SAN FRANCISCO
PLANNING DEPARTMENT

MEMO

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

DATE:	June 18, 2015
TO:	San Francisco Planning Commission
FROM:	Christopher Espiritu, Planning Department,
RE:	Appeal of Preliminary Mitigated Negative Declaration for 850 Bryant Street, Assessor's Block 3759, Lots 009 through 012, 014, 043, 045, and a portion of 042, Planning Department Case No. 2014.0198E
HEARING DATE:	June 25, 2015

An appeal has been received concerning a preliminary mitigated negative declaration for the following project:

Case No. 2014.0198E – 850 Bryant Street: The project site is located on Bryant Street at 6th Street in the South of Market neighborhood. The proposed project would demolish three existing buildings on-site and construct a 200,000-gsf, 110-foot-tall (including an additional 15-foot-tall mechanical penthouse) Rehabilitation and Detention Facility (RDF) building adjacent to the existing Hall of Justice building. The proposed RDF would replace the existing County Jail Facility #3 and #4 and is a part of a larger program to relocate City agencies from the seismically deficient HOJ. The proposed RDF would be constructed as a maximum security facility, compliant with adult detention facility codes and standards, with a capacity of up to 640 beds, a 30 percent reduction (265 fewer beds) from the combined capacity in CJ #3 and CJ #4 of 905 beds.

This matter is calendared for public hearing on June 25, 2015. Enclosed are the Appeal Letter, Comment Letters, the Staff Responses, the Preliminary Mitigated Negative Declaration, Executive Summary and the Draft Motion.

If you have any questions related to this project's environmental evaluation, please contact me at (415) 575-9022 or Christopher.Espiritu@sfgov.org.

Thank you.

Appeal of Preliminary Mitigated Negative Declaration
Executive Summary

HEARING DATE: June 25, 2015

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Date:	June 18, 2015
Case No.:	**2014.0198E**
Project Title:	**850 Bryant Street – Hall of Justice - Rehabilitation and Detention Facility**
Zoning:	Western SoMa Special Use District / Public Use (P) Zoning District 105-J Height and Bulk District Service/Arts/Light Industrial (SALI) Zoning District 30-X Height and Bulk District
Block/Lot:	3759/009 through 012, 014, 043, 045, a portion of 042
Project Sponsor:	**City and County of San Francisco Department of Public Works** Building, Design and Construction, Project Management Jumoke Akin-Taylor – (415) 557-4751 **City and County of San Francisco Sheriff's Department** Sheriff's Bureau of Building Services Dan Santizo - (415) 522-8123
Staff Contact:	Christopher Espiritu – (415) 575-9022 christopher.espiritu@sfgov.org

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PROPOSED COMMISSION ACTION:

Consider whether to uphold staff's decision to prepare a Mitigated Negative Declaration (MND) under the California Environmental Quality Act (CEQA), or whether to overturn that decision and require the preparation of an Environmental Impact Report due to specified potential significant environmental effects of the proposed project.

PROJECT DESCRIPTION:

The project site (Assessor's Block 3759, Lots 9 through 12, 14, 43, 45, a portion of Lot 42) is located on Bryant Street at Sixth Street within the South of Market neighborhood. The western portion of the project site contains the existing eight-story, 105-foot-tall (plus an additional 12-foot-tall mechanical penthouse), 610,000-gsf Hall of Justice (HOJ) at 850 Bryant Street. The existing HOJ serves as one of the primary County Jail Facilities for the San Francisco Sheriff's Department. County Jails No. 3 (CJ#3) and No. 4 (CJ#4) are located on the 6th and 7th floors of the existing HOJ. Other City agencies utilizing the existing HOJ include the San Francisco County Superior Court, the Chief Medical Examiner's Office, and the San Francisco Police Department. Directly east of the existing HOJ is the project building site, which is bounded by Ahern Way to the north, Sixth Street to the east, Bryant Street to the south, and Harriet Street to the west. The 40,276-sf project building site contains two vacant lots, surface parking, and five existing buildings: a one-story, 6,000-gsf office building (444 Sixth Street); a one-story, 5,100-gsf commercial building (450 Sixth Street); a three-story, 7,150-gsf, 14-unit single room occupancy

(SRO) residential building with ground-floor retail (480-484 Sixth Street); a three-story, 16,500-gsf office building (800-804 Bryant Street); and a one-story, 2,000-gsf McDonald's restaurant (820 Bryant Street).

The proposed project is a joint-agency effort between the San Francisco Department of Public Works and the San Francisco Sheriff's Department. The proposed project calls for construction of an approximately 200,000-gsf, 95-foot-tall (plus an additional 15-foot-tall mechanical penthouse) Rehabilitation and Detention Facility (RDF) on the project building site. All the existing buildings on the project building site, with the exception of the buildings at 480-484 Sixth Street (Block 3759/Lot 10) and 800-804 Bryant Street (Block 3759/Lot 11), would be demolished. The proposed RDF would replace the existing CJ#3 and CJ#4 and is a part of a larger program to relocate City agencies from the seismically deficient HOJ building. The proposed RDF would be constructed as a maximum security facility, compliant with adult detention facility codes and standards, with a capacity of up to 640 beds, a 30 percent reduction (265 fewer beds) from the combined capacity in CJ#3 and CJ#4 of 905 beds. The proposed RDF would also include space for administrative offices, staff support, exercise, mental and medical health services, and programs and classroom space for the inmates. Additionally, the proposed project would include improvements within the Harriet Street and Ahern Way rights-of-way, including the construction of a subterranean tunnel underneath the Harriet Street roadway, which would connect the existing HOJ to the basement level of the proposed RDF. This tunnel would be used to provide secure, direct transport of inmates between the proposed RDF and the existing HOJ building.

ISSUES:

The Planning Department published a Preliminary Mitigated Negative Declaration (PMND) on May 13, 2015, and received an appeal letter from Californians United for a Responsible Budget on June 3, 2015, appealing the determination to issue a MND. The Planning Department also received additional comment letters during the public review period ending June 3, 2015.

The appeal letter states that the PMND fails to adequately address the following issues:

1. Air quality impacts on building occupants' outdoor space
2. Noise impacts on building occupants' outdoor space
3. Compliance with Proposition M
4. Parking impacts
5. Wind impacts

The additional comment letters received state that the PMND fails to adequately address the following issues: use of the mezzanine level for additional beds; rejection of San Bruno facility rehabilitation; loss of jobs; historic resource impacts; archaeological resources impacts; transportation and circulation impacts; noise impacts on Bessie Carmichael Elementary School; cumulative shadow impacts on Victoria Manalo Draves Park, and conflict with General Plan

policies relating to preservation of sunlight on open spaces; water supply and quality impacts; hazards and hazardous materials impacts; use of tax dollars to build a new jail; and environmental justice issues.

No other comments (nor appeals of the PMND) were received. All of the issues raised in the appeal letter and other comments have been addressed in the attached materials, which include:

1. A draft Motion upholding the decision to issue a MND;
2. Exhibit A: Planning Department Response to the Appeal Letter and comment letters
3. Exhibit B: Appeal Letter from Californians United for a Responsible Budget
4. Exhibit C: Comment Letters Received During PMND Review Period
    - Attachment C.1: Letter from Lisa Marie Alatorre
        - This letter was repeated as a form letter and submitted electronically via e-mail without any changes by 173 individuals and groups during the comment period
    - Attachment C.2: Other Comment Letters
5. Exhibit D: Notice of Availability of and Intent to Adopt a Mitigated Negative Declaration
6. Exhibit E: Preliminary Mitigated Negative Declaration (Hard Copy and/or CD)

RECOMMENDATION:

Staff recommends that the Planning Commission adopt the motion to uphold the PMND. No substantial evidence supporting a fair argument that a significant environmental effect may occur as a result of the project has been presented that would warrant preparation of an Environmental Impact Report. By upholding the PMND (as recommended), the Planning Commission would not prejudge or restrict its ability to consider whether the proposed project's uses or design is appropriate for the neighborhood.

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Planning Commission Motion [XXXX]

HEARING DATE: June 25, 2015

Hearing Date:	June 25, 2015
Case No.:	**2014.0198E**
Project Address:	**850 Bryant Street**
Zoning:	Western SoMa Special Use District / Public Use (P) Zoning District 105-J Height and Bulk District Service/Arts/Light Industrial (SALI) Zoning District 30-X Height and Bulk District
Block/Lot:	3759/009 through 012, 014, 043, 045, a portion of 042
Project Sponsor:	**City and County of San Francisco Department of Public Works** Building, Design and Construction, Project Management Jumoke Akin-Taylor – (415) 557-4751 **City and County of San Francisco Sheriff's Department** Sheriff's Bureau of Building Services Dan Santizo - (415) 522-8123
Staff Contact:	Christopher Espiritu – (415) 575-9022 christopher.espiritu@sfgov.org

ADOPTING FINDINGS RELATED TO THE APPEAL OF THE PRELIMINARY MITIGATED NEGATIVE DECLARATION, FILE NUMBER 2014.0198E FOR THE PROPOSED REHABILITATION AND DETENTION FACILITY ("PROJECT") AT 850 BRYANT STREET.

MOVED, that the San Francisco Planning Commission (hereinafter "Commission") hereby AFFIRMS the decision to issue a Mitigated Negative Declaration, based on the following findings:

1. On July 2, 2014, pursuant to the provisions of the California Environmental Quality Act ("CEQA"), the State CEQA Guidelines, and Chapter 31 of the San Francisco Administrative Code, the Planning Department ("Department") received an Environmental Evaluation Application form for the Project, in order that it might conduct an initial evaluation to determine whether the Project might have a significant impact on the environment.

2. On May 13, 2015, the Department determined that the Project, as proposed, could not have a significant effect on the environment.

3. On May 13, 2015, a notice of determination that a Mitigated Negative Declaration would be issued for the Project was duly published in a newspaper of general circulation in the City, and the Mitigated Negative Declaration posted in the Department offices, and distributed all in accordance with law.

4. On June 3, 2015, an appeal of the decision to issue a Mitigated Negative Declaration was timely filed by the Californians United for a Responsible Budget.

5. On June 3, 2015, comment letters concerning the decision to issue a Mitigated Negative Declaration and other comments were submitted by various individuals.

6. A staff memorandum, dated June 18, 2015, addresses and responds to all points raised by the appellant in the appeal letter and by the commenters in the submitted comments. That memorandum is attached as Exhibit A and staff's findings as to those points are incorporated by reference herein as the Commission's own findings. Copies of that memorandum have been delivered to the City Planning Commission, and a copy of that memorandum is on file and available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400.

7. On June 25, 2015, the Commission held a duly noticed and advertised public hearing on the appeal of the Preliminary Mitigated Negative Declaration, at which testimony on the merits of the appeal, both in favor of and in opposition to, was received.

8. All points raised in the appeal of the Preliminary Mitigated Negative Declaration at the June 25, 2015 City Planning Commission hearing have been responded to either in the Memorandum or orally at the public hearing.

9. After consideration of the points raised by appellant, both in writing and at the June 25, 2015 hearing, the San Francisco Planning Department reaffirms its conclusion that the proposed project could not have a significant effect upon the environment.

10. In reviewing the Preliminary Mitigated Negative Declaration issued for the Project, the Planning Commission has had available for its review and consideration all information pertaining to the Project in the Planning Department's case file.

11. The Planning Commission finds that Planning Department's determination on the Mitigated Negative Declaration reflects the Department's independent judgment and analysis.

The City Planning Commission HEREBY DOES FIND that the proposed Project, could not have a significant effect on the environment, as shown in the analysis of the Mitigated Negative Declaration, and HEREBY DOES AFFIRM the decision to issue a Mitigated Negative Declaration, as prepared by the San Francisco Planning Department.

I hereby certify that the foregoing Motion was ADOPTED by the City Planning Commission on June 25, 2015.

Jonas Ionin
Commission Secretary

AYES:

NOES:

ABSENT:

ADOPTED: June 25, 2015

Exhibit A

Planning Department Response to the Appeal Letter

Exhibit A to Draft Motion
Planning Department Response to Appeal of Preliminary Mitigated Negative Declaration

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CASE NO. 2014.0198E – 850 BRYANT STREET –
HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY PROJECT
PUBLISHED ON MAY 13, 2015

BACKGROUND

An environmental evaluation application (2014.0198E) for the proposed project at 850 Bryant Street was filed on June 18, 2014.

A Preliminary Mitigated Negative Declaration (PMND) was published on May 13, 2015. The Notice of Availability stated that the review period for public comment or appeal would be 20 days, ending on June 3, 2015 ("i.e., by 5:00 p.m. on June 3, 2015"). On June 3, 2015, Californians United for a Responsible Budget filed a letter appealing the PMND. Additional comments were received from: Lisa Marie Alatorre (plus 173 individuals and groups who submitted an identical letter); Leo Warshaw-Cardoza; Jenna Gaarde; Sami Kilmitto; Johannes Kuzmich; Michael Lyon; Dylan Moore; Andrea Salinas; Eli; Sir Edmond, Luicje Lany; Larry; Bilal Du; Joss Greene, and an unsigned letter.

The concerns in the appeal letter, presented below by environmental topic, are summarized and responded to, and concerns raised in comment letters received are listed following the appeal letter topics and addressed in a master response. Copies of the appeal letter and the comment letters are included within this appeal packet.

COMPATIBILITY WITH EXISTING ZONING AND PLANS

ZONING AND PLANS CONCERN 1: The appellant asserts that the PMND [proposed project] fails to comply with the City and County of San Francisco's Priority Policies #2, #3, and #5 and so should be rejected.

> "2. Project fails to comply with San Francisco Proposition M
>
> "As noted in the PMND, "Prior to issuing a permit for any project which requires an Initial Study under CEQA, prior to issuing a permit for any demolition, conversion, or change of use, and prior to taking any action which requires a finding of consistency with the General Plan, the City is required to find that the proposed project or legislation would be consistent with the Priority Policies." (PMND, p. 28) Priority Policy #2 is "2) conservation and protection of existing housing and neighborhood character to preserve the cultural and economic diversity of neighborhoods;" #3 is "preservation and enhancement of affordable housing;" and #5 is "5) protection of industrial and service land uses from commercial office development and enhancement of resident

employment and business ownership." (PMND, p. 27) However, the project includes potential displacement of 14 units of existing affordable "SRO" housing: "If relocation of the building tenants is determined necessary, it is likely that the building could accommodate future commercial/office uses." (PMND, p. 8) The potential "residential relocation plan" to be drafted by a different City department is not part of the PMND and may face significant hurdles. As is well known, the current supply of affordable rental housing in San Francisco is in a total state of crisis due to rising rents and the widespread use of eviction against low-income tenants. Waiting lists for public and affordable housing are years-long. San Francisco Housing Authority recognizes that "The demand for low-income housing in San Francisco far exceeds available units." (http://www.sfha.org/Residents-Applicants.html) SFHA advises low-income tenants," in many cases, you may have to wait 4 to 9 years before your name will reach the top of the List." (http://www.sfha.org/FAQ-s.html) And at present, the waitlist for Section 8 housing is currently closed, and only 3 units were listed on their availability page within the past two years. (http://sfha.org/Information--Section-8.html, http://sfha.gosection8.com/SearchRentals.aspx)

"In the current affordable housing crisis it is unrealistic in the extreme to assume that the Real Estate Division of the San Francisco General Services Agency has the funding or ability to acquire - even on a temporary basis - 14 units of affordable housing if the Housing Authority, which has the specific charge to find such units and lease them through Section 8 - cannot even accomplish this. Loss of the units violates Priority Policy #2 and #3; insofar as the area around this building is zoned SALI (Service/ Arts/Light Industrial), conversion of the SRO into commercial/office uses would further violate Priority Policy #5 by encroaching such uses into an industrial and service land-use area.

"The PMND fails to comply with the City and County of San Francisco's Priority Policies #2, #3, and #5 and so should be rejected." *(Californians United for a Responsible Budget)*

RESPONSE TO ZONING AND PLANS CONCERN 1: Under CEQA, land use impacts are considered to be significant if the proposed project would conflict with any plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Environmental plans and policies are those, like the Bay Area Air Quality Management District (BAAQMD) 2010 Clean Air Plan, which directly address environmental issues and/or contain targets or standards, which must be met in order to preserve or improve characteristics of the City's physical environment. The proposed project would not obviously or substantially conflict with applicable plans, policies, and regulations such that an adverse physical change would result. Therefore, the proposed project would have a less-than-significant impact with regard to conflicts with existing plans and zoning.

Issues related to the cost of housing are socioeconomic rather than physical and are relevant to CEQA only inasmuch as they are connected to physical environmental impacts. Under CEQA, a project may have a significant impact if it will displace substantial numbers of people,

necessitating the construction of replacement housing elsewhere. The potential displacement of 14 SRO residential units would not displace substantial numbers of people, and the PMND found this impact less than significant.

As described on p. 4 of the PMND, "the project site includes a three-story, 7,150-gsf, 14-unit single room occupancy (SRO) residential building with ground-floor retail, constructed in 1916 (480-484 Sixth Street)." As stated on p. 8, this "14-unit SRO residential building with ground-floor retail would remain on the project building site, although it may be decided through the process of DPW's future acquisition of the property to relocate some or all of the building occupants before the proposed RDF is ready for use. If relocation of the building tenants is determined necessary, it is likely that the building could accommodate future commercial/office uses. In accordance with the California Relocation Act (Chapter 16, Section 7260 et seq. of the Government Code), the proposed project includes provision for a residential relocation plan, which, if needed, would be prepared by the Real Estate Division of the San Francisco General Services Agency. The relocation plan would establish a program to help affected residential tenants who qualify for assistance with relocation expenses, including moving expenses, and social services."

The PMND further states on p. 37, that "although housing demand at all income levels has outpaced housing production in the City, the residential displacement of 14 SRO housing units would not be substantial enough to necessitate the construction of replacement housing." Therefore, the proposed project would not create the need for additional housing to be constructed elsewhere and this impact was found to be less than significant in the PMND. Furthermore, in accordance with the relocation plan, a program would be established as part of the project to help affected residential tenants who qualify for assistance with relocation expenses, including moving expenses, and social services.

The City has not determined whether relocation of the 480-484 Sixth Street building occupants (residents and retail tenants) would be necessary. There are no known redevelopment plans for the building, and it is possible that relocation of the building occupants would not even occur as part of the proposed project. In the absence of certainty as to what may occur on the site, a likely future use on the site was established to adequately analyze the potential environmental impacts that could occur, if relocation of the building tenants were determined to be necessary. Thus, for purposes of environmental analysis in the PMND, specifically the analysis of environmental impacts where relocation of these occupants needed to be quantified,[1] a "worst-case scenario" was assumed –that all 14 units would be vacated and more intense uses were

[1] These topics include population and housing, transportation and circulation, noise, and air quality. Analyses of the other topics in the Initial Study are not dependent on whether the existing residential uses would be retained on the project site or whether it would be converted to office use to be used by the Sheriff's Department or other public agencies.

analyzed. As further stated on PMND p. 64, under this worst-case scenario "the existing residential and restaurant uses within the building would be relocated, and upon completion of the proposed project, the building would contain about 4,770 gsf of office uses and 2,380 gsf of ground floor retail uses." Analyses of other topics in the Initial Study would be the same whether the existing building to be retained on the project site remained in residential use or was converted to office for use by the Sheriff's Department or other public agencies.

Contrary to the appellant's assertion, the potential loss of the SRO units under the proposed project would be consistent with established policies in Proposition M, the Accountable Planning Initiative, including Policy (2) conservation and protection of existing housing and neighborhood character to preserve the cultural and economic diversity of neighborhoods, and Policy (3) preservation and enhancement of affordable housing. Even though the potential residential displacement of 14 SRO housing units would not be substantial enough to necessitate the construction of replacement affordable housing, the proposed project would provide protection to the affected tenants through implementation of a residential relocation plan that would establish a program to help affected residential tenants who qualify for assistance with relocation expenses, including moving expenses and social services. If other uses were to be made of the existing building, the loss of 14 SRO housing units would not result in a substantial increase in housing demand in San Francisco, thus resulting in a less-than-significant environmental impact.

The appellant also states that the potential loss of the SRO units is inconsistent with Proposition M Policy (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership. However, there are no existing industrial or service uses on the project site that could be displaced as result of the proposed project.

Effects analyzed under CEQA must be related to a physical change in the environment. The appellant does not state how this would result in an adverse physical change in the environment.

As part of the entitlement process for the proposed project, the Planning Commission and the Board of Supervisors will evaluate the proposed project against these Priority Planning Policies, and will consider whether the proposed project would, on balance, conform or conflict with the Priority Planning Policies. This review is carried out independent of the environmental review process, as part of the decision to approve, modify, or disapprove a proposed project. Because the PMND analyzes the impacts related to those policies, the PMND will provide decision-makers with information that will assist them in determining the proposed project's consistency with these policies.

TRANSPORTATION AND CIRCULATION (PARKING)

TRANSPORTATION AND CIRCULATION CONCERN 1: The appellant asserts that the proposed project is not an "employment center" and is not eligible for exclusion from an analysis of aesthetic or parking impacts through the City's Transit-Oriented Infill Eligibility Checklist project. As a result, the appellant asserts that the transportation impact analysis in the Preliminary Mitigated Negative Declaration is not adequate and should be rejected because it did not consider the effect of a constrained parking supply on traffic impacts at the intersections considered in the PMND.

> "3. Parking impacts are not mitigated, but the project is not an employment center project
>
> The PMND claims that 'aesthetics and parking are no longer to be considered in determining if a project has the potential to result in significant environmental effects' per Public Resources Code Section 21099(d), effective January 1, 2014 ('aesthetics and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment') because the proposal is an 'employment center project' (PMND, p. 31, 79). However, Public Resources Code Section 21099(l)(a) clearly states 'Employment center project' means a project located on property zoned for commercial uses with a floor area ratio of no less than 0.75 and that is located within a transit priority area.' The PMND states multiple times that the zoning from the project site is currently SALI (Service/ Arts/Light Industrial) and is proposed to be changed to P (Public Use) (PMND p.2, 5, etc.) The project is not an 'employment center project' because it is not on a parcel zoned for commercial uses - it is proposed to be zoned for public non-commercial uses. Thus parking impacts must be considered potentially significant unmitigated environmental impacts.
>
> The PMND's 'informational' parking analysis indicates that the project will result in the removal of 22 off-street and 41 on-street spaces, all of them in a neighborhood of high demand. In addition, the project is projected to create a net increase of 47 new FTE employees (PMND, p. 36) creating a net new parking demand of 10 spaces for the Jail ("RDF'") portion, plus 26 more for the proposed reuse of 480-484 Sixth St. The PMND notes that "during field surveys on-street parking spaces on Harriet Street, Ahem Way, and Sixth Street were at or close to 100 percent occupied throughout the day," and that 'visitors or others that utilize the on-street parking on Harriet Street, Ahem Way, and Sixth Street would need to be accommodated elsewhere in the project vicinity, either on street or in other off- street facilities.' (PMND, p. 80.) The PMND concludes that 'the net new project parking demand, and the demand associated with the parking spaces that would be eliminated, would need to be accommodated on-street or within nearby off-street facilities, and area-wide parking occupancy would increase further' - but the project includes no such accommodation. While the PMND speculates that 'under cumulative conditions, as under existing conditions, due to the difficulty in finding on-

street parking in the study area, some drivers may park outside of the study area, switch to transit, car-sharing, carpooling, walking, or bicycling.' (PMND, p. 89) However, the project includes no significant transit, car-sharing, carpooling, walking, or bicycling improvements, exacerbating the potentially significant unmitigated environmental impacts created by the parking impacts.

In fact, the PMND even recognizes that 'considering cumulative parking conditions, over time, due to the land use development and increased density anticipated within the City, parking demand and competition for on- and off-street parking is likely to increase.' (PMND, p. 88) It also recognizes - but fails to study – 'secondary physical impacts associated with constrained supply (e.g., queuing by drivers waiting for scarce on-site parking spaces that affects the public right-of-way)' and circling by rivers looking for parking spaces. (PMND, p. 79) The traffic analysis indicates that 4 of the 5 studied intersections already experience a Level of Service score of C or worse (1 is an F) at peak times (PMND, p. 59). Adding more vehicles to these congested conditions will aggravate traffic conditions and create more local air pollution and other potentially significant unmitigated environmental impacts.

In summary, the increased parking demand on both on-street and off-street parking spaces is clearly an unmitigated environmental impact. The unmitigated parking impacts could give rise to further unmitigated impacts on traffic and air quality. If for no other reason, the PMND should be rejected."

RESPONSE TO TRANSPORTATION AND CIRCULATION CONCERN 1: The project site is an infill site located within a transit-rich area with easy and frequent access to transit provided by the San Francisco Municipal Transportation Agency (Muni) and regional transit service providers; thus, the project meets two of the three criteria in the City's Transit-Oriented Infill Eligibility Checklist. The proposed public facility (a Rehabilitation and Detention Facility that would be operated by the City and County of San Francisco Sheriff's Department) would be a principally permitted use in a Public Use Zoning District (P Zoning District). The City's Transit-Oriented Infill Eligibility Checklist was prepared with the understanding that the project sponsor would seek a change to the zoning classification on the project building site because the present zoning (Service/Arts/Light Industrial Zoning District (SALI Zoning District) would not allow the proposed use.

The appellant correctly identified one of the required approvals of the proposed project, i.e., the rezoning of the eastern portion of the project site from a SALI Zoning District to a P Zoning District (see PMND pp. 20-21). As discussed in the land use analysis under Impact LU-2 (PMND p. 33), the proposed project would comply with the provisions of Planning Code

Section 211, which regulates uses in P Zoning Districts.[2] Institutional uses are principally permitted in P Zoning Districts (e.g., the Hall of Justice and County Jail Facilities No. 1 and No. 2 on the parcel immediately to the west of the project building site, which is in a P Zoning District). The proposed project would exhibit the same range of uses as currently exist in the adjacent P Zoning District. The San Francisco Planning Department considers these uses as employment centers in their determination regarding compliance with Senate Bill 743/Public Resources Code Section 21099. Thus, with respect to the exclusion of analyses of aesthetics and parking, the City's Transit-Oriented Infill Eligibility Checklist has been properly prepared because the proposed project meets each of the three criteria. The appellant's assertion is not founded in facts and no further responses are required.

With respect to parking, the Planning Department stated in its response to SB 743[3] that the City determined years ago that parking loss or deficit in and of itself does not result in direct changes to the physical environment, and that determination has been upheld (see *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656). While the environmental analysis does assess the indirect or secondary environmental effects of parking loss, such as air quality or noise impacts, the direct effects of a parking deficit or loss have been determined to be a significant impact under CEQA in only the rarest of circumstances. It is important to note that San Francisco has not been alone in recognizing that the adequacy of parking is more appropriately assessed as part of reviewing project merits rather than a potentially significant environmental impact under CEQA. In 2010, the Governor's Office of Planning and Research (OPR) amended Appendix G of the CEQA Guidelines to remove the significance criterion about inadequate parking capacity. This policy direction continues to evolve and is strengthened by the provisions of SB 743. In addition to addressing Level of Service reform, Section 5 of SB 743 states that, "…the adequacy of parking for a project shall not support a finding of significance…" It is the San Francisco Planning Department's interpretation, in consultation with the City Attorney, that this provision of the statute expands upon the parking changes related to the 2010 amendment to the CEQA Appendix G transportation significance standards in that it would apply to all projects in transit priority areas, not just residential, mixed-use residential or employment center projects.

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[2] On March 22, 2015, the redesignation of Planning Code Section 234 as Planning Code Section 211 became effective as part of Ordinance No. 22-15 reorganizing Article 2 (adopted by the Board of Supervisors on February 20, 2015). If the PMND is upheld, the Final Mitigated Negative Declaration will include this correction.

[3] San Francisco Planning Department, "CEQA Update: Senate Bill 743 Summary – Aesthetics, Parking and Traffic," November 26, 2013. Available online at http://sfmea.sfplanning.org/CEQA%20Update-SB%20743%20Summary.pdf. Accessed June 15, 2015. A copy of this document is available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.0198E.

As explained on PMND pp. 79-80, the San Francisco Planning Department and CEQA do not consider parking supply as part of the permanent physical environment and, therefore, do not consider changes in parking conditions to be environmental impacts as defined by CEQA. The San Francisco Planning Department acknowledges, however, that parking conditions may lead to secondary environmental impacts and may be of interest to the public and the decision-makers. Existing parking regulations and occupancy data are provided on PMND pp. 63-64, project-related parking information is discussed on PMND pp. 79-80, and cumulative parking information is discussed on PMND pp. 79-80. Because the new RDF is merely replacing the existing County Jails No. 3 (CJ#3) and No. 4 (CJ#4) which are presently located on the 6th and 7th floors of the existing HOJ, with fewer beds, implementation of the proposed project would result in an overall reduction in traffic (47 fewer inbound and outbound p.m. peak hour vehicle trips). This would result in a decrease in the associated parking demand (see PMND p. 80). Therefore, the appellant's assertion that the project-level and cumulative transportation impact analysis in the PMND is not adequate, did not factor cars searching for parking into the traffic impact analysis, or identify parking impacts as potentially significant is not correct. It is premised on the assumption that the proposed project would add vehicle trips to the adjacent roadways (where, in fact, there would be a traffic reduction because the project would relocate an existing use from the 6th and 7th floors of the Hall of Justice to the project building site) and a misunderstanding of the City's standard approach to parking analysis.

The appellant also suggests that the proposed project does not do enough to encourage alternative modes of travel to and from the project site as a means to alleviate the perceived effects of constrained parking. Please see Improvement Measure I-TR-1: Transportation Demand Management (TDM) Plan, PMND pp. 70-71, for details about additional measures aimed at supporting the use of transit and other modes of travel.

NOISE

NOISE CONCERN 1: The appellant asserts that the noise analysis in the Preliminary Mitigated Negative Declaration was not adequate and should be rejected because it did not consider the effect of ambient noise levels on future inmates who would use the partially enclosed outdoor yards of the proposed Rehabilitation and Detention Facility, including potential amplification of existing noise levels due to the design of the partial enclosure and its location in relation to the elevated freeway.

> "1. Air quality and noise impacts on building occupants' outdoor space are not assessed and are potentially significant
>
> …

> In addition, the noise levels for the outdoor yards are unacceptable. Although they have not been assessed within the PMND (which is its an error with the PMND), they can be expected to be at least as loud as current outdoor measurements at a similar elevation in the vicinity. (Elevation is an important factor to accurately reflect the distribution of freeway noise that is louder above and lower below the roadway guardrail height.) In fact, the partial enclosure of the proposed outdoor yards would likely reflect sound to increase noise levels. The PMND notes that "background noise levels (at or above the freeway elevation) were found to be 79 dBA (Ldn)[74] near the northern façade (closest to the freeway) and 75 dBA (Ldn)[75] near the southern façade (midblock)." (PMND, p. 106-107) The most relevant categories from San Francisco's Land Use Compatibility Chart for Community Noises are "Outdoor Spectator Sports," which "should not be undertaken" in areas where outdoor noise is above levels of 73 dBA, and Playgrounds, which "should not be undertaken" in areas where outdoor noise is above 75 dBA. (PMND, p. 97) Freeway noise levels are projected to increase by as much as 2.4 dBA in the future (PMND, p. 110). Noise is already recognized to be an additional source of stress within the jail environment, and outdoor spaces are generally one of a very few opportunities people in jails have to experience a less stressful environment. (Richard Wener, "The Environmental Psychology of Prisons and Jails," Ch. 9. "The Effects of Noise in Correctional Settings": Cambridge University Press, 2012.) The proposed site is fundamentally incompatible with acceptable outdoor recreation, but the PMND has not studied, let alone mitigated, these conditions for the project." *(Californians United for a Responsible Budget)*

RESPONSE TO NOISE CONCERN 1: Exercise space for inmates (see PMND p. 13) would be provided on the second through fifth floors of the proposed Rehabilitation and Detention Facility and is clearly defined in the PMND as an interior space. These spaces are labeled as "YARD" spaces on Figure 9: Proposed Second Floor Plan, Figure 10: Proposed Third Floor Plan, and Figure 11: Proposed Fourth and Fifth Floor Plans provided in the Project Description (see PMND pp. 15-17). Each of the "YARD" spaces labeled on those floor plans would be fully enclosed exercise rooms with light wells that reach down into theses spaces from the rooftop. The light wells are depicted by the single isosceles triangle on the "YARD" spaces on the west portion of the second through fifth floor plans (see Figures 9, 10 and 11) and the two obtuse triangles on the "YARD" spaces on the east portion of the fourth and fifth floors (see Figure 11). The design of the proposed Rehabilitation and Detention Facility is governed by adult detention facility codes and standards for maximum security facilities (see PMND p. 7), and all spaces including the exercise spaces and light wells/skylights that penetrate the building floor plates would be enclosed. As explained in the Project Description on PMND p. 13, the second, third, fourth, and fifth floors would have "room for interior exercise and class room space." Therefore, future inmates who use the proposed exercise spaces would not be affected by ambient noise levels in excess of 75 dBA. Further, as stated on PMND pp. 107-108, the proposed Rehabilitation and Detention Facility would include a fixed window system and dual wall designs (similar to those of County Jail Facilities No. 1 and No. 2 located to the west of the

project site), and incorporate noise attenuation measures to address noise produced by the ventilation system to achieve acceptable interior noise levels (Mitigation Measure M-NO-3 on PMND p. 108). Thus, the appellant's concern related to potential noise impacts on future inmates of the proposed Rehabilitation and Detention Facility while exercising in outdoor yards and the adequacy of the noise analysis conducted for the PMND is not founded in fact because it is premised on a misunderstanding of the graphics provided with the PMND. No further response is required.

AIR QUALITY

AIR QUALITY CONCERN 1: The appellant asserts that the air quality analysis in the Preliminary Mitigated Negative Declaration was not adequate and should be rejected because it did not consider the exposure of future inmates to poor air quality at the partially enclosed outdoor yards of the proposed Rehabilitation and Detention Facility, which is located within an Air Pollutant Exposure Zone.

> "1. Air quality and noise impacts on building occupants' outdoor space are not assessed and are potentially significant
>
> "The PMND recognizes that people being held in jail are "sensitive receptors" and that podular housing units are a sensitive land use for the purposes of CEQA air quality assessment, (PMND, p. 123-124, 128) and that the project is located in an Air Pollutant Exposure Zone. (PMNd, p. 128) The PMND asserts that an Enhanced Ventilation Proposal approved by the Department of Public Health will be sufficient to mitigate the exposure of sensitive receptors to increased pollutant exposure. However, unlike other residential occupancies, people in jail are restrained not only in the indoor air quality they are exposed to but in their access to healthy outdoor air. In particular, the proposed building designs indicate that people in jail will be required to exercise and have outdoor recreation in yards that face Highway 101 to the west (PMND, p. 15-17). The proposed Enhanced Ventilation Proposal does not mitigate exposure to the dangerous air quality inherent in the proposed project site's outdoor areas. In fact, the building design of stacked, semienclosed yards facing into the prevailing winds coming across the freeway may well exacerbate already unacceptable outdoor air quality in the area. The potentially significant health impacts of having restricted outdoor spaces in an Air Pollutant Exposure Zone with designs that may concentrate pollutant levels have not even been studied in the PMND, let alone mitigated." *(Californians United for a Responsible Budget)*

RESPONSE TO AIR QUALITY CONCERN 1: As indicated above in the Response to Noise Concern 1, the proposed Rehabilitation and Detention Facility would not include outdoor spaces. The exercise space on each floor would be enclosed. The appellant may have misunderstood the graphics provided in the Project Description. The City's mapping of Air Pollutant Exposure Zones and its approach to the analysis of air quality impacts, which was

developed in coordination with the San Francisco Department of Public Health and in response to the Bay Area Air Quality Management District's 2012 update to its CEQA Guidelines, has evolved over the last five years. Enhanced ventilation, previously imposed as a mitigation measure, is now required for all projects within Air Pollutant Exposure Zones (San Francisco Health Code Article 38). Thus, the proposed Rehabilitation and Detention Facility project would include an enhanced ventilation system to ensure that indoor air quality for inmates and staff is not unduly affected by the poor air quality in the project vicinity (as indicated by the mapped Air Pollutant Exposure Zone). Thus, the appellant's concern related to potential air quality impacts on future inmates of the proposed Rehabilitation and Detention Facility while exercising in outdoor yards and the adequacy of the air quality analysis conducted for the PMND is not founded in fact because it is premised on a misunderstanding of the graphics provided with the PMND. No further response is required.

WIND

WIND CONCERN 1: The appellant asserts that the wind impact analysis in the Preliminary Mitigated Negative Declaration is flawed because it underestimates potentially significant impacts. The appellant asserts that the finding of a less-than-significant impact is due to the absence of consideration for the effects of the 15-foot-tall mechanical penthouse on the roof and reliance on the shielding effects of the Hall of Justice, which would be demolished in the future.

> "4. Wind impacts are underestimated and potentially significant
>
> "The PMND argument that "the proposed project would result in a less-than-significant impact related to wind hazards" (PMND, p. 139) relies on the fact that "the proposed Jail ("RDF") would not be taller than the existing 117-foot-tall Hall of Justice." (PMND, p. 138) However, there are significant errors in this purported fact. The wind analysis section identifies the new building as 95 feet high (PMND, p. 138) while elsewhere it is proposed as 95 feet high plus a 15-foot tall mechanical penthouse (PMND, p. 5). The project drawings indicate that the mechanical penthouse would occupy approximately 80% of the building roof area. (PMND, p. 9-12). The wind impact should thus be analyzed for a 110-foot tall building, which seems to be a basic error in the wind impact assessment.
>
> "A potentially greater error lies in the reliance on the existing Hall of Justice as part of the wind assessment. The Jail ("RDF") project is only one piece of the larger Justice Facilities Improvement Program, which intends to demolish the majority of the Hall of Justice building "once all occupants are relocated." (http://www.sfdpw.org/index.aspx?page=127) Because the Jail ("RDF") proposal is the most complex and costly portion of the JFIP program, it is reasonable to assume that if the proposed project is built the Hall of Justice demolition will follow. In fact, the current project is proposed in order to enable the demolition of the Hall of Justice. The demolition of part of the Hall of Justice would significantly alter the wind dynamics in

the area, yet the PMND wind assessment does not include the impact of the intended outcome of the proposed project. The PMND should not be approved with a flawed wind assessment." *(Californians United for a Responsible Budget)*

RESPONSE TO WIND CONCERN 1: The wind impact analysis on PMND pp. 136-139 is based on the screening-level wind analysis prepared by Rowan Williams Davies & Irwin, Inc. (RWDI) and provided as Appendix G to the PMND. The determination in the PMND is based on the professional opinion of RWDI staff and their understanding of the interaction between prevailing winds and the height, massing, and orientation (or profiles) of buildings/structures (see PMND p. 136 and Appendix G, p. 5).

The wind impact analysis focuses on the potential for changes to the ground-level wind speeds along public sidewalks in the vicinity of the proposed Rehabilitation and Detention Facility – Ahern Way, Sixth Street, Bryant Street, and Harriet Street – and entries to the proposed Rehabilitation and Detention Facility (west sidewalk of Sixth Street). Determinations of significance are made by comparing existing conditions to conditions with implementation of the proposed project and are based on the City's wind comfort and wind hazard criteria (see PMND, p. 138 footnote 122).

The wind impact analysis considers the direction of the prevailing winds, which come from the west-southwest through to the northwest (see PMND p. 137), existing conditions in the immediate vicinity of the project building site, which includes the 117-foot-tall Hall of Justice immediately to the west of the project building site, and the massing of the proposed Rehabilitation and Detention Facility (at 95 feet). The 15-foot-tall mechanical penthouse for the proposed Rehabilitation and Detention Facility would be located on the central portion of the roof and would be set back from the building façades. Thus, wind that would be intercepted by this structure would be redirected down onto the roof and would not contribute to accelerated ground-level wind speeds. Therefore, the identification of the proposed Rehabilitation and Detention Facility as a 95-foot tall building is not a flaw because the 15-foot-tall mechanical penthouse is not a determining factor in the wind impact analysis in the PMND.

As discussed on PMND pp. 137-138 the 117-foot-tall Hall of Justice, which is upwind of the proposed building site, is properly considered as part of the existing baseline conditions along with other structures in the immediate vicinity and beyond. Any consideration of altering existing baseline conditions by assuming the demolition Hall of Justice would go against standard practice for the San Francisco Planning Department and introduce an error into the proposed project's wind impact analysis. Furthermore, the demolition of the Hall of Justice is not a project that could be considered for a cumulative analysis by the Planning Department because it has not been formally proposed. When, and if, the Hall of Justice were to be demolished it would have to go through a separate environmental review, and, at that point in time, the potential wind impacts of that project would consider the proposed Rehabilitation and Detention Facility as part of its baseline (or existing conditions), assuming the proposed project

is approved and a new HOJ building is constructed. Therefore, the wind impact analysis correctly relies on the combined sheltering effect of the Hall of Justice and the proposed Rehabilitation and Detention Facility as the basis for making a less-than significant determination for project-related wind impacts on the adjacent Sixth Street and Bryant Street sidewalks, and the Sixth Street entries to the proposed Rehabilitation and Detention Facility. As discussed on PMND p. 139, the sidewalks on Ahern Way and Harriet Street would have limited public use due to the location of the proposed loading and jail transport areas. The wind impact analysis discloses the fact that the west façade of the proposed Rehabilitation and Detention Facility would intercept the prevailing winds and direct them downward to the sidewalks on Ahern Way and Harriet Street and found that wind impacts on these sidewalks would be less than significant. This determination would not change if the Hall of Justice were to be demolished, because the proposed Rehabilitation and Detention Facility would continue to provide a sheltering effect at these locations ensuring that ground level wind speeds would remain at acceptable levels.

Thus, the appellant's concerns that wind impacts are underestimated and that potentially significant impacts could occur due to the rooftop mechanical penthouse of the proposed Rehabilitation and Detention Facility and the reliance on the sheltering effect of the existing 117-foot-tall Hall of Justice are based on a misunderstanding of the City's approach to wind impact analyses. No further response is required.

ALTERNATIVES

ALTERNATIVES CONCERN 1: The appellant states that the proposed project to expand jail facilities has significant environmental impacts that require that an EIR be prepared, and an EIR would benefit the public by including an analysis of alternatives that would be preferable under CEQA, such the no-project alternative or health-based alternative programs that could serve the same population prior to incarceration at lower cost with a net benefit to public safety and a reduction in social injustices from the proposed jail expansion.

> "The Preliminary Mitigated Negative Declaration (PMND) failed to study significant environmental impacts regulated by CEQA. Because these impacts exist and have not been mitigated, the project must be further studied. We strongly urge that this study be conducted through a full Environmental Impact Report process so that public comments can be more thoroughly included and so that alternatives - including a no-build alternative - can be compared. Alternatives to the proposed project could be not only preferable under CEQA, but would also be lower cost measures and avoid the harsh social injustices of the proposed jail expansion."
>
> …
>
> "5. A Full EIR will result in choosing a better alternative
>
> "Lastly, we would like to observe some the limitations of the proposed project approval by Negative Declaration. By choosing to (incorrectly) identify the project as one without

> significant environmental impacts, the project sponsors have avoided the time and cost but also the beneficial public input that would be part of a more thorough vetting of the project through CEQA's EIR process. The EIR process requires study of alternatives to the proposed project, generally including a no-build alternative. As we and many other San Francisco residents have already stated in public comments on this EIR and elsewhere, better alternatives to this project are not hard to find. For instance, an expanded Pretrial Diversion program could reduce the need for jail housing by hundreds of people, yet it was studied as an alternative to this expensive and negatively impactful proposal. It is also widely recognized that many people in jail have substance abuse and/or mental health problems. Instead of proposing to treat these vulnerable community members with relatively expensive and poorly performing interventions in a jail setting; public health based alternative programs, including residential programs, could serve the same population at lower cost, with greater effectiveness, and with a net benefit to public safety, by intervening before crimes have occurred. Again, such alternatives have not been studied, and will not be studied if this PMND is approved." (*Californians United for a Responsible Budget*)

RESPONSE TO ALTERNATIVES CONCERN 1: Appellants' assertion that the proposed project would have significant environmental impacts and therefore requires preparation of an EIR is not supported. The preparation of an EIR is required when a proposed project could result in significant impacts; however, a Mitigated Negative Declaration is appropriate when revisions to the proposed project and mitigation measures agreed to by the project sponsor would avoid or reduce impacts such that clearly no significant impacts would occur. While an EIR must include an analysis of alternatives that would reduce or avoid one or more of the significant impacts identified in the EIR, no such analysis is required in an Initial Study that supports issuance of a Mitigated Negative Declaration. As discussed throughout the Mitigated Negative Declaration for the Rehabilitation and Detention Facility Project, the proposed project would not result in significant physical environmental impacts that could not be mitigated to a less-than-significant level; therefore, no EIR is required.

The Appellants may misunderstand portions of the proposed project, which is to replace the existing County jail facilities CJ#3 and CJ#4 in the Hall of Justice. Thus, the proposed project would not expand the City's jail facilities, but in fact would result in 265 fewer beds than the facilities that are being replaced, as explained in the MND/Initial Study on p. 7 (see also the discussion of Travel Demand from the proposed RDF on p. 64 and the discussion of air quality issues in Impact AQ-3 on p. 126).

Studies prepared for the Sheriff's Department indicate that the overall jail population has been declining and is expected to continue to decline over time and the average length of stay has

also declined.[4] The recommendation in the Jail Population Study Update memorandum is to replace the 905 beds in County Jails 3 and 4 with up to 601 beds in the replacement facility if it is assumed that the existing County Jail #6 is not in use. Thus, the proposed project would result in a reduction in the total number of jail beds.

The purpose of analyzing alternatives in an EIR is to focus on alternatives that could avoid or substantially lessen significant physical impacts that would be caused by a proposed project (CEQA Guidelines §15126.6(b)). The effectiveness of treatment programs for jail inmates, provision of additional residential programs for the homeless such as those being carried out by the Mayor's Office HOPE programs, or expansion of the existing San Francisco Pretrial Diversion Project programs, which may reduce the jail population, are social issues that would not be addressed in an analysis of alternatives to the proposed Rehabilitation and Detention Facility if an EIR were to be required.

ISSUES RAISED IN ADDITIONAL LETTERS

In addition to the comments raised in the appeal letter, comments from letters received during the PMND public review period raise additional issues. The general concerns of the comments fall into several categories of issues: Project Description, Population and Housing, Historic and Archaeological Resources, Transportation and Circulation, Noise, Shadow, Utilities and Service Systems, Hazards and Hazardous Materials, and General. These concerns are summarized below and addressed in one master response that corresponds to the topic order.

Project Description

Issues:

- Undisclosed plans to use the mezzanine level for additional beds
- Rejection of San Bruno facility rehabilitation based on inaccurate information about costs and transportation issues
- Permanent displacement of established businesses

Population and Housing

Issue:

- Loss of jobs related to McDonald's and parking

[4] Jay Liao, Kyle Patterson, and Matt Podin, San Francisco Controller's Office, Memorandum to Sheriff Ross Mirkarimi, "Jail Population Study Update," May 28, 2014, pp. 3 and 5. A copy of this document is available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.0198E.

Cultural and Paleontological Resources

Issues:

- Impacts on the California Register-eligible Hall of Justice and on historic buildings at 480-484 Sixth Street and 887-891 Bryant Street
- Excavation impacts on archaeological resources including Native American burial sites
- Vibration impacts on archaeological resources
- Inaccurate level of significance conclusion regarding discovery of Native American burials and attendant delays in excavation

Transportation and Circulation

Issue:

- Need for plans to support or subsidize transportation for construction workers or affected residents, and to reduce traffic congestion; and impacts from increased traffic

Noise

Issue:

- Insufficient study of noise impacts, especially those related to the Bessie Carmichael Elementary School

Shadow

Issues:

- Cumulative shadow impacts on Victoria Manalo Draves Park and conflict with General Plan policies relating to preservation of sunlight on open spaces

Utilities and Service Systems

Issues:

- Appropriateness of using water resources for a jail during the drought
- Insufficient study of water quality impacts

Hazards and Hazardous Materials

Issues:

- Absence of soil sampling
- Need to analyze site soils for toxins that could become airborne

General

Issues:

- Appropriateness of using tax dollars to build a new jail rather than allocating funds to services and uses such as schools, affordable housing, health care, mental health, and open space
- Social issues such as human rights violations, root causes of poverty and homelessness, and concern that a PMND was prepared for the proposed project rather than an EIR because the City wants a "blank check" for the project and will use the facility to incarcerate the homeless as part of gentrification

MASTER RESPONSE

The comments do not provide evidence or argument to support the issues raised. With regard to the issue about rejecting use of the San Bruno Jail, County Jail #5 at San Bruno is currently in use; rehabilitation of the old jail facility at San Bruno (CJ #6) to house jail inmates could occur in the future, but was not analyzed as an alternative to the proposed RDF site because of the cost and time required to transport inmates to the courts in San Francisco for hearings compared to the cost and time to transport them from the proposed RDF to the adjacent courts in the Hall of Justice. The comment does not identify what inaccuracies there might be regarding cost to transport inmates from San Bruno to San Francisco. As explained in the Responses to Alternatives Issues, above, a MND is not required to analyze alternatives to the proposed project.

The other issues raised in these comments are addressed in the Initial Study, as follows:

- Use of mezzanines (which would not increase the total number of beds) is discussed in the Initial Study on pp. 8 and 13, and the total number of beds proposed is on Initial Study p. 7.
- Existing businesses are described on Initial Study p. 4.
- Employment at the project site is discussed in Section E.2, Population and Housing, pp. 35-39.
- Impacts on historic and archaeological resources are analyzed in Section E.3, Cultural and Paleontological resources, pp. 40-54.
- Transportation and circulation impacts are analyzed in Section E.4, Transportation and Circulation, pp. 54-89.
- Noise impacts to sensitive receptors, are analyzed in Section E.5, Noise, pp. 89-111. Bessie Carmichael Elementary School is noted as a sensitive receptor on Initial Study p. 95, but is not specifically analyzed in the impact analyses because it is across the freeway and at a much greater distance from the project site than the sensitive residential uses at 480-488 Sixth Street which is adjacent to the project site. As no

significant and unmitigable noise impacts were identified for the nearby residential use, and noise levels from the proposed project would be less at greater distances from the project site, there is no need to separately discuss noise impacts at the school.

- Section E.8, Wind and Shadow, discusses cumulative shadow impacts, specifically net new shadow on Victoria Manalo Draves Park, on PMND pp. 147-149. As discussed on PMND pp. 142-143 the proposed RDF would cast net new shadow on the southeastern portion of Victoria Manalo Draves Park between February 3 and April 25 and between August 17 and November 7. The cumulative analysis was based on the technical background study (see PMND Appendix H: Shadow Analysis Report for the Proposed Hall of Justice Rehabilitation and Detention Facility per San Francisco Planning Code Section 295 Standards). As discussed on PMND pp. 148 the proposed project would not combine with shadow from cumulative projects because the shadows would not occur on the same portion of the park, i.e. the proposed project's net new shadow would fall on the southeastern portion of the park while net new shadow from the cumulative projects would fall on the northern portion of the park.
- Water supply, quality, and systems are described in Section E.10, Utilities and Service Systems, pp. 152-158, and Section E.14, Hydrology and Water Quality, pp. 175-194.
- Section E.15, Hazards and Hazardous Materials, pp. 195-211, addresses the potential soil contamination on the project site from past uses.

The Planning Department finds that the concerns stated by the commenters on the PMND do not raise any issues not already addressed in the PMND. The Department's responses rely on summary text from the full CEQA record, which includes the PMND and background studies, and other documents and information in the record as appropriate. The issues listed under General concern social issues and do not raise any specific environmental issues that require discussion in the CEQA document. Decision-makers may consider these issues during their determination as to whether to approve the proposed project.

CONCLUSION

Staff recommends that the Planning Commission adopt the motion to uphold the Preliminary Mitigated Negative Declaration. No substantial evidence supporting a fair argument that a significant environmental effect may occur as a result of the project has been presented that would warrant preparation of an Environmental Impact Report. By upholding the PMND (as recommended), the Planning Commission would not prejudge or restrict its ability to consider whether the proposed project's uses or design are appropriate for the neighborhood.

Exhibit B

Appeal Letter from Californians United for a Responsible Budget

Californians United for a Responsible Budget

Oakland Office:
1322 Webster St # 210 Oakland, CA 94612
510-435-1176 (c)
510-839-7615 (f)

Los Angeles Office:
1137 E. Redondo Blvd. Inglewood, CA
213-864-8931(c)
www.curbprisonspending.org

June 2, 2015

San Francisco Planning Department
Attn: Sarah B. Jones
1650 Mission Street, Suite 400
San Francisco, CA 94103

Re: 850 Bryant Street-HOJ-Rehabilitation and Detention Facility

Dear Planning Department,

We are writing to appeal the approval of the Preliminary Mitigated Negative Declaration issued May 13, 2015 for the 850 Bryant Street Hall of Justice Rehabilitation and Detention Facility Project.

The Preliminary Mitigated Negative Declaration (PMND) failed to study significant environmental impacts regulated by CEQA. Because these impacts exist and have not been mitigated, the project must be further studied. We strongly urge that this study be conducted through a full Environmental Impact Report process so that public comments can be more thoroughly included and so that alternatives – including a no-build alternative – can be compared. Alternatives to the proposed project could be not only preferable under CEQA, but would also be lower cost measures and avoid the harsh social injustices of the proposed jail expansion. But with or without and EIR process, the Preliminary Mitigated Negative Declaration as currently written should be rejected because of its serious flaws.

1. Air quality and noise impacts on building occupants' outdoor space are not assessed and are potentially significant

The PMND recognizes that people being held in jail are "sensitive receptors" and that podular housing units are a sensitive land use for the purposes of CEQA air quality assessment, (PMND, p. 123-124, 128) and that the project is located in an Air Pollutant Exposure Zone. (PMNd, p. 128) The PMND asserts that an Enhanced Ventilation Proposal approved by the Department of Public Health will be sufficient to mitigate the exposure of sensitive receptors to increased pollutant exposure. However, unlike other residential occupancies, people in jail are restrained not only in the indoor air quality they are exposed to but in their access to healthy outdoor air. In particular, the proposed building designs indicate that people in jail will be required to exercise and have outdoor recreation in yards that face Highway 101 to the west (PMND, p. 15-17). The proposed Enhanced Ventilation Proposal does not mitigate exposure to the dangerous air quality inherent in the proposed project site's outdoor areas. In fact, the building design of stacked, semi-enclosed yards facing into the prevailing winds coming across the freeway may well exacerbate already unacceptable outdoor air quality in the area. The potentially significant health impacts of having restricted outdoor spaces in an Air Pollutant Exposure Zone with designs that may concentrate pollutant levels have not even been studied in the MPND, let along mitigated.

In addition, the noise levels for the outdoor yards are unacceptable. Although they have not been

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assessed within the PMND (which is its an error with the PMND), they can be expected to be at least as loud as current outdoor measurements at a similar elevation in the vicinity. (Elevation is an important factor to accurately reflect the distribution of freeway noise that is louder above and lower below the roadway guardrail height.) In fact, the partial enclosure of the proposed outdoor yards would likely reflect sound to increase noise levels. The PMND notes that "background noise levels (at or above the freeway elevation) were found to be 79 dBA (Ldn)74 near the northern façade (closest to the freeway) and 75 dBA (Ldn)75 near the southern façade (mid-block)." (PMND, p. 106-107) The most relevant categories from San Francisco's Land Use Compatibility Chart for Community Noises are "Outdoor Spectator Sports," which "should not be undertaken" in areas where outdoor noise is above levels of 73 dBA, and Playgrounds, which "should nor be undertaken" in areas where outdoor noise is above 75 dBA. (PMND, p. 97) Freeway noise levels are projected to increase by as much as 2.4 dBA in the future (PMND, p. 110). Noise is already recognized to be an additional source of stress within the jail environment, and outdoor spaces are generally one of a very few opportunities people in jails have to experience a less stressful environment. (Richard Wener, "The Environmental Psychology of Prisons and Jails," Ch. 9 – "The Effects of Noise in Correctional Settings": Cambridge University Press, 2012.) The proposed site is fundamentally incompatible with acceptable outdoor recreation, but the PMND has not studied, let alone mitigated, these conditions for the project.

While the inadequate level of study alone should result in rejection of the PMND, we would like to observe that the negative impacts of being forced to live in an extremely noisy Air Pollutant Exposure Zone are not borne equally by all sectors of San Francisco's population. Many observers, including the San Francisco Sheriff, have noted the gross over-representation of people of color and specifically African-Americans in San Francisco's jails. African-Americans are approximately 6% of San Francisco's population but 56% of the county jail population. (Office of the Controller: "County Jail Needs Assessment," August 15, 2012, p. 11 - http://www.sfsheriff.com/files/sf_jail_needs_8_2013.pdf) In addition, approximately 75% of people in jail are awaiting trial, most of whom can not afford bail but are not offered alternatives means of awaiting trial in the community because of under-funding of the Sheriff's Pretrial Services Division. While we recognize that funding for local programs is not directly a CEQA concern, Environmental Justice is an appropriate concern for environmental planning documents. In the case of the proposed project, the negative health impacts of being forced to spend one's only outdoor time in a noisy enclosed yard whose only open side is immediately adjacent to the most crowded freeway will be focused especially on poor African-Americans and people of color.

2. Project fails to comply with San Francisco Proposition M

As noted in the PMND, "Prior to issuing a permit for any project which requires an Initial Study under CEQA, prior to issuing a permit for any demolition, conversion, or change of use, and prior to taking any action which requires a finding of consistency with the General Plan, the City is required to find that the proposed project or legislation would be consistent with the Priority Policies." (PMND, p. 28) Priority Policy #2 is "2) conservation and protection of existing housing and neighborhood character to preserve the cultural and economic diversity of neighborhoods;" #3 is "preservation and enhancement of affordable housing;" and #5 is "5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership." (PMND, p. 27) However, the project includes potential displacement of 14 units of existing affordable "SRO" housing: "If relocation of the building

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tenants is determined necessary, it is likely that the building could accommodate future commercial/office uses." (PMND, p. 8) The potential "residential relocation plan" to be drafted by a different City department is not part of the PMND and may face significant hurdles. As is well known, the current supply of affordable rental housing in San Francisco is in a total state of crisis due to rising rents and the widespread use of eviction against low-income tenants. Waiting lists for public and affordable housing are years-long. San Francisco Housing Authority recognizes that "The demand for low-income housing in San Francisco far exceeds available units." (http://www.sfha.org/Residents-Applicants.html) SFHA advises low-income tenants, "in many cases, you may have to wait 4 to 9 years before your name will reach the top of the List." (http://www.sfha.org/FAQ-s.html) And at present, the waitlist for Section 8 housing is currently closed, and only 3 units were listed on their availability page within the past two years. (http://sfha.org/Information--Section-8.html, http://sfha.gosection8.com/SearchRentals.aspx)

In the current affordable housing crisis it is unrealistic in the extreme to assume that the Real Estate Division of the San Francisco General Services Agency has the funding or ability to acquire – even on a temporary basis – 14 units of affordable housing if the Housing Authority, which has the specific charge to find such units and lease them through Section 8 – cannot even accomplish this. Loss of the units violates Priority Policy #2 and #3; insofar as the area around this building is zoned SALI (Service/Arts/Light Industrial), conversion of the SRO into commercial/office uses would further violate Priority Policy #5 by encroaching such uses into an industrial and service land-use area.

The PMND fails to comply with the City and County of San Francisco's Priority Policies #2, #3, and #5 and so should be rejected.

3. Parking impacts are not mitigated, but the project is not an employment center project

The PMND claims that "aesthetics and parking are no longer to be considered in determining if a project has the potential to result in significant environmental effects" per Public Resources Code Section 21099(d), effective January 1, 2014 ("aesthetics and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment") because the proposal is an "employment center project" (PMND, p. 31, 79). However, Public Resources Code Section 21099(1)(a) clearly states "'Employment center project' means a project located on property zoned for commercial uses with a floor area ratio of no less than 0.75 and that is located within a transit priority area." The PMND states multiple times that the zoning from the project site is currently SALI (Service/Arts/Light Industrial) and is proposed to be changed to P (Public Use) (PMND p.2, 5, etc.) The project is not an "employment center project" because it is not on a parcel zoned for commercial uses – it is proposed to be zoned for public non-commercial uses. Thus parking impacts must be considered potentially significant unmitigated environmental impacts.

The PMND's "informational" parking analysis indicates that the project will result in the removal of 22 off-street and 41 on-street spaces, all of them in a neighborhood of high demand. In addition, the project is projected to create a net increase of 47 new FTE employees (PMND, p. 36) creating a net new parking demand of 10 spaces for the Jail ("RDF") portion, plus 26 more for the proposed reuse of 480-484 Sixth St. The PMND notes that "during field surveys on-street

Californians United for a Responsible Budget

Oakland Office:
1322 Webster St # 210 Oakland, CA 94612
510-435-1176 (c)
510-839-7615 (f)

Los Angeles Office:
1137 E. Redondo Blvd. Inglewood, CA
213-864-8931(c)
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parking spaces on Harriet Street, Ahern Way, and Sixth Street were at or close to 100 percent occupied throughout the day," and that "visitors or others that utilize the on-street parking on Harriet Street, Ahern Way, and Sixth Street would need to be accommodated elsewhere in the project vicinity, either on street or in other off- street facilities." (PMND, p. 80.) The PMND concludes that "the net new project parking demand, and the demand associated with the parking spaces that would be eliminated, would need to be accommodated on-street or within nearby off-street facilities, and area-wide parking occupancy would increase further" – but the project includes no such accommodation. While the PMND speculates that "under cumulative conditions, as under existing conditions, due to the difficulty in finding on-street parking in the study area, some drivers may park outside of the study area, switch to transit, car-sharing, carpooling, walking, or bicycling." (PMND, p. 89) However, the project includes no significant transit, car-sharing, carpooling, walking, or bicycling improvements, exacerbating the potentially significant unmitigated environmental impacts created by the parking impacts.

In fact, the PMND even recognizes that "considering cumulative parking conditions, over time, due to the land use development and increased density anticipated within the City, parking demand and competition for on- and off- street parking is likely to increase." (PMND, p. 88) It also recognizes – but fails to study – "secondary physical impacts associated with constrained supply (e.g., queuing by drivers waiting for scarce on-site parking spaces that affects the public right-of-way)" and circling by rivers looking for parking spaces. (PMND, p. 79) The traffic analysis indicates that 4 of the 5 studied intersections already experience a Level of Service score of C or worse (1 is an F) at peak times (PMND, p. 59). Adding more vehicles to these congested conditions will aggravate traffic conditions and create more local air pollution and other potentially significant unmitigated environmental impacts.

In summary, the increased parking demand on both on-street and off-street parking spaces is clearly an unmitigated environmental impact. The unmitigated parking impacts could give rise to further unmitigated impacts on traffic and air quality. If for no other reason, the PMND should be rejected.

4. Wind impacts are underestimated and potentially significant

The PMND argument that "the proposed project would result in a less-than-significant impact related to wind hazards" (PMND, p. 139) relies on the fact that "the proposed Jail ("RDF") would not be taller than the existing 117-foot-tall Hall of Justice." (PMND, p. 138) However, there are significant errors in this purported fact. The wind analysis section identifies the new building as 95 feet high (PMND, p. 138) while elsewhere it is proposed as 95 feet high plus a 15-foot tall mechanical penthouse (PMND, p. 5). The project drawings indicate that the mechanical penthouse would occupy approximately 80% of the building roof area. (PMND, p. 9-12). The wind impact should thus be analyzed for a 110-foot tall building, which seems to be a basic error in the wind impact assessment.

A potentially greater error lies in the reliance on the existing Hall of Justice as part of the wind assessment. The Jail ("RDF") project is only one piece of the larger Justice Facilities Improvement Program, which intends to demolish the majority of the Hall of Justice building "once all occupants are relocated." (http://www.sfdpw.org/index.aspx?page=127) Because the Jail ("RDF") proposal is the most complex and costly portion of the JFIP program, it is

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reasonable to assume that if the proposed project is built the Hall of Justice demolition will follow. In fact, the current project is proposed in order to enable the demolition of the Hall of Justice. The demolition of part of the Hall of Justice would significantly alter the wind dynamics in the area, yet the PMND wind assessment does not include the impact of the intended outcome of the proposed project. The PMND should not be approved with a flawed wind assessment.

5. A Full EIR will result in choosing a better alternative

Lastly, we would like to observe some the limitations of the proposed project approval by Negative Declaration. By choosing to (incorrectly) identify the project as one without significant environmental impacts, the project sponsors have avoided the time and cost but also the beneficial public input that would be part of a more thorough vetting of the project through CEQA's EIR process. The EIR process requires study of alternatives to the proposed project, generally including a no-build alternative. As we and many other San Francisco residents have already stated in public comments on this EIR and elsewhere, better alternatives to this project are not hard to find. For instance, an expanded Pretrial Diversion program could reduce the need for jail housing by hundreds of people, yet it was studied as an alternative to this expensive and negatively impactful proposal. It is also widely recognized that many people in jail have substance abuse and/or mental health problems. Instead of proposing to treat these vulnerable community members with relatively expensive and poorly performing interventions in a jail setting; public health based alternative programs, including residential programs, could serve the same population at lower cost, with greater effectiveness, and with a net benefit to public safety, by intervening before crimes have occurred. Again, such alternatives have not been studied, and will not be studied if this PMND is approved.

In closing, for all the reasons listed above, we urge your department to reject the Preliminary Mitigated Negative Declaration issued May 13, 2015 for the 850 Bryant Street Hall of Justice Rehabilitation and Detention Facility Project.

Sincerely,

Architects, Designers, Planners for Social Responsibility
California Coalition for Women Prisoners
Californians United for a Responsible Budget
Coalition on Homelessness
Critical Resistance-Oakland
Ella Baker Center
Housing Rights Committee
OWL-SF
San Francisco Tenants Union
St. James Infirmary
Tax Payers for Public Safety
Transgender, Gender Variant, and Intersex Justice Project
Western Regional Advocacy Project

Exhibit C

Comment Letters Received During PMND Review Period

C.1 - Comment Letter from Lisa Marie Alatorre
C.2 – Other Comment Letters

C.1 – Comment Letter from Lisa Marie Alatorre

The comment letter submitted by Lisa Alatorre on May 26, 2015 was repeated as a form letter and resubmitted electronically via e-mail without any changes by 173 individuals and groups.

From:	Lisa Marie Alatorre
To:	Espiritu, Christopher (CPC); nosfjail@curbprisonspending.org
Subject:	Public comment on RDF mitigated negative declaration
Date:	Tuesday, May 26, 2015 10:37:12 AM

Name: Lisa Marie Alatorre
Email: lisa.alatorre@gmail.com
Comment: Dear San Francisco Board of Supervisors, San Francisco Planning Department, and Sheriff Mirkarimi,

This email serves as public comment for the Preliminary Mitigated Negative Declaration issued May 13, 2015 for the 850 Bryant Street Hall of Justice Rehabilitation and Detention Facility Project.

The proposed project not only could displace the individuals and families living in the 14 SRO units of the historic building at 480-484 Sixth Street but could also serve to undermine the provisions of Annual Limit Program and the Accountable Planning Initiative (Proposition M) by increasing office space, decreasing affordable housing for our most marginalized residents, and encouraging gentrification.

This project will take away space currently used by well-established businesses in the community. Older businesses struggle to find affordable rental space in SoMA in this market; we will lose them forever.

The mezzanine level mentioned in the report is not shown in the plans, and we suspect that this is a way to warehouse more than the projected 640 beds.

Victoria Manalo Draves Park is a brand new, 2.5-acre park with a softball field, basketball court, dual-level playground, picnic area, community garden and large, grassy field in the SOMA neighborhood, next to Bessie Carmichael Elementary School and near Bessie Carmichael School/Filipino Education Center. The park is named for local diving champion Vicki Manalo Draves, the first Filipina-American to compete in the Olympic games. This project, in conjunction with other commercial development projects in the area, would cast shadows on both the northern and southeastern parts of the park. This conflicts with General Plan policies related to urban design and the preservation of sunlight on open spaces.

The project planners claim to be exempt from parking analysis because they are an "employment center" project that has an exemption. However, it is clear that "employment center" projects are on commercial zoned parcels, and this site is not zoned C. So they are not exempt. They also state that they will remove 22 off-street and 41 on-street spaces, all of them in a neighborhood of high demand. This requires careful analysis. It also looks like they knew this but attempted to claim the "employment center" designation, since they address the two other criteria for CEQA exemption but not the zoning.

The planners have no plan to address loss of parking spots in the community, no plans to support or subsidize alternative transportation for construction workers or residents impacted, no plans to reduce traffic or construction worker/resident congestion, and will instead waste a ton of money on surveys and hiring unnecessary city workers to monitor the disaster with no real plans for alleviating the stress and burden this will place on San Francisco.

The rehabilitation of the San Bruno facility has been rejected because of exaggerated costs and false information regarding transportation of prisoners to and from the downtown courts.

According to the California Register of Historical Resources, the Hall of Justice is eligible for listing in the California Register because of the many high-profile trials that took place there and the central role it played in several notable protests led by community activists in San Francisco during the 1960s,1970s, 1980s, and 1990s. This area of the city is also home to the historic building at 480-484 Sixth Street, which is a three-story, 14-unit single room occupancy (SRO) residential building with retail on the ground floor, constructed in 1916. It is also near the property at 887-891 Bryant Street, built in 1920, which is an Art Deco style commercial building.

Digging a pedestrian tunnel to transport prisoners would require approximately 18,000 cubic yards of

soil to be removed from the project site and would have significant archeological impact in an area known to contain archeological resources from the “prehistoric period and Gold Rush Period to later 19th Century.” Planners are also “concerned” about vibration levels during construction that could significantly damage more local archaeological resources.

If any evidence of Native American burials are found, there is a 6 day window to figure out what to do with the remains, and the planners would be forced to delay excavation for up to four weeks. The planners have deemed this aspect of their project “less than significant.”

Filtration can provide people in jail with decent air quality, but how about during outdoor time? Having "outdoor" yards right next to a freeway is potentially quite dangerous; in the proposed design, the yards face the freeway. The design of the semi-enclosed yards may actually concentrate freeway pollution. They did not study this.
The wind analysis may have used the wrong height, 95 instead of 110, and did not include the future plan to demolish the Hall of Justice (HOJ).

There is a great deal that the planners did not plan for in this preliminary report.

For these reasons and many more, the project should be further studied and the Preliminary Mitigated Negative Declaration should not be approved. A new jail will not only be terrible for the environment, but will be terrible for San Francisco and its residents.

Lastly, there has been absolutely NO concern for the human impact this jail would have....I reject the premise that this is not an environmental concern, especially for an urban space. We need a full analysis of a the "no build" option as well as an evaluation of the human impact.

I hope we can count on you to do the RIGHT thing and ensure a full EIR on this uneccessary and harmful project.
Zipcode: 94601

Time: May 26, 2015 at 5:37 pm
IP Address: 107.217.188.73
Contact Form URL: https://nonewsfjail.wordpress.com/submit-comment-to-the-mitigated-negative-declaration/

Sent by a verified WordPress.com user.

C.2 – Other Comment Letters

San Francisco Planning Department
1650 Mission Street, Ste. 400
San Francisco, CA 94103-2479
Attn: Chris Espiritu

Re: 850 Bryant Street-HOJ
Case No: 2014.0198E

To: San Francisco Board of Supervisors, San Francisco Planning Department, and Sheriff Mirkarimi,

Please No New Jail there's so many human Right violation that Is being and has historically close to Community of Colors denied ~~access~~ to low Income folk for Jail

Job will be cut from Mc donalds
Jobs from the Parking lot will be loss

Sincerely,

Jenna Gaarde <donotreply@wordpress.com> June 1, 2015 12:25 PM
To: christopher.espiritu@sfgov.org, nosfjail@curbprisonspending.org
Reply-To: "Jenna Gaarde" <jennagaarde@gmail.com>
Public comment on RDF mitigated negative declaration

Name: Jenna Gaarde
Email: jennagaarde@gmail.com
Comment: Dear San Francisco Board of Supervisors, San Francisco Planning Department, and Sheriff Mirkarimi,

On page 136 of the CEQA statutes it states under Mandatory Findings of Significance that a project must declare if, "The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly."

The World Health Organization defines environmental health as addressing, "all the physical, chemical, and biological factors external to a person, and all the related factors impacting behaviors." Freeways or polluting factories are obvious forms of pathogenic infrastructure, that is they are physical factors, which cause adverse effects on human beings. Within public health there is a large body of evidence that argues that jails and prisons are types of pathogenic infrastructure that have adverse effects on humans. Jails are physical factors that alter the environment in which San Franciscans live, just as parks increase availability of open space and places to play. They prevent access to services, disrupt ability to work and have "contagion" effects in communities that are disproportionately represented in jails. In San Francisco many of these populations experience high levels of mental health conditions, chronic illness and substance abuse issues. A November 24, 2014 NY Times Op-Ed pulled from a recent report by the Vera Institute of Justice to argue that mass incarceration poses, "one of the greatest public health challenges of modern times." Jail exacerbates these health concerns, increasing rates of STDs, severity of substance abuse disorders and exposure to violence. The Vera report found nationwide, for example, that suicide accounts for one-third of deaths in jails, and that while 68% of jailed individuals have diagnosable substance abuse disorders, less than 15% receive appropriate treatment. Higher rates of health conditions increase the use of city services, medications, and emergency services such as fire and police and decrease healthy behaviors that have environmental co-benefits such as biking or eating healthy foods.

Under CEQA, it is required that the building of a new jail, as pathogenic infrastructure, must submit additional findings on the adverse effects on human beings that it causes through its environmental effects.
Zipcode: 94605

Time: June 1, 2015 at 7:25 pm
IP Address: 186.151.119.254
Contact Form URL: https://nonewsfjail.wordpress.com/submit-comment-to-the-mitigated-negative-declaration/
Sent by an unverified visitor to your site.

May 30, 2015

San Francisco Planning Department
1650 Mission Street, Ste. 400
San Francisco, CA 94103-2479
Attn: Chris Espiritu

Re: 850 Bryant Street-HOJ
Case No: 2014.0198E

To: San Francisco Board of Supervisors, San Francisco Planning Department, and Sheriff Mirkarimi,

I am writing to urge you to reconsider the Mitigated Negative Declaration issued May 13, 2015 for the 850 Bryant Street Hall of Justice Rehabilitation and Detention Facility Project. This jail would have disastrous environmental impacts. First of all, the jail plan includes many "outdoor" yards next next to a freeway, which will expose prisoners to toxic air pollution, and the semi-enclosed yards are likely to concentrate freeway pollution. Second, the plan will result in a loss of parking spots, but there are no plans to support workers or impacted residents. of substitute alternative transportation for construction

I am also quite upset that the Board of Supervisors is moving forward to spend $290,000,000 on a new jail instead of putting that money towards what San Franciscans desperately need: affordable housing, access to good education, quality healthcare, and green spaces. I love this city and want it to be a place where all our community members can lead safe, whole, sustainable lives! I hope you will consider how beneficial this money could be if it is put towards services and needed infrastructure like schools instead of this unneeded jail.

Thank you.

Sincerely,

Joss Green

San Francisco Planning Department
1650 Mission Street, Ste. 400
San Francisco, CA 94103-2479
Attn: Chris Espiritu

Re: 850 Bryant Street-HOJ
Case No: 2014.0198E

To: San Francisco Board of Supervisors, San Francisco Planning Department, and Sheriff Mirkarimi,

This letter serves as public comment for the preliminary Mitigated Negative Declaration issued May 13, 2015 for the 850 Bryant street Hall of Justice Rehabilitation and Detention Facility Project.

It's totally unacceptable that you have not completed a full environmental impact report for the proposed construction at 850 Bryant. There was no soil sample taken, the impact on traffic was not taken into consideration during construction of the project, and the impacts of the demolition of the existing buildings at the site.

There should be no new jail in San Francisco!

Sincerely,

San Francisco Planning Department
1650 Mission Street, Ste. 400
San Francisco, CA 94103-2479
Attn: Chris Espiritu

Re: 850 Bryant Street-HOJ
Case No: 2014.0198E

To: San Francisco Board of Supervisors, San Francisco Planning Department, and Sheriff Mirkarimi,

This letter is my public comment on the "Preliminary Mitigated Negative Declaration" issued May 13, 2015 for the 850 Bryant Street Hall of Justice Rehabilitation and Detention facility Project.

IN MY OPINION THE "PRELIMINARY MITIGATED NEGATIVE DECLARATION" SHOULD BE REJECTED. It should be rejected for the following reasons:

Overall, the PMND is based on unrealistic assumptions, incorrect statements, and vague claims. Additionally the PMND is incomplete and fails to consider important environmental impacts.

(1) The PMND incorrectly claims "employment center" designation for the construction. The proposed site is not zoned C and, hence, cannot be designated as such. Therefore, a parking analysis is [redacted] required by law and needed because we can reasonably anticipate a negative impact on parking due to the increased capacity of the jail.

(2) The PMND incorrectly assumes there will be no impact on individuals and families living in 14 SRO units in the historic building at 480-484 6th Street. In fact, the new construction raises the probability of displacement. Given the crisis we face in San Francisco of a lack of affordable housing and SRO units this needs to be investigated further in a full EIR. Additionally, these families will be impacted by the next point...

(3) The PMND is in conflict with the General Plan policies related to urban design and the preservation of sunlight on open spaces. This project will contribute to the casting of shadows on the northern and southeastern parts of the park.

Sincerely,

④ The PMND incorrectly assumes that the project will have no impact on traffic. At commuting hours this is a very congested area. It is unrealistic to assume that such a large project will not impact traffic through and access to the area.

⑤ The PMND incorrectly assumes that the potential to find Native American burials is "Less than Significant". In fact, the project proposes massive new displacements of soil that greatly threatens potential burial sites and, [redacted] additionally, potential archeological finds. This potential impact needs to be studied further.

⑥ The PMND fails to address the issue of air quality in the open yards that are part of the proposed facility. These semi-enclosed yards are located adjacent to the freeway and may, in fact, concentrate the air pollution from the freeway. This presents a potentially major health risk to facility inhabitants and employees.

Any One or two of the reason above should be sufficient to warrant a full EIR. Together they create a mandate for the rejection of PMND.

Sincerely,

Sami Kilmitto

[redacted]

San Francisco, CA 94110

San Francisco Planning Department
1650 Mission Street, Ste. 400
San Francisco, CA 94103-2479
Attn: Chris Espiritu

Re: 850 Bryant Street-HOJ
Case No: 2014.0198E

To: San Francisco Board of Supervisors, San Francisco Planning Department, and Sheriff Mirkarimi,

This letter serves as public comment for the Preliminary Mitigated Negative Declaration issued May 13, 2015 for the 850 Bryant St. Hall of Justice Rehabilitation and Detention Facility Project.

It is crucial that an Environmental Impact Report is issued as part of this application and further study of the proposed facility's impact is conducted. I am particularly concerned about the health impact on people inside and outside the facility (those detained, workers, and neighbors). What is the quality of the soil on the site? Does it contain any toxins that would be released into the air? How would the facility's location next to a freeway impact the health of those detained, whose only access to the outdoors is the yard, presumabely full of exhaust fumes (the Declaration states that air filtration will only be provided inside the facility).

This is one of countless concerns I have about the proposed jail's impact on the greater San Francisco community. I urge the Board to reject the Declaration and require further study

Sincerely,

Johannes Kutmich.

San Francisco Planning Department
1650 Mission Street, Ste. 400
San Francisco, CA 94103-2479
Attn: Chris Espiritu

Re: 850 Bryant Street-HOJ
Case No: 2014.0198E

To: San Francisco Board of Supervisors, San Francisco Planning Department, and Sheriff Mirkarimi,

Please make safety housing and mental Health/Substance and Behavioral clinics for a target persons in this great rich and nonviolent city in most area Outside Markets Streets, Castro, Mission St to Daly City, and Bayview Hunter's point - on I and Heights Fleet to Golden Gate Park.

Sincerely,

Sir Edmond Luigi Lamy

San Francisco Planning Department
1650 Mission Street, Ste. 400
San Francisco, CA 94103-2479
Attn: Chris Espiritu

Re: 850 Bryant Street-HOJ
Case No: 2014.0198E

To: San Francisco Board of Supervisors, San Francisco Planning Department, and Sheriff Mirkarimi,

This letter serves as public comment for the Preliminary Mitigated Negative Declaration issued May 13, 2015 for the 850 Bryant Street Hall of Justice Rehabilitation and Detention Facility Project.

The proposed project not only could displace the individuals and families living in the 14 SRO units of the historic building at 480-484 Sixth Street but could also serve to undermine the provisions of Annual Limit Program and the Accountable Planning Initiative (Proposition M) by increasing office space, decreasing affordable housing for our most marginalized residents, and encouraging gentrification.

This project will take away space currently used by well-established businesses in the community. Older businesses struggle to find affordable rental space in SoMA in this market; we will lose them forever.

The mezzanine level mentioned in the report is not shown in the plans, and we suspect that this is a way to warehouse more than the projected 640 beds.

Victoria Manalo Draves Park is a brand new, 2.5-acre park with a softball field, basketball court, dual-level playground, picnic area, community garden and large, grassy field in the SOMA neighborhood, next to Bessie Carmichael Elementary School and near Bessie Carmichael School/Filipino Education Center. The park is named for local diving champion Vicki Manalo Draves, the first Filipina-American to compete in the Olympic games. This project, in conjunction with other commercial development projects in the area, would cast shadows on both the northern and southeastern parts of the park. This conflicts with General Plan policies related to urban design and the preservation of sunlight on open spaces.

The project planners claim to be exempt from parking analysis because they are an "employment center" project that has an exemption. However, it is clear that "employment center" projects are on commercial zoned parcels, and this site is not zoned C. So they are not exempt. They also state that they will remove 22 off-street and 41 on-street spaces, all of them in a neighborhood of high demand. This requires careful analysis. It also looks like they knew this but attempted to claim the

"employment center" designation, since they address the two other criteria for CEQA exemption but not the zoning.

The planners have no plan to address loss of parking spots in the community, no plans to support or subsidize alternative transportation for construction workers or residents impacted, no plans to reduce traffic or construction worker/resident congestion, and will instead waste a ton of money on surveys and hiring unnecessary city workers to monitor the disaster with no real plans for alleviating the stress and burden this will place on San Francisco.

The rehabilitation of the San Bruno facility has been rejected because of exaggerated costs and false information regarding transportation of prisoners to and from the downtown courts.

According to the California Register of Historical Resources, the Hall of Justice is eligible for listing in the California Register because of the many high-profile trials that took place there and the central role it played in several notable protests led by community activists in San Francisco during the 1960s,1970s, 1980s, and 1990s. This area of the city is also home to the historic building at 480-484 Sixth Street, which is a three-story, 14-unit single room occupancy (SRO) residential building with retail on the ground floor, constructed in 1916. It is also near the property at 887-891 Bryant Street, built in 1920, which is an Art Deco style commercial building.

Digging a pedestrian tunnel to transport prisoners would require approximately 18,000 cubic yards of soil to be removed from the project site and would have significant archeological impact in an area known to contain archeological resources from the "prehistoric period and Gold Rush Period to later 19th Century." Planners are also "concerned" about vibration levels during construction that could significantly damage more local archaeological resources.

If any evidence of Native American burials are found, there is a 6 day window to figure out what to do with the remains, and the planners would be forced to delay excavation for up to four weeks. The planners have deemed this aspect of their project "less than significant."

Filtration can provide people in jail with decent air quality, but how about during outdoor time? Having "outdoor" yards right next to a freeway is potentially quite dangerous; in the proposed design, the yards face the freeway. The design of the semi-enclosed yards may actually concentrate freeway pollution. They did not study this.
The wind analysis may have used the wrong height, 95 instead of 110, and did not include the future plan to demolish the Hall of Justice (HOJ).

There is a great deal that the planners did not plan for in this preliminary report.

For these reasons and many more, the project should be further studied and the Preliminary Mitigated Negative Declaration should not be approved. A new jail will not only be terrible for the environment, but will be terrible for San Francisco and its residents.

Sincerely,

Czarina Livelo

Czarina Livelo.

P.S. The impact is just as much human as it is environmental. Erecting a new jail does not solve the root problem of homelessness, poverty, or criminal activity. We need to address how we can service underserved communities. We do not need to perpetuate the school-to-prison pipeline, we need to provide our neighbors and friends with education, mental health services, and overall safe spaces. A "humane" new jail is irrelevant if we cannot even treat San Franciscans with humanity and justice. Please reconsider the impact. Invest in our people and not in prisons. No new SF Jail!

San Francisco Planning Department
1650 Mission Street, Ste. 400
San Francisco, CA 94103-2479
Attn: Chris Espiritu

Re: 850 Bryant Street-HOJ
Case No: 2014.0198E

To: San Francisco Board of Supervisors, San Francisco Planning Department, and Sheriff Mirkarimi,

THERE EXIST A HOUSING CRISIS IN S.F. THIS HOUSING CRISIS CAUSES HOMELESSNESS. SIX THOUSAND PEOPLE THAT LIVE S.F. ARE HOMELESS THIS INCLUDES FAMILIES. THE ROOT CAUSES ARE POVERTY AND INEQUALITY. THE TAX PAYERS ARE GETTING SHIT SHIFTED BY THIS CITY POLICY OF NOT ADDRESSING ROOT CAUSES OF POVERTY, HOMELESSNESS AND INEQUALITY. ADDITIONAL POLICE AND JAIL CONSTRUCTION DOESN'T GET AT ROOT CAUSES. THEY ONLY EXACERBATE THE PROBLEMS PLAGUING US.

Sincerely,

San Francisco Planning Department
1650 Mission Street, Ste. 400
San Francisco, CA 94103-2479
Attn: Chris Espiritu

Re: 850 Bryant Street-HOJ
Case No: 2014.0198E

To: San Francisco Board of Supervisors, San Francisco Planning Department, and Sheriff Mirkarimi,

Grad Authors of San Francisco has serious concerns with the Preliminary Mitigated Negative Declaration on the proposed new jail. The size and complexity of this project necessitate a wide-ranging and profound investigation into potential environmental impacts. We cannot imagine other developments of this size and complexity being given a blank check. Our strong suspicion is that the reason for this blank check is that the City wants additional space to incarcerate the homeless as part of gentrification.

Sincerely,

Michael Lyon

San Francisco Planning Department
1650 Mission Street, Ste. 400
San Francisco, CA 94103-2479
Attn: Chris Espiritu

Re: 850 Bryant Street-HOJ
Case No: 2014.0198E

To: San Francisco Board of Supervisors, San Francisco Planning Department, and Sheriff Mirkarimi,

THE PROPOSED PROJECT AT 850 BRYANT ST COULD DISPLACE FAMILIES IN THE 14 SRO UNITS, IT LOULD ALSO UNDERMINE PROP M, THROUGH INCREASED OFFICE SPACE. BY DOING THIS WE LIMIT THE SPACE AVAILABLE FOR AFFORDABLE HOUSING.

BEYOND THIS, IN OUR DRAUGHT OUR WATER IS PRECIOUS AND WE SHOULD NOT BE DIVERTING OUR RESOURCES TO HARMFUL SPACES SUCH AS JAILS AND INCACERATION.

Sincerely,

DYLAN
MOORE

San Francisco Planning Department
1650 Mission Street, Ste. 400
San Francisco, CA 94103-2479
Attn: Chris Espiritu

Re: 850 Bryant Street-HOJ
Case No: 2014.0198E

To: San Francisco Board of Supervisors, San Francisco Planning Department, and Sheriff Mirkarimi,

Please consider the following recommendations for a full environmental impact report.

1. The air and water quality impacts are not sufficiently studied. In addition noise impact has not been sufficiently studied. All these areas are of critical importance as Bessie Carmichael K-8 school are located directly adjacent to the project.
2. The impact on loss of parking spaces is not evaluated, and therefore is not mitigated. This area receives high visitor traffic from throughout San Francisco to the agencies and courts located in 850 Bryant. Loss of parking will therefore have impact to all San Francisco residents.
3. The loss of 14 SRO units of housing is not mitigated. The report merely sites that the tenants will be linked with a social worker, which cannot be asserted as a mitigating solution. It is a widely known fact, and should be well known to the planning department, that there is a lack of affordable housing, and that wait lists are years long. The contractor does not appear to have even evaluated the demographics of the tenants whom are likely seniors, and even persons who are disabled, both sectors of the population it is illegal to displace. These units must be replaced one for one.

Sincerely,
Andrea Salinas
aasalinas@gmail.com
94110

Leo Warshaw-Cardozo <donotreply@wordpress.com> June 1, 2015 5:34 PM
To: christopher.espiritu@sfgov.org, nosfjail@curbprisonspending.org
Reply-To: "Leo Warshaw-Cardozo" <leowarshawcardozo@gmail.com>
Public comment on RDF mitigated negative declaration

Name: Leo Warshaw-Cardozo
Email: leowarshawcardozo@gmail.com
Comment: Dear San Francisco Board of Supervisors, San Francisco Planning Department, and Sheriff Mirkarimi,

This email serves as public comment for the Preliminary Mitigated Negative Declaration issued May 13, 2015 for the 850 Bryant Street Hall of Justice Rehabilitation and Detention center project.

I oppose the construction of a new jail. It's a misuse of our tax dollars, given that the city of San Francisco already has a functioning jail with unoccupied space and given the need for funding for more pressing issues (housing, education, etc).

Please stop this project.
Zipcode: 94110

Time: June 2, 2015 at 12:33 am
IP Address: 50.0.128.51
Contact Form URL: https://nonewsfjail.wordpress.com/submit-comment-to-the-mitigated-negative-declaration/
Sent by an unverified visitor to your site.

Exhibit D

Notice of Availability of and Intent to Adopt a Mitigated Negative Declaration

SAN FRANCISCO
PLANNING DEPARTMENT

Notice of Availability of and Intent to Adopt a Mitigated Negative Declaration

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

Date:	May 13, 2015
Case No.:	**2014.0198E**
Project Title:	**850 Bryant Street – Hall of Justice - Rehabilitation and Detention Facility**
Zoning:	Western SoMa Special Use District Public Use (P) Zoning District 105-J Height and Bulk District Service/Arts/Light Industrial (SALI) Zoning District 30-X Height and Bulk District
Block/Lot:	3759/009 through 012, 014, 043, 045, a portion of 042, and Harriet Street and Ahern Way street rights-of way
Project Sponsor:	Jumoke Akin-Taylor - (415) 557-4751 San Francisco Department of Public Works
Staff Contact:	Christopher Espiritu - (415) 575-9022 christopher.espiritu@sfgov.org

This notice is to inform you of the availability of the environmental review document concerning the proposed project as described below. The document is a preliminary mitigated negative declaration (PMND), containing information about the possible environmental effects of the proposed project. The PMND documents the determination of the Planning Department that the proposed project could not have a significant adverse effect on the environment. Preparation of a mitigated negative declaration does not indicate a decision by the City to carry out or not to carry out the proposed project.

Project Description: The project site (Assessor's Block 3759, Lots 9 through 12, 14, 43, 45, a portion of Lot 42, and portions of the Harriet Street and Ahern Way rights-of-way) is located on Bryant Street at Sixth Street within the South of Market neighborhood. The western portion of the project site contains the existing eight-story, 117-foot-tall, 610,000-gsf Hall of Justice (HOJ) at 850 Bryant Street. The existing HOJ serves as one of the primary County Jail Facilities for the San Francisco Sheriff's Department. County Jails No. 3 (CJ#3) and No. 4 (CJ#4) are located on the 6th and 7th floors of the existing HOJ. Other City agencies utilizing the existing HOJ include the San Francisco County Superior Court, the Chief Medical Examiner's Office, and the San Francisco Police Department. Directly east of the existing HOJ is the project building site, which is bounded by Ahern Way to the north, Sixth Street to the east, Bryant Street to the south, and Harriet Street to the west. The 40,276-sf project building site contains two vacant lots, surface parking, and five existing buildings: a one-story, 6,000-gsf office building (444 Sixth Street); a one-story, 5,100-gsf commercial building (450 Sixth Street); a three-story, 7,150-gsf, 14-unit single room occupancy (SRO) residential building with ground-floor retail (480-484 Sixth Street); a three-story, 16,500-gsf office building (800-804 Bryant Street); and a one-story, 2,000-gsf McDonald's restaurant (820 Bryant Street).

The proposed project is a joint-agency effort between the San Francisco Department of Public Works and the San Francisco Sheriff's Department. The proposed project calls for construction of an approximately 200,000-gsf, 110-foot-tall (including an additional 15-foot-tall mechanical penthouse) Rehabilitation and Detention Facility (RDF) on the project building site. All the existing buildings on the project building site, with the exception of the buildings at 480-484 Sixth Street (Block 3759/Lot 10) and 800-804 Bryant Street (Block 3759/Lot 11), would be demolished. The proposed RDF would replace the existing CJ#3 and CJ#4 and is a part of a larger program to relocate City agencies from the seismically deficient HOJ building. The

proposed RDF would be constructed as a maximum security facility, compliant with adult detention facility codes and standards, with a capacity of up to 640 beds, a 30 percent reduction (265 fewer beds) from the combined capacity in CJ#3 and CJ#4 of 905 beds. The proposed RDF would also include space for administrative offices, staff support, exercise, mental and medical health services, and programs and classroom space for the inmates. Additionally, the proposed project would include improvements within the Harriet Street and Ahern Way rights-of-way, including the construction of a subterranean tunnel underneath the Harriet Street roadway, which would connect the existing HOJ to the basement level of the proposed RDF. This tunnel would be used to provide secure, direct transport of inmates between the proposed RDF and the existing HOJ building.

The PMND is available to view or download from the Planning Department's Negative Declarations and Environmental Impact Report web page (http://www.sf-planning.org/sfceqadocs). Paper copies are also available at the Planning Information Center (PIC) counter on the ground floor of 1660 Mission Street, San Francisco.

If you have questions concerning environmental review of the proposed project, contact the Planning Department staff contact listed above.

Within 20 calendar days following publication of the PMND (i.e., by 5:00 p.m. on **June 3, 2015)**, any person may:

1) Review the PMND as an informational item and take no action;

2) Make recommendations for amending the text of the document. The text of the PMND may be amended to clarify or correct statements and may be expanded to include additional relevant issues or to cover issues in greater depth. This may be done **without** the appeal described below; **OR**

3) Appeal the determination of no significant effect on the environment to the Planning Commission in a letter which specifies the grounds for such appeal, accompanied by a $547 check payable to the San Francisco Planning Department.[1] An appeal requires the Planning Commission to determine whether or not an Environmental Impact Report must be prepared based upon whether or not the proposed project could cause a substantial adverse change in the environment. Send the appeal letter to the Planning Department, Attention: Sarah B. Jones, 1650 Mission Street, Suite 400, San Francisco, CA 94103. **The letter must be accompanied by a check in the amount of $547.00 payable to the San Francisco Planning Department, and must be received by 5:00 p.m. on June 3, 2015.** The appeal letter and check may also be presented in person at the PIC counter on the first floor of 1660 Mission Street, San Francisco.

In the absence of an appeal, the mitigated negative declaration shall be made final, subject to necessary modifications, after 20 days from the date of publication of the PMND. If the PMND is appealed, the Final Mitigated Negative Declaration (FMND) may be appealed to the Board of Supervisors. The first approval action, as identified in the Initial Study, would establish the start of the 30-day appeal period for the FMND pursuant to San Francisco Administrative Code Section 31.16(h).

Members of the public are not required to provide personal identifying information when they communicate with the Commission or the Department. All written or oral communications, including submitted personal contact information, may be made available to the public for inspection and copying upon request and may appear on the Department's website or in other public documents.

[1] Upon review by the Planning Department, the appeal fee may be reimbursed for neighborhood organizations that have been in existence for a minimum of 24 months.

Exhibit E

Preliminary Mitigated Negative Declaration

SAN FRANCISCO
PLANNING DEPARTMENT

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

Preliminary Mitigated Negative Declaration

Date:	May 13, 2015
Case No.:	**2014.0198E**
Project Title:	**850 Bryant Street – Hall of Justice Rehabilitation and Detention Facility Project**
Zoning:	Western SoMa Special Use District Public Use (P) Zoning District 105-J Height and Bulk District Service/Arts/Light Industrial (SALI) Zoning District 30-X Height and Bulk District
Block/Lot:	3759/009 through 012, 014, 043, 045, a portion of 042, and Harriet Street and Ahern Way street rights-of way
Lot Size:	40,276 square feet
Project Sponsor	Jumoke Akin-Taylor San Francisco Department of Public Works Building, Design and Construction, Project Management (415) 557-4751 Dan Santizo City and County of San Francisco Sheriff's Department Sheriff's Bureau of Building Services (415) 522-8123
Lead Agency:	San Francisco Planning Department
Staff Contact:	Christopher Espiritu - (415) 575-9022 christopher.espiritu@sfgov.org

PROJECT DESCRIPTION:

The site for the proposed Hall of Justice (HOJ) Rehabilitation and Detention Facility (RDF) project is located in San Francisco's South of Market neighborhood, at the intersection of Bryant and Sixth streets, and consists of eight parcels: Assessor's Block 3759, Lots 9 through 12, 14, 43, 45, a portion of Lot 42, and portions of the Harriet Street and Ahern Way rights-of-way. The western portion of the project site (the HOJ site), located at 850 Bryant Street, contains the existing eight-story, 117-foot-tall (105 feet to the rooftop plus an additional 12-foot-tall mechanical penthouse), 610,000-gsf HOJ, constructed between 1958 and 1961. The existing HOJ serves as one of the primary County Jail Facilities for the San Francisco Sheriff's Department. County Jails No. 3 (CJ#3) and No. 4 (CJ#4) are located on the 6th and 7th floors of the existing HOJ. Other uses within the existing HOJ include the justice center for the San Francisco County Superior Court, the Chief Medical Examiner and morgue, and the current operational headquarters for the San Francisco Police Department. County Jails No. 3 (CJ#3) and No. 4 (CJ#4) are located on the 6th and 7th floors of the existing HOJ. Directly east of the HOJ site is the project building site, which is bounded by Ahern Way to the north, Sixth Street to the east, Bryant Street to the south, and Harriet Street to the west. The 40,276-sf project building site contains two vacant lots, areas of surface parking, and five existing buildings: a one-story, 6,000-gsf office building, constructed in 1956 (444 Sixth Street); a one-story, 5,100-gsf commercial building, constructed in 1959 (450 Sixth Street); a three-story, 7,150-gsf,

14-unit single room occupancy (SRO) residential building with ground-floor retail, constructed in 1916 (480-484 Sixth Street); a three-story, 16,500-gsf office building, constructed in 2003 (800-804 Bryant Street); and a one-story, 2,000-gsf McDonald's restaurant, constructed in 1996 (820 Bryant Street). The project building site also includes portions of the Harriet Street and Ahern Way rights-of way.

The proposed project is a joint-agency effort between the City and County of San Francisco Department of Public Works and the City and County of San Francisco Sheriff's Department. The proposed project calls for construction of a new, approximately 200,000-gsf, 110-foot-tall (95 feet to the rooftop plus an additional 15-foot-tall mechanical penthouse) RDF on the project building site. The City and County of San Francisco would acquire the project building site for development of the proposed project. All the existing buildings on the project building site, with the exception of the buildings at 480-484 Sixth Street (Block 3759/Lot 10) and 800-804 Bryant Street (Block 3759/Lot 11), would be demolished. The proposed project would require legislative amendments to the Planning Code to reclassify the zoning designation on the project building site from SALI to P and to reclassify the height and bulk district from 30-X to 95-J.

The proposed RDF would replace the existing CJ#3 and CJ#4 and is a part of a larger program to relocate City agencies from the seismically deficient HOJ. The proposed RDF would be constructed as a maximum security facility, compliant with adult detention facility codes and standards, with a capacity of up to 640 beds, a 30 percent reduction (265 fewer beds) from the combined capacity in CJ#3 and CJ#4 of 905 beds. The proposed RDF would also include space for administrative offices, staff support, exercise, mental and medical health services, and programs and classroom space for the inmates.

The proposed project would include improvements within the Harriet Street and Ahern Way rights-of-way. A subterranean tunnel would be constructed underneath the Harriet Street roadway and sidewalks to connect the existing HOJ to the basement level of the proposed RDF. This tunnel would be used to provide secure, direct transport of inmates between the proposed RDF and the existing HOJ. As part of the construction of the proposed RDF, portions of Harriet Street and Ahern Way would be reconfigured to accommodate designated, secure service and jail transport areas (a loading dock on Harriet Street and a secured, controlled entryway or "sally port" on Ahern Way). In addition, both Harriet Street (from Bryant Street to the I-80 overpass) and Ahern Way (west of Sixth Street) would be closed to through traffic in both directions; only official service vehicles would be allowed access.

FINDING:

This project could not have a significant effect on the environment. This finding is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15064 (Determining Significant Effect), 15065 (Mandatory Findings of Significance), and 15070 (Decision to prepare a Negative Declaration), and the following reasons as documented in the Initial Evaluation (Initial Study) for the project, which is attached.

Mitigation measures are included in this project to avoid potentially significant effects. See pp. 216-222.

cc: Jumoke Akin-Taylor, Department of Public Works
Dan Santizo, Sheriff's Department
Richard Sucre, Current Planning
Supervisor Jane Kim, District 6
Master Decision File
Distribution List

Initial Study

850 Bryant Street - Hall of Justice Rehabilitation and Detention Facility Project

Planning Department Case No. 2014.0198E

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LIST OF FIGURES

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APPENDICES

ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACL	Absolute Cumulative Limits
ADRP	Archeological Data Recovery Plan
ARDTP	Archeological Research Design and Treatment Plan
ATP	Archeological Testing Plan
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BCDC	Bay Conservation and Development Commission
bgs	below grade surface
BMPs	best management practices
C-APE	CEQA Area of Potential Effect
CAA	Clean Air Act
CalEEMod	California Emissions Estimator Model
Cal/OSHA	State Occupational Safety and Health Administration
CARB	California Air Resources Board
CCAA	California Clean Air Act
CGS	California Geological Survey
CJ#	County Jail No.
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2e	carbon dioxide equivalents
CPA	San Francisco Capital Planning Committee
CRHR	California Register of Historical Resources
CSO	Combined Sewer Overflow
dB	decibel
DBI	Department of Building Inspection
DEHP	bis(2-ethylhexyl) phthalate
DPH	Department of Public Health
DPM	diesel particulate matter
DPW	Department of Public Works
DTSC	Department of Toxic Substances Control
ERO	Environmental Review Officer
ESA	Environmental Site Assessment
ESLs	Environmental Screening Levels
FARR	Final Archeological Resource Report
General Plan	San Francisco General Plan
FEMA	Federal Emergency Management Agency
FTE	full-time equivalent
GHG	greenhouse gas
gsf	gross square feet
HEPA	High Efficiency Particulate Air Filter
HOJ	Hall of Justice
HRE	Historic Resources Evaluation
IWMP	Integrated Waste Management Plan
Ldn	day-night noise level
LEED	Leadership in Energy and Environmental Design

Leq	equivalent continuous sound level
LUST	leaking underground storage tank
mgd	million gallons per day
mg/kg	milligram per kilogram
mg/L	milligram per liter
MHHW	Mean Higher High Water
MLD	Most Likely Descendant
MLP:	maximum load point
mph	miles per hour
MRZ-4	Mineral Resource Zone 4
MTA	San Francisco Municipal Transportation Agency
MTBE	methyl tertiary-butyl ether
MTC	Metropolitan Transportation Commission
MTCO2E	Metric ton of carbon dioxide equivalents
MUG	Mixed Use-General (zoning designation)
Muni	San Francisco Municipal Railway
MUR	Mixed Use-Residential (zoning designation)
Mw	moment magnitude
NAHC	California State Native American Heritage Commission
NAVD88	1988 North American Vertical Datum
NCT	Neighborhood Commercial Transit (zoning designation)
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO_X	oxides of nitrogen
NO_2	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRC	National Research Council
NSR	New Source Review
NWIC	Northwest Information Center
OPR	State Office of Planning and Research
OS	open space
PAHs	polynuclear aromatic hydrocarbons
PAR	Preliminary Archeological Review
PCBs	polychlorinated biphenyls
PM	particulate matter
$PM_{2.5}$	PM composed of particulates at are 10 microns in diameter or less
PM_{10}	PM composed of particulates at are 2.5 microns in diameter or less
POPOS	privately owned public open spaces
ppm	parts per million
PPV	peak particle velocity
QACL	Qualified Archaeological Consultants List
RDF	Retention and Detention Facility
RED	Residential Enclave (zoning designation)
ROG	reactive organic gases
RWQCB	Bay Area Regional Water Quality Control Board
SALI	Service/Arts/Light Industrial Zoning District
SB	Senate Bill
SamTrans	San Mateo County Transit District
SEWPCP	Southeast Water Pollution Control Plant
sf	square feet

SFBAAB	San Francisco Bay Area Air Basin
SFCTA	San Francisco County Transportation Authority
SFFD	San Francisco Fire Department
sfh	square foot hours
SFMTA	San Francisco Municipal Transportation Agency
SFO	San Francisco International Airport
SFPD	San Francisco Police Department
SFPL	San Francisco Public Library
SFPUC	San Francisco Public Utilities Commission
SFUSD	San Francisco Unified School District
Sheriff's Department	San Francisco Sheriff's Department
SHR3	Seismic Hazard Rating 3
SO_2	sulfur dioxide
SMP	site mitigation plan
SOMA	South of Market
SoMa	South of Market
SRO	single room occupancy
STLC	soluble threshold limit concentration
SUD	Special Use District
TAAS	Theoretically Available Annual Sunlight
TACs	toxic air contaminants
TASC	Transportation Advisory Staff Committee
TBACT	Best Available Control Technology
TCLP	toxicity characteristic leaching procedure
TDM	Transportation Demand Management
TEP	Transit Effectiveness Project
TTLC	total threshold limit concentration
UMU	Urban Mixed Use (zoning designation)
U.S. EPA	U.S. Environmental Protection Agency
USGS	United States Geological Survey
UST	underground storage tank
UWMP	Urban Water Management Plan
VDECS	verified diesel emission control strategy
VMT	vehicle miles traveled
WMUG	Western SoMa Mixed Use-General (zoning designation)
WMUO	Western SoMa Mixed Use-Office (zoning designation)
WSA	Water Supply Assessment

Initial Study

850 Bryant Street - Hall of Justice Rehabilitation and Detention Facility Project

Planning Department Case No. 2014.0198E

A. PROJECT DESCRIPTION

Project Location and Existing Project Site Characteristics

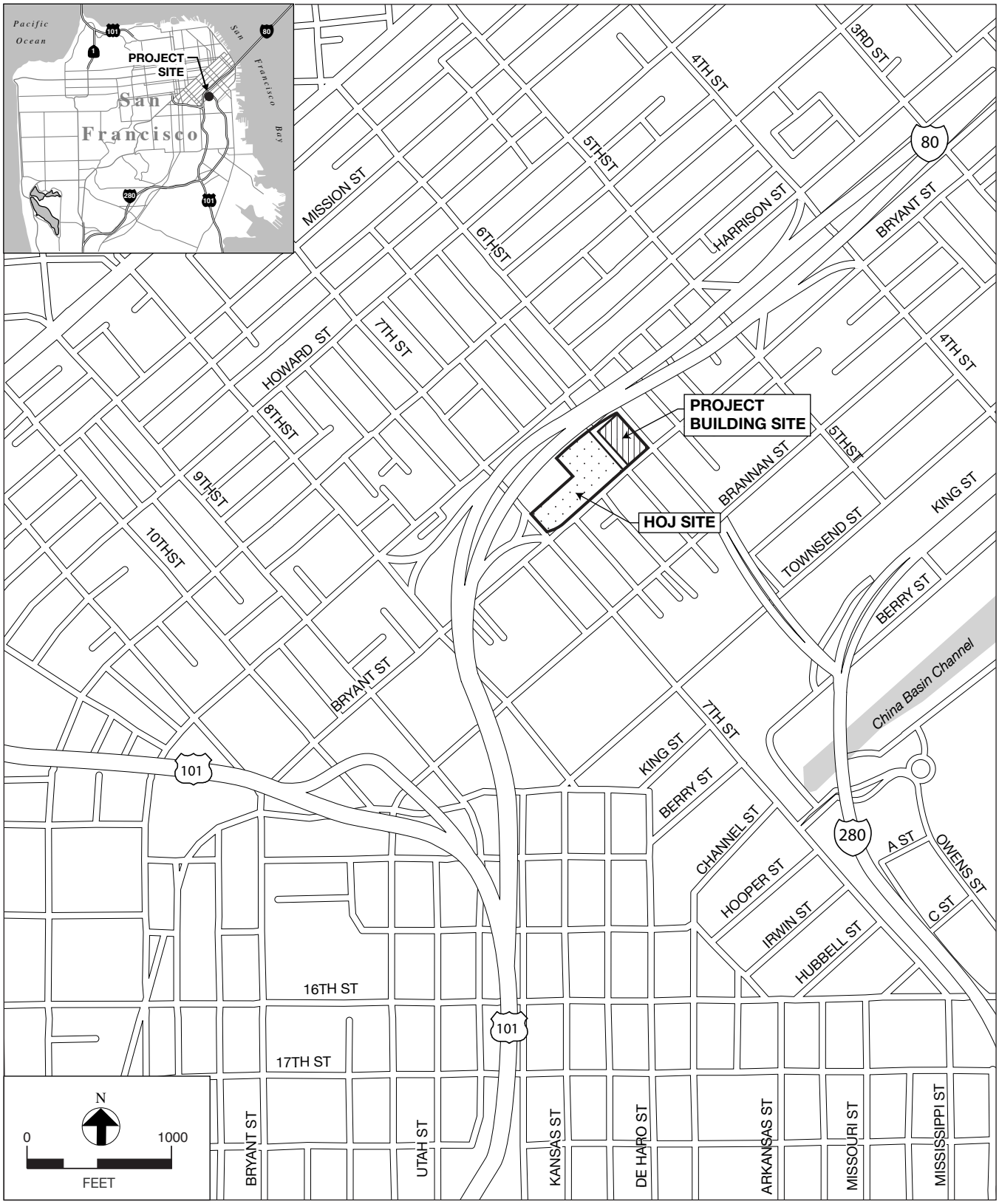
The proposed Hall of Justice (HOJ) – Rehabilitation and Detention Facility (RDF) project (herein referred to as "proposed project") is located in San Francisco's South of Market neighborhood, at the intersection of Bryant and Sixth streets (see **Figure 1: Project Location**), and consists of eight parcels: Assessor's Block 3759, Lots 9 through 12, 14, 43, 45 and a portion of Lot 42, as well as portions of the Harriet Street and Ahern Way rights-of-way (see **Figure 2: Existing Site Plan**). The project site is relatively flat, sloping gently from northwest to southwest.

The western portion of the project site (HOJ site), located at 850 Bryant Street, including a portion of Lot 042 in Block 3759, is bounded by Harriet Street on the east, Bryant Street on the south, and Seventh Street on the west. The HOJ site contains an existing eight-story, 105-foot-tall (plus an additional 12-foot-tall mechanical penthouse), approximately 610,000-gross-square-foot (gsf) institutional building constructed between 1958 and 1961. The HOJ is eligible for inclusion in the California Register of Historical Resources (CRHR) under Criterion 1 (Events) as a major legal and civic institution in San Francisco.[1] The existing HOJ serves as one of the primary County Jail Facilities for the San Francisco Sheriff's Department (Sheriff's Department). County Jails No. 3 (CJ#3) and No. 4 (CJ#4) are located on the 6th and 7th floors of the existing HOJ building. Other existing uses within the HOJ include the justice center for the San Francisco County Superior Court, the Chief Medical Examiner and morgue, and the operational headquarters for the San Francisco Police Department.[2]

Primary pedestrian access into the HOJ building is through the main entrance located on Bryant Street. Service, loading, and parking access for the HOJ building is from Harriet Street between Bryant Street and Ahern Way with driveways to the at-grade building service area, the at-grade surface parking and ambulance loading area, the below-grade basement level of the existing HOJ, and a secure transport area/sally port for County Jails No. 1 (CJ#1) and No. 2 (CJ#2) at 425 Seventh Street north of the HOJ site. On the HOJ site, there are existing street trees along Harriet Street

[1] San Francisco Planning Department, Preservation Team Review Form, April 3, 2015 (see Appendix A of this PMND).

[2] At the end of March 2015 approximately 250 San Francisco Police Department staff moved from the HOJ to the newly constructed Public Safety Building at 1251 3rd Street in Mission Bay. Available online at http://sf-police.org/index.aspx?recordid=1145&page=3763. Accessed April 2, 2015.

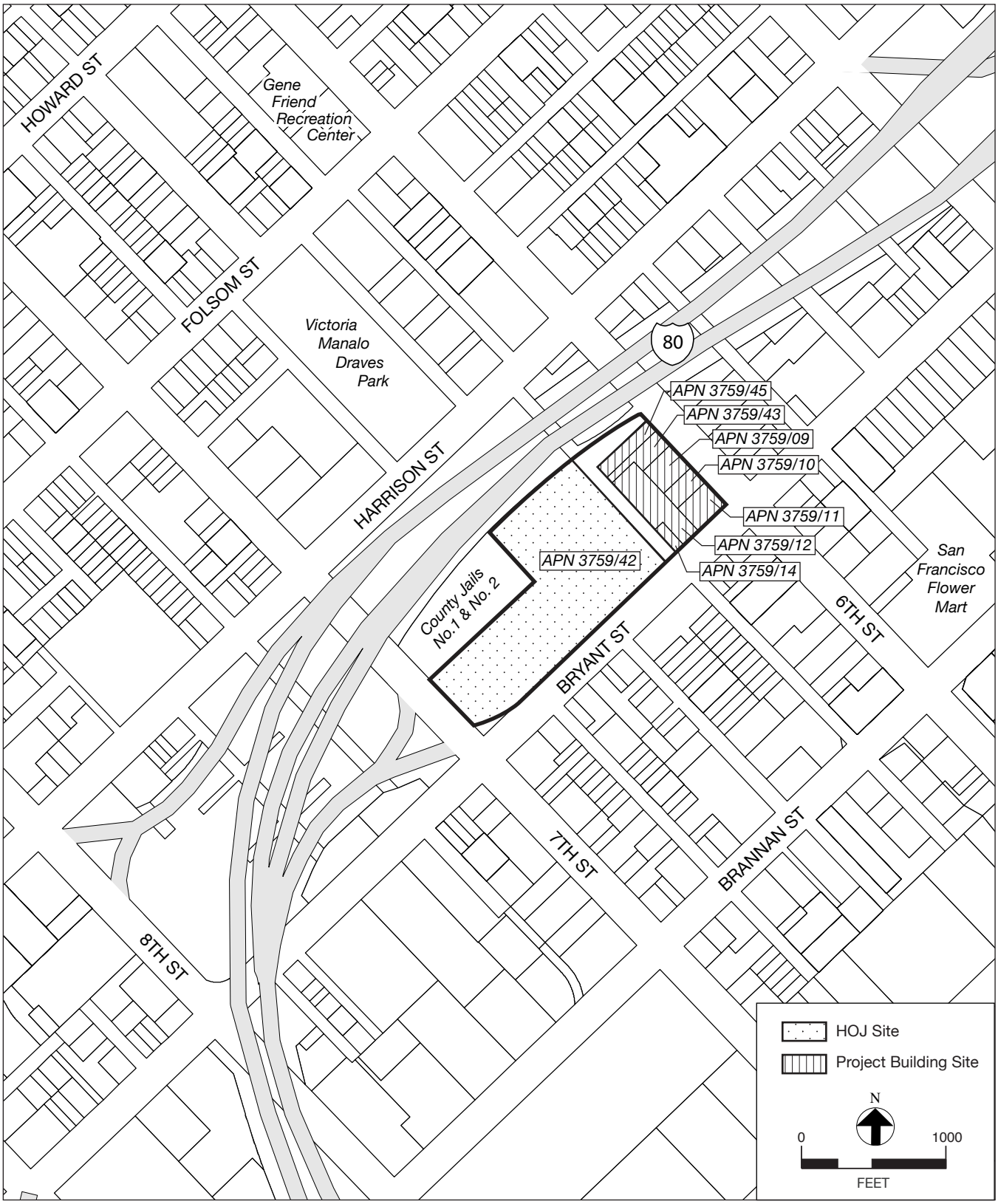


SOURCE: Turnstone Consulting/SWCA

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Case No. 2014.0198E

FIGURE 1: PROJECT LOCATION



SOURCE: Turnstone Consulting/SWCA

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Case No. 2014.0198E

FIGURE 2: EXISTING SITE PLAN

between Bryant Street and Ahern Way, along Bryant Street between Harriet and Seventh streets, and along Seventh Street between Bryant and Harrison streets.

The eastern portion of the project site (project building site) is slightly less than an acre in size (40,276 square feet [sf]) and encompasses Lots 009 through 012, 014, 043, and 045 in Block 3759. The project building site is bounded by Ahern Way to the north, Bryant Street to the south, Sixth Street to the east, and Harriet Street to the west. The project building site contains two vacant lots, areas of surface parking, and five existing buildings: a one-story, 6,000-gsf office building, constructed in 1956 (444 Sixth Street); a one-story, 5,100-gsf commercial building, constructed in 1959 (450 Sixth Street); a three-story, 7,150-gsf, 14-unit single room occupancy (SRO[3]) residential building with ground-floor retail, constructed in 1916 (480-484 Sixth Street); a three-story, 16,500-gsf office building, constructed in 2003 (800-804 Bryant Street and 498 Sixth Street); and a one-story, 2,000-gsf McDonald's restaurant, constructed in 1996 (820 Bryant Street). The building at 480-484 Sixth Street is a well-preserved, somewhat early example of a multi-family residential building in the South of Market Area. It is a California Register-eligible property, and is assigned a Status Code by the San Francisco Planning Department of "3CS," meaning that it is eligible for the CRHR as an individual historic resource through survey evaluation.[4] The project building site also includes portions of the Harriet Street and Ahern Way rights-of way. Harriet Street is a one-way, north-south street with access from Bryant Street. Ahern Way is a two-way, east-west street with access from Sixth Street. Ahern Way provides access to the ambulance loading area and the basement level of the existing HOJ on the HOJ site as well as the secure transport area/sally port for CJ#1 and CJ#2. There are existing street trees adjacent to the project building site along Sixth Street, between Ahern Way and Bryant Street and along Bryant Street, between Harriet and Sixth streets. There are existing trees located on the interior of the project building site in the rear yard of the SRO building at 480-484 Sixth Street.

CJ#1 and CJ#2 are located directly north of the HOJ site at 425 Seventh Street. CJ#1 is an inmate processing and intake facility. CJ#2 serves as a medium security jail facility, primarily used to house female inmates. These facilities are located on the northwest portion of Block 3759/Lot 42 not included as part of the HOJ site and are not part the proposed project. However, the basement level of 425 Seventh Street is shared with the HOJ for below-grade parking and to facilitate the movement of inmates and staff from the cells and holding area to the HOJ courts.

[3] An SRO is a multiple-tenant building that usually houses one or two people in individual rooms (sometimes two rooms, or two rooms with a bathroom or half bathroom). Tenants of SROs typically share bathrooms and/or kitchens, while some SRO rooms may include kitchenettes, bathrooms, or half-baths. Although many are former hotels, SROs are primarily rented as a permanent residence.

[4] VerPlanck Historic Preservation Consulting, Memorandum to Rich Sucre, San Francisco Planning Department, September 22, 2014.

The HOJ site and the project building site are well served by public transit. The San Francisco Municipal Railway (Muni) operates numerous surface buses within one block of the project site along Fifth, Sixth, Seventh, Eighth, Folsom, Harrison, Bryant, and Brannan streets, including the 8X Bayshore, 8AX/BX Bayshore Expresses, 19 Polk, 27 Bryant, 47 Van Ness, 12 Folsom, and 14X Mission Express routes. Regional transit providers include Golden Gate Transit and San Mateo County Transit District (SamTrans). Both Golden Gate Transit and SamTrans operate surface buses within three blocks of the project site – along Mission, Howard, and Folsom streets and Mission, Ninth, and Tenth streets, respectively.

Existing Zoning on the Project Site

The HOJ site is located within a Public Use (P) Zoning District and a 105-J Height and Bulk District, and the project building site is within the Service/Arts/Light Industrial (SALI) Zoning District and a 30-X Height and Bulk District.[5] The entire project site is located within the Western SoMa Special Use District (SUD), which includes zoning controls to address specific land use issues related to animal service uses, nighttime entertainment uses, and formula retail uses. It is also within the area covered by the *Western SOMA* (*South of Market) Area Plan* of the *San Francisco General Plan*.[6] The project site is not located within any known or potential historic district.

Project Characteristics

The proposed project calls for the construction of a new, approximately 200,000-gsf, 110-foot-tall (95 feet tall to the roof top, plus an additional 15-foot-tall mechanical penthouse) building on the block directly east of the existing HOJ building, in part to provide secure, direct access to the courts facility located within the HOJ. (See **Figure 3: Project Site Plan**.) All existing buildings on the project building site would be demolished with the exception of the SRO building at 480-484 Sixth Street (Block 3759/Lot 10) and the office building at 800-804 Bryant Street/498 Sixth Street (Block 3759/Lot 11).

The proposed RDF would replace the existing CJ#3 and CJ#4, currently located on the 6th and 7th floors of the existing HOJ building. The proposed project is a part of a larger program to relocate City agencies from the seismically deficient HOJ building.[7] Once the jail population is relocated

[5] The maximum building height is 105 feet on the HOJ site and 30 feet on the project building site. Bulk controls reduce the size of a building's floorplates as the building increases in height. Pursuant to Planning Code Section 270(a), the bulk controls in a "J" Bulk District become effective above a building height of 40 feet, and there are no bulk controls in an "X" Bulk District.

[6] The *Western SoMa Area Plan* is also known as the *Western SoMa Community Plan*. These terms are interchangeable.

[7] Future programs to relocate other City agencies or uses from the HOJ building are speculative and therefore not included as part of the proposed project, nor included in environmental analysis of the proposed project.

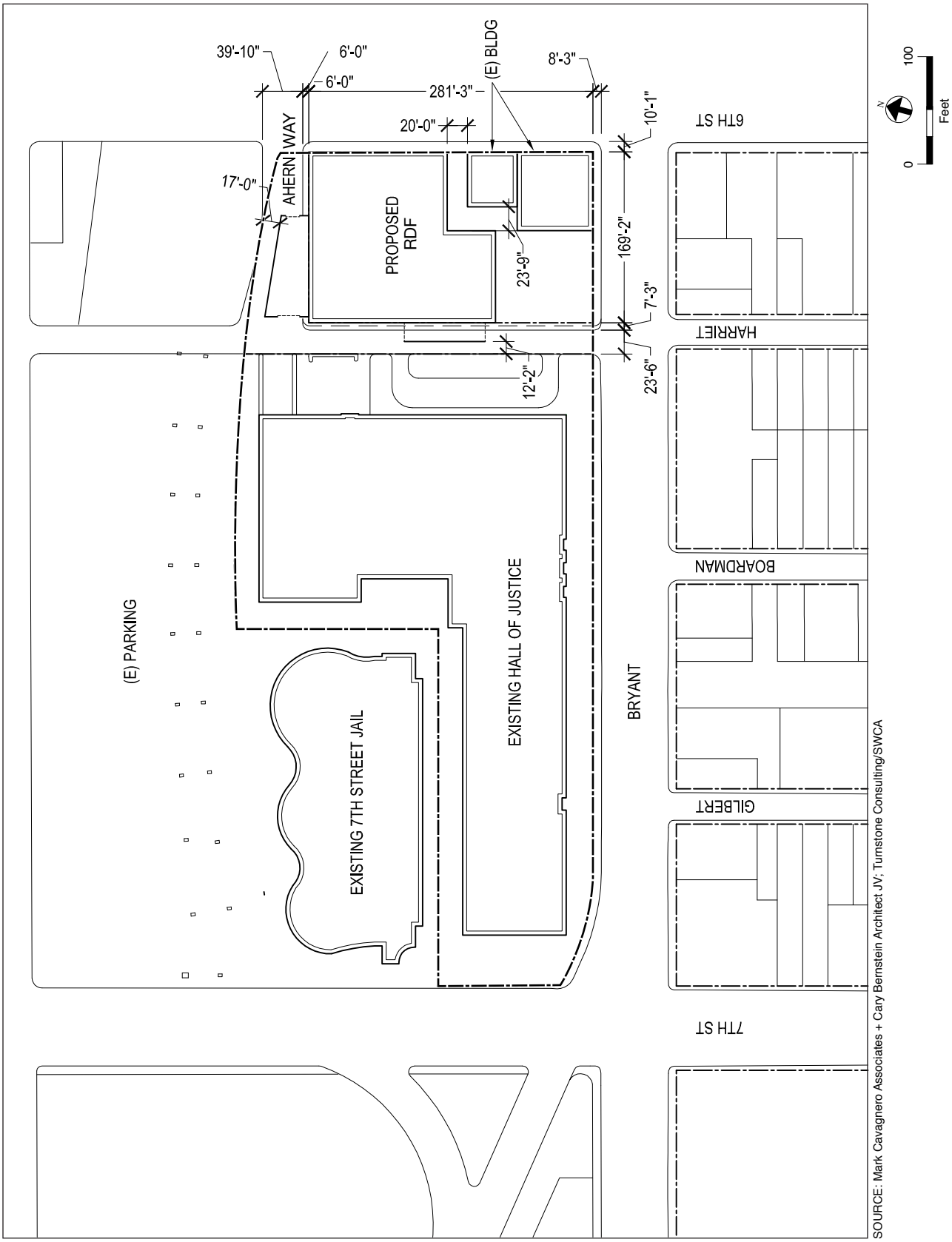


FIGURE 3: PROJECT SITE PLAN

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Case No. 2014.0198E

from CJ#3 and CJ#4 to the proposed RDF, the 6th and 7th floors of the HOJ building would remain vacant. The proposed RDF would be constructed as a maximum security facility, compliant with adult detention facility codes and standards, with a capacity of up to 640 beds, a 30 percent reduction (265 fewer beds) from the combined capacity in CJ#3[8] and CJ#4 of 905 beds. The proposed RDF would also include space for administrative offices, staff support, exercise, programs and classroom space, and mental and medical health services for the jail population.

The proposed project would include improvements within the Harriet Street and Ahern Way rights-of-way, and the removal of parking on the west side of Sixth Street along the proposed RDF's frontage. A subterranean tunnel would be constructed underneath the Harriet Street roadway and sidewalks to connect the existing HOJ building to the basement level of the proposed RDF. This tunnel, subject to San Francisco Municipal Transportation Agency (SFMTA) approval, would be used to provide secure and direct transport of inmates between the proposed RDF and the existing HOJ building. As part of the proposed RDF, portions of Harriet Street and Ahern Way would be reconfigured to accommodate separate and secure areas for service deliveries and jail transport (a secured loading dock on Harriet Street and a secured, controlled entryway or "sally port" on Ahern Way, respectively), subject to SFMTA and Department of Public Works (DPW) review and approval. In addition, both Harriet Street (from Bryant Street to the I-80 overpass) and Ahern Way (west of Sixth Street) would be closed to through traffic in both directions and only official service vehicles would be allowed access.

Project Background

In 1992, and again in 2012, DPW conducted seismic studies on the HOJ at 850 Bryant Street and designated the building with a Seismic Hazard Rating 3 (SHR3), which indicates that the HOJ is seismically deficient and unlikely to remain operational in the event of a major earthquake.[9] The proposed project is a joint-agency effort between DPW and the Sheriff's Department to replace CJ#3 and CJ#4, which are located on the 6th and 7th floors of the seismically deficient HOJ.

The Sheriff's Department currently operates five separate detention facilities and a secured ward within the San Francisco General Hospital, at 1001 Potrero Avenue, for inmates who require hospitalization. CJ#1 and CJ#2 have been operating for nearly 20 years at its current location at 425 Seventh Street, north of the HOJ site. CJ#3 and CJ#4 are located on the 6th and 7th floors of the existing HOJ building. The newest facility, CJ#5, was constructed in 2004 and is located

[8] CJ #3 was vacated in November 2013. Inmates have been temporarily relocated to County Jail #5 in San Bruno and will eventually transfer to the proposed RDF, once construction is complete. For purposes of this environmental analysis, it is assumed that CJ#3 is still operating on the site.

[9] EQA Engineering And Design/AGS Inc., *Seismic Assessment of Various City-Owned Buildings Earthquake Safety Program- Hall of Justice*, October 1992, pp. V-VI. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

approximately 15 miles to the south in the City of San Bruno in San Mateo County (1 Moreland Drive, San Bruno).[10] The total bed capacity within the Sheriff's Department jail system facilities (CJ#1 through CJ#5) is 2,515 beds.

Acquisition of the Project Building Site

The project building site is slightly less than an acre in size at 0.92 acres (40,276 sf) and encompasses two vacant lots and five existing buildings located on Lots 009 through 012, 014, 043, and 045 in Assessor's Block 3759. The City and County of San Francisco would acquire these properties for development of the proposed RDF, and three of the five existing buildings would be demolished: a one-story office building at 444 Sixth Street, a one-story commercial building at 450 Sixth Street, and a one-story restaurant at 820 Bryant Street.

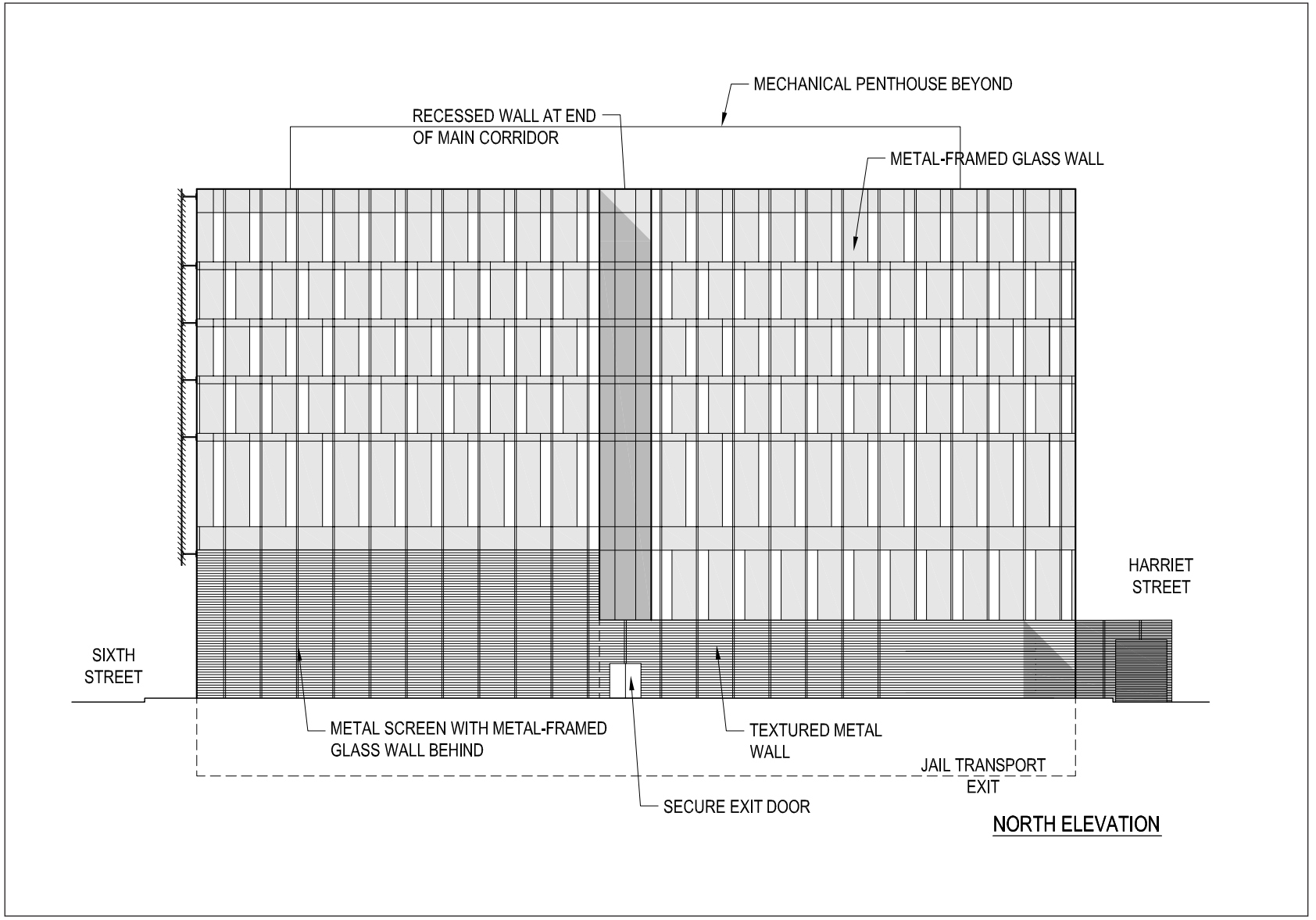
The three-story office building located at the corner Sixth and Bryant streets (800-804 Bryant Street and 498 Sixth Street) would remain on the project building site. Existing uses and tenants are not anticipated to change with implementation of the proposed project.

The 14-unit SRO residential building with ground-floor retail at 480-484 Sixth Street would also remain on the project building site, although it may be decided through the process of DPW's future acquisition of the property to relocate some or all of the building occupants before the proposed RDF is ready for use. If relocation of the building tenants is determined necessary, it is likely that the building could accommodate future commercial/office uses. In accordance with the California Relocation Act (Chapter 16, Section 7260 et seq. of the Government Code), the proposed project includes provision for a residential relocation plan, which, if needed, would be prepared by the Real Estate Division of the San Francisco General Services Agency. The relocation plan would establish a program to help affected residential tenants who qualify for assistance with relocation expenses, including moving expenses, and social services.

Proposed Building Form and Design

The proposed RDF would be approximately 200,000 gsf and 110 feet tall (95 feet tall plus a 15-foot-tall mechanical penthouse), and would contain five floors (with mezzanine levels at the 4th and 5th floors) plus a partial basement level. The 15-foot-tall mechanical penthouse would be centrally located on the rooftop and would house the emergency diesel generator for the proposed RDF. (See **Figure 4: Proposed Massing - North Elevation**, **Figure 5: Proposed Massing - East Elevation**, **Figure 6: Proposed Massing - South Elevation**, and **Figure 7: Proposed Massing - West Elevation**.) It is anticipated that the proposed RDF would be constructed to meet or exceed

[10] The Sheriff's Department also operates County Jail #6, located at 1 Moreland Drive, San Bruno, but it currently does not house any inmates.



SOURCE: Mark Cavagnero Associates + Cary Bernstein Architect JV; Turnstone Consulting/SWCA

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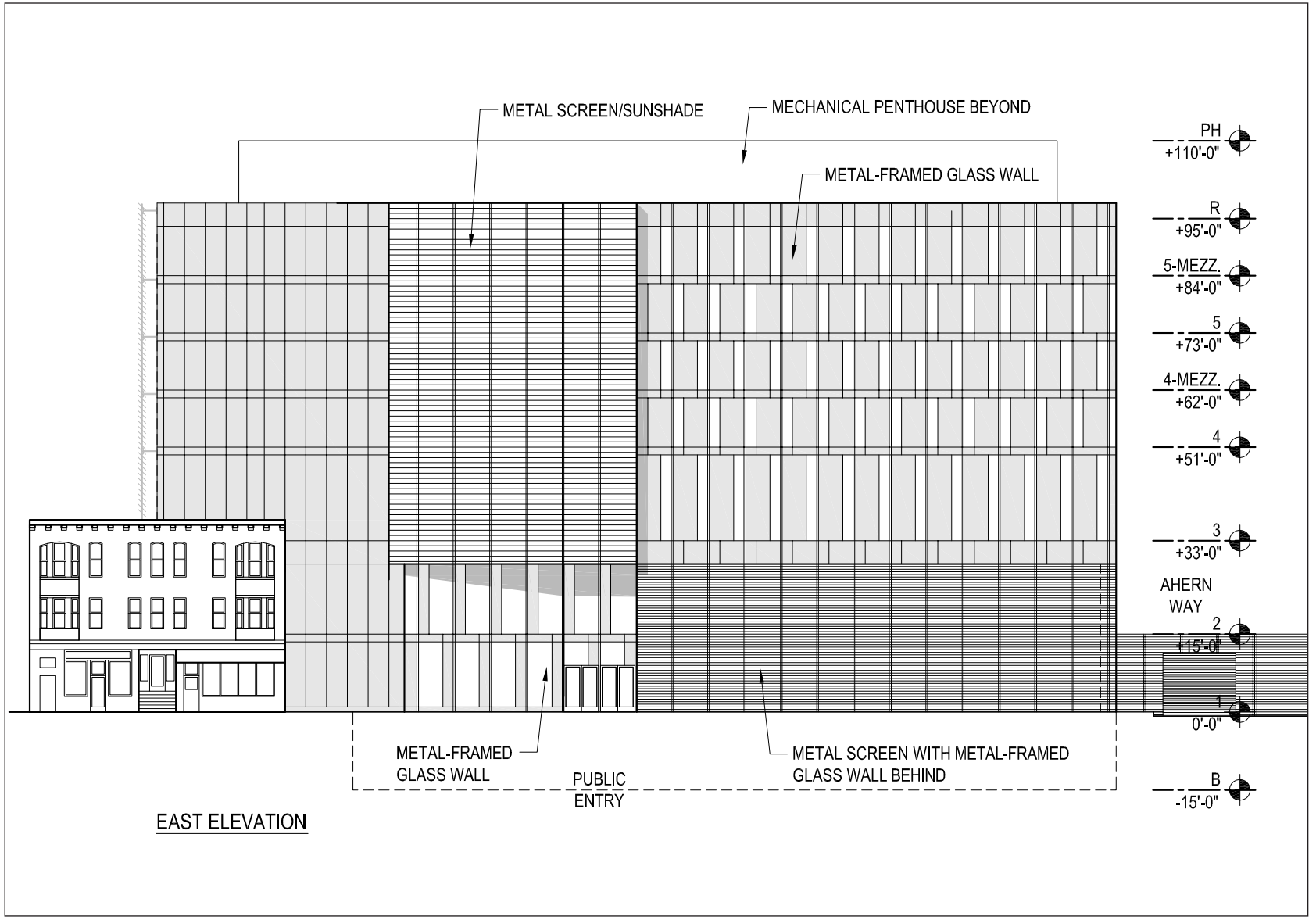
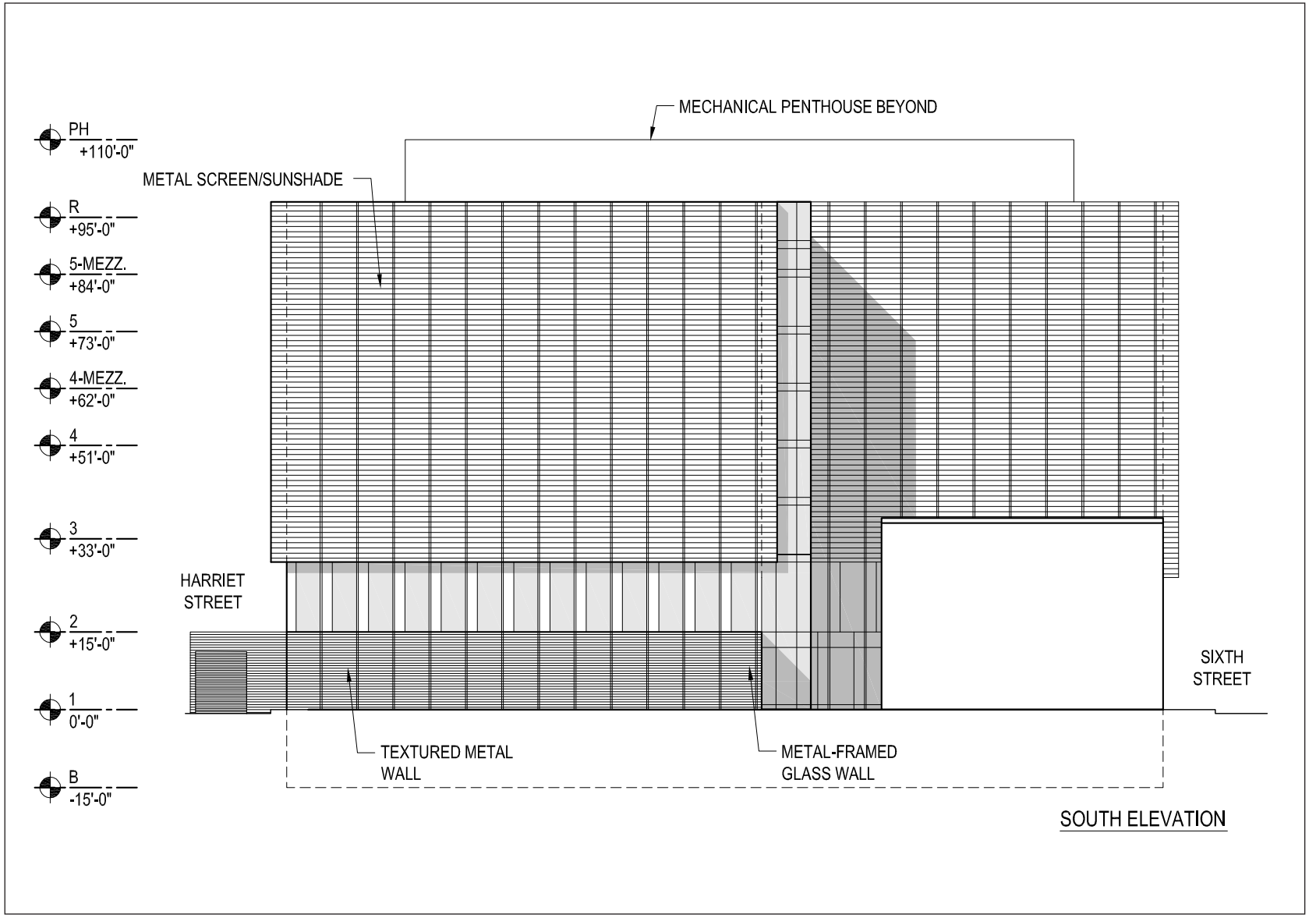
FIGURE 4: PROPOSED MASSING - NORTH ELEVATION



SOURCE: Mark Cavagnero Associates + Cary Bernstein Architect JV; Turnstone Consulting/SWCA

FIGURE 5: PROPOSED MASSING - EAST ELEVATION



SOURCE: Mark Cavagnero Associates + Cary Bernstein Architect JV; Turnstone Consulting/SWCA

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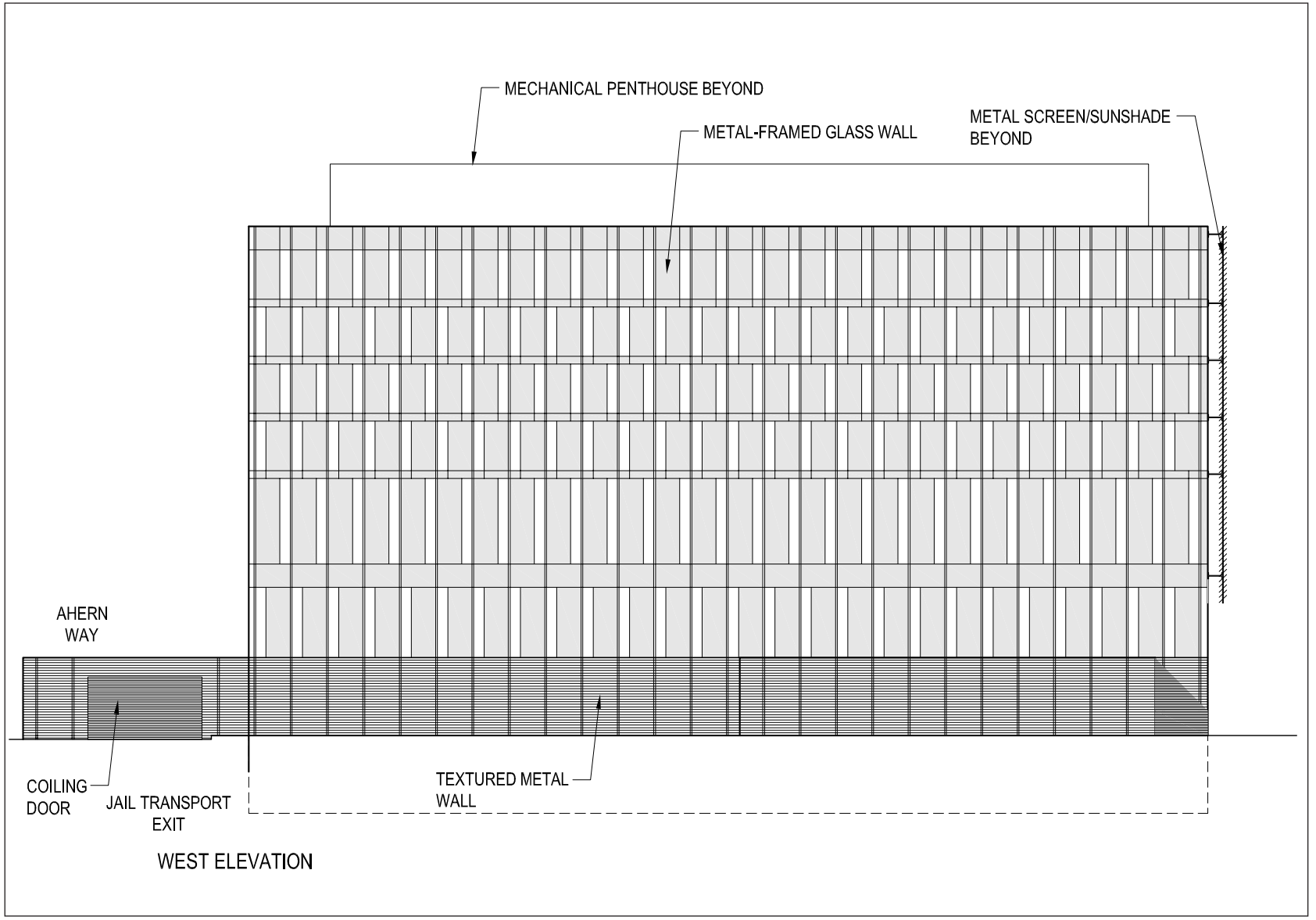
FIGURE 6: PROPOSED MASSING - SOUTH ELEVATION



SOURCE: Mark Cavagnero Associates + Cary Bernstein Architect JV; Turnstone Consulting/SWCA

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FIGURE 7: PROPOSED MASSING - WEST ELEVATION

basic Leadership in Energy and Environmental Design (LEED) Silver standards or GreenPoint Rated standards established in the San Francisco Green Building Ordinance with respect to energy and water use for City-owned buildings. The proposed RDF would include podular housing units that allow for direct supervision of inmates, increasing the safety of inmates and staff, and efficient provision of services. Program space for classrooms, computer and vocational training to foster Sheriff's Department rehabilitative programs, and medical and mental health units for inmates would also be constructed, as detailed below by floor level and shown on **Figures 8** through **11** on the following pages.

Ground Floor (First Floor Plan)

The proposed ground floor would include the publicly-accessible lobby, with access from Sixth Street, and the inmate visiting room. This floor would also provide space for central records, warrants, and administrative offices, as well as the RDF kitchen, building and laundry services, and a multi-purpose room. The ground floor would also include an enclosed sally port[11] for jail inmate transport, to be constructed along the north elevation, partially within the Ahern Way right-of-way, with access onto Ahern Way from Sixth Street. An enclosed service vehicle loading area would be constructed along the west elevation of the building, partially within the Harriet Street right-of-way. Direct service access to the service vehicle loading area would be from Harriet Street via Bryant Street. (See **Figure 8: Proposed First Floor Plan**.)

Second Floor

The proposed second floor would include two separate 16-cell inmate pods, with room for interior exercise and classroom space. The floor would also include space for medical and staff-support services. (Se**e Figure 9: Proposed Second Floor Plan**.)

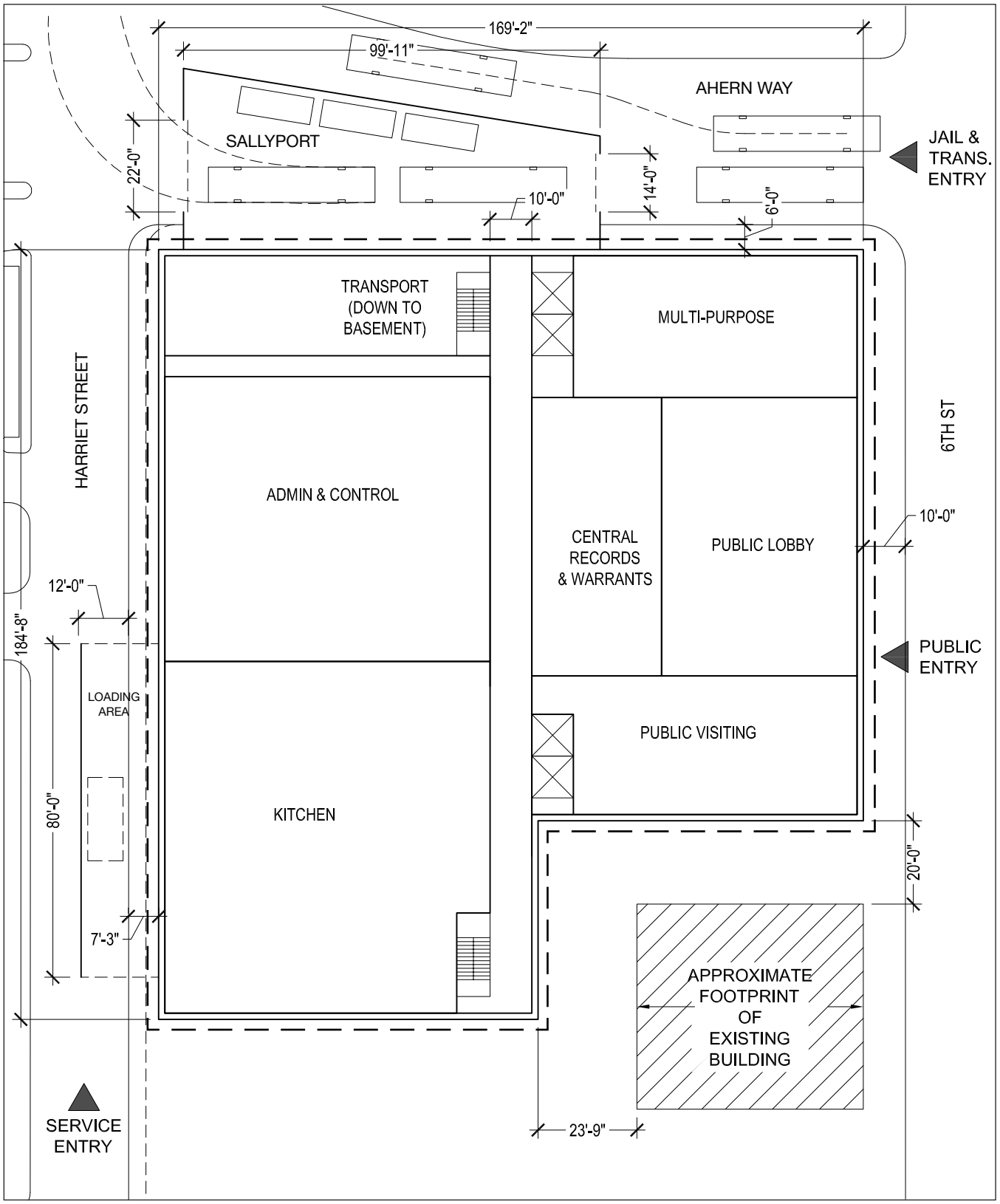
Third Floor

The proposed third floor would include two separate 16-cell inmate pods, with room for interior exercise and classroom space. The floor would also include staff-support space and central program space. (See **Figure 10: Proposed Third Floor Plan**.)

Fourth and Fifth Floors

The proposed fourth and fifth floors would each include three 32-cell inmate pods, one 16-cell inmate pod, and room for interior exercise and classroom space. Each of these floors would also contain a mezzanine level with space to allow for additional inmate cells. (See **Figure 11: Proposed Fourth and Fifth Floors Plan**.)

[11] A sally port is an enclosed, secured, controlled entryway into highly restricted or protected areas, such as the proposed RDF.



SOURCE: Mark Cavagnero Associates + Cary Bernstein Architect JV; Turnstone Consulting/SWCA

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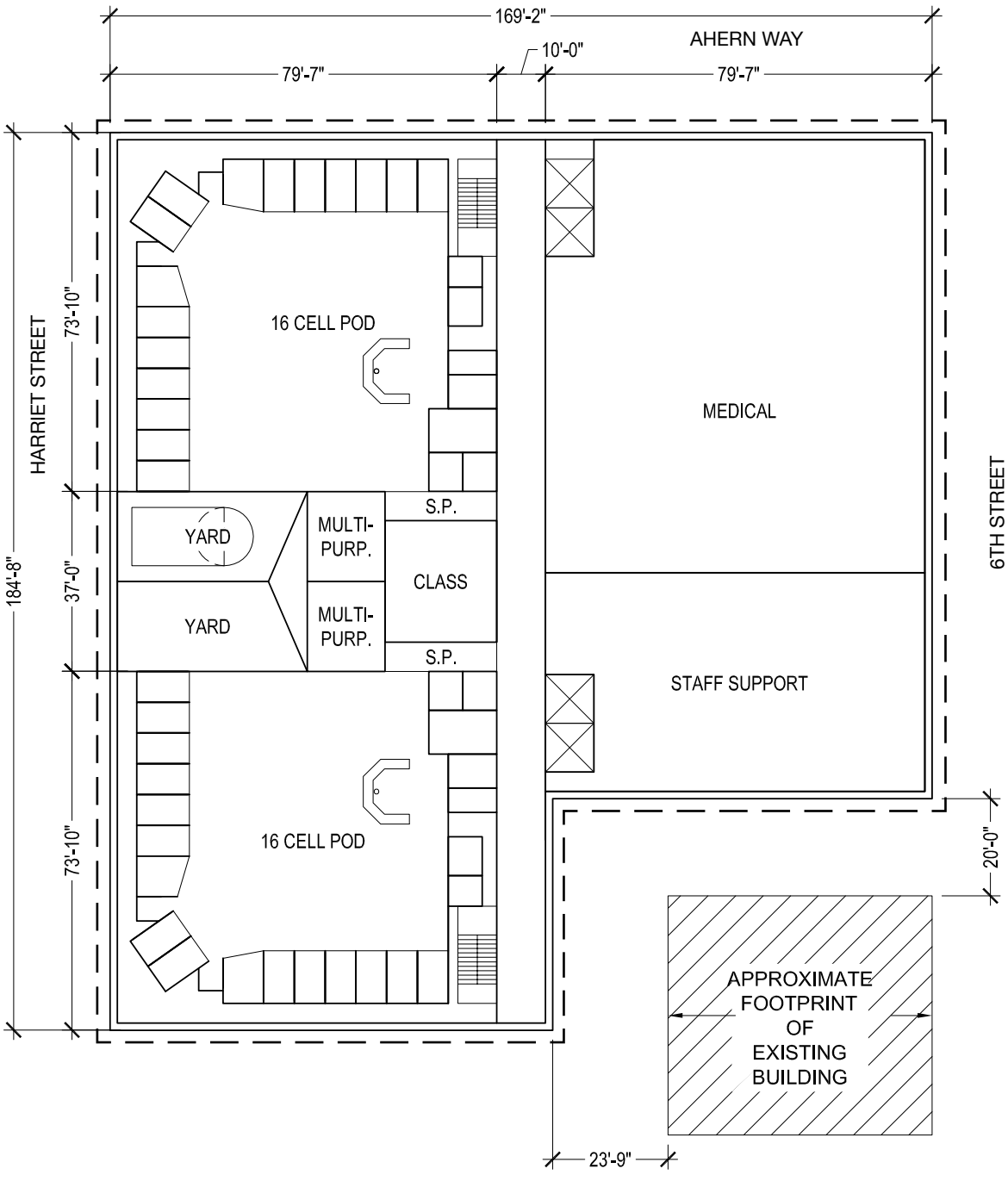
FIGURE 8: PROPOSED FIRST FLOOR PLAN



SOURCE: Mark Cavagnero Associates + Cary Bernstein Architect JV; Turnstone Consulting/SWCA

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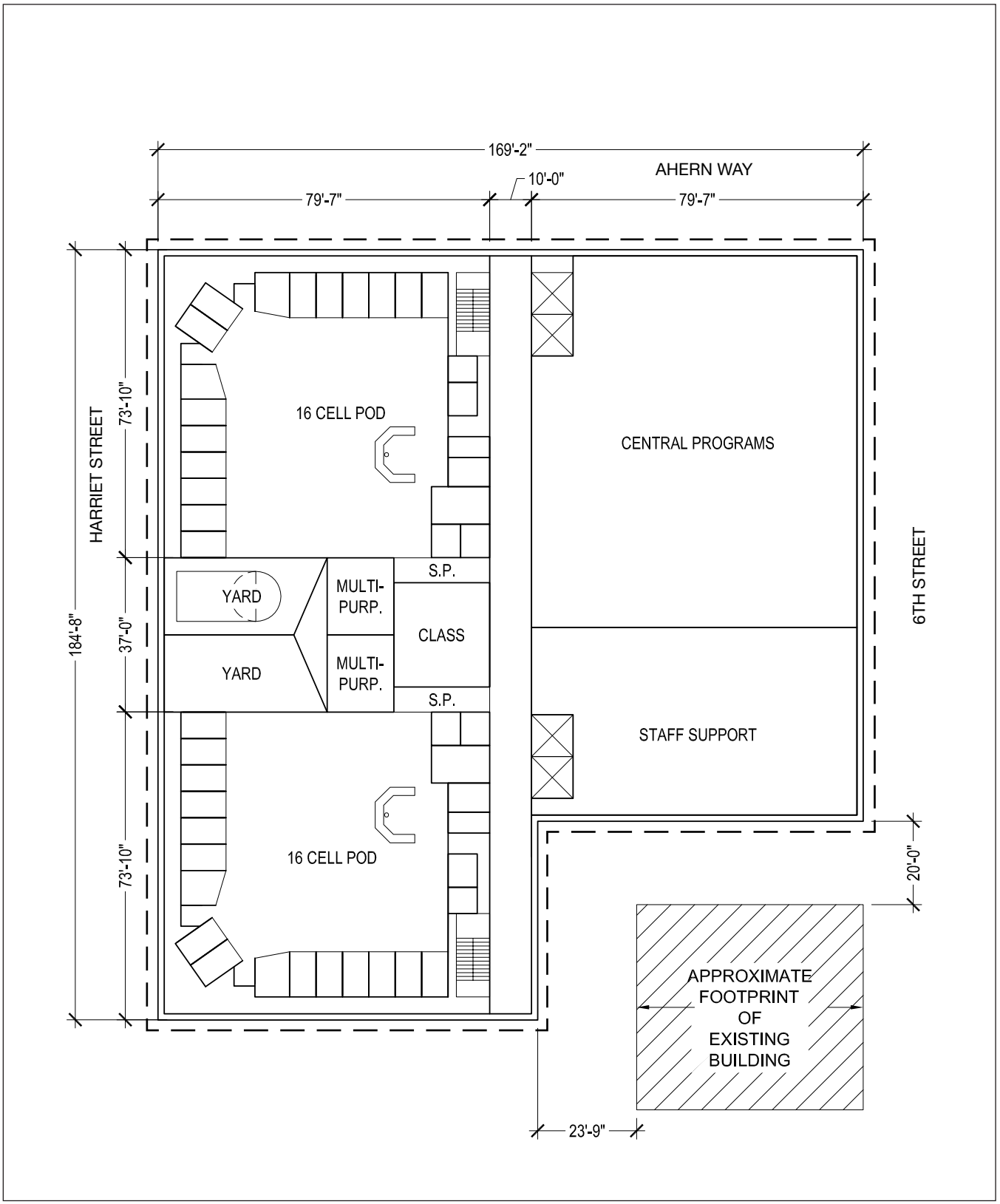
FIGURE 9: PROPOSED SECOND FLOOR PLAN



SOURCE: Mark Cavagnero Associates + Cary Bernstein Architect JV; Turnstone Consulting/SWCA

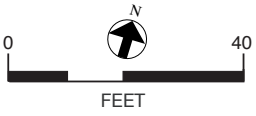


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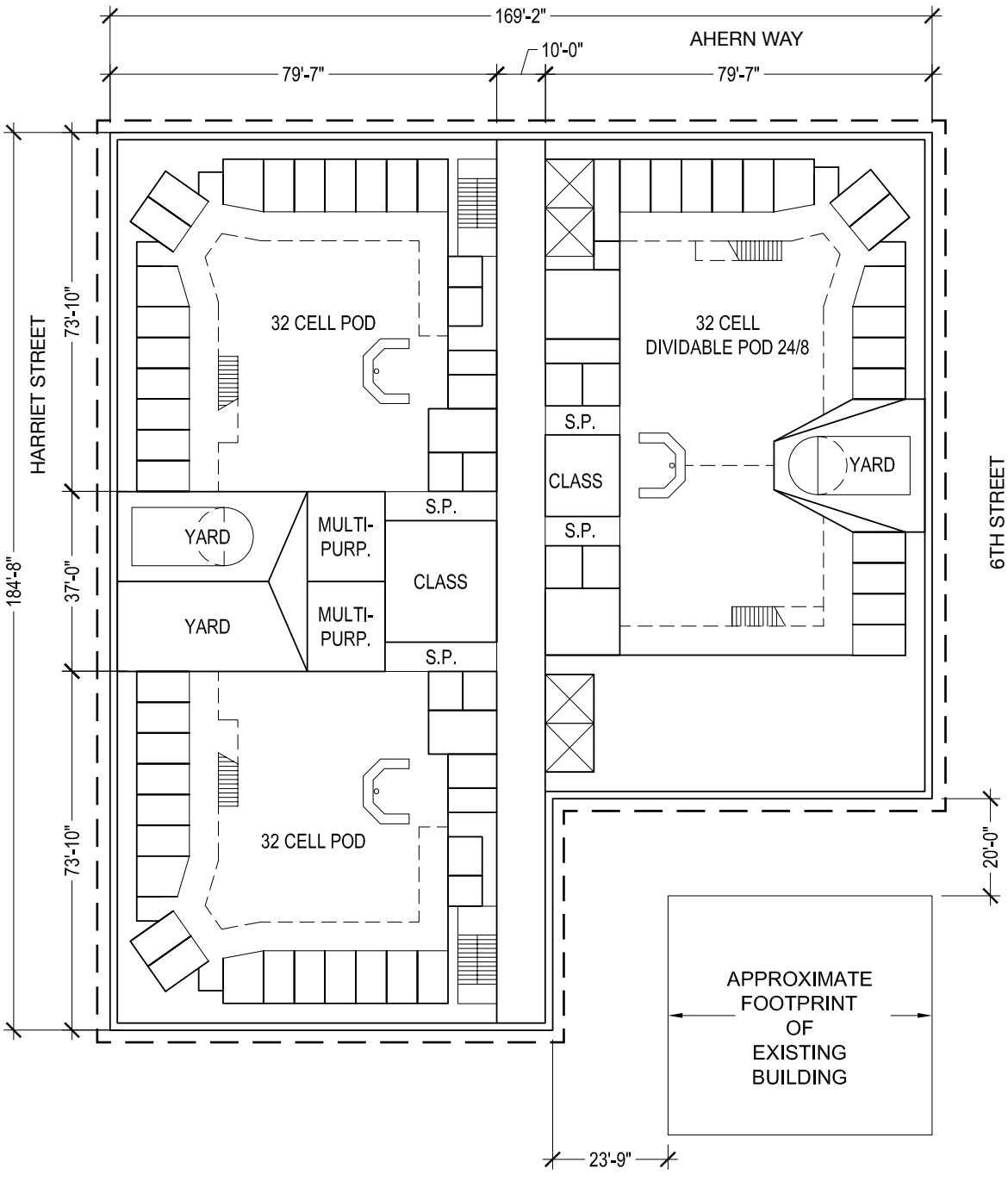
FIGURE 10: PROPOSED THIRD FLOOR PLAN



SOURCE: Mark Cavagnero Associates + Cary Bernstein Architect JV; Turnstone Consulting/SWCA

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FIGURE 11: PROPOSED FOURTH & FIFTH FLOOR PLAN

Partial Basement Level

The proposed approximately 28,000-gsf basement level would provide access to a proposed pedestrian tunnel connecting the proposed RDF to the courtrooms in the existing HOJ building for inmate transport between the buildings. Space within the basement area would also be designated for building services, storage, laundry, and mechanical/electrical/plumbing uses. (See **Figure 12: Proposed Basement Level Floor Plan**.)

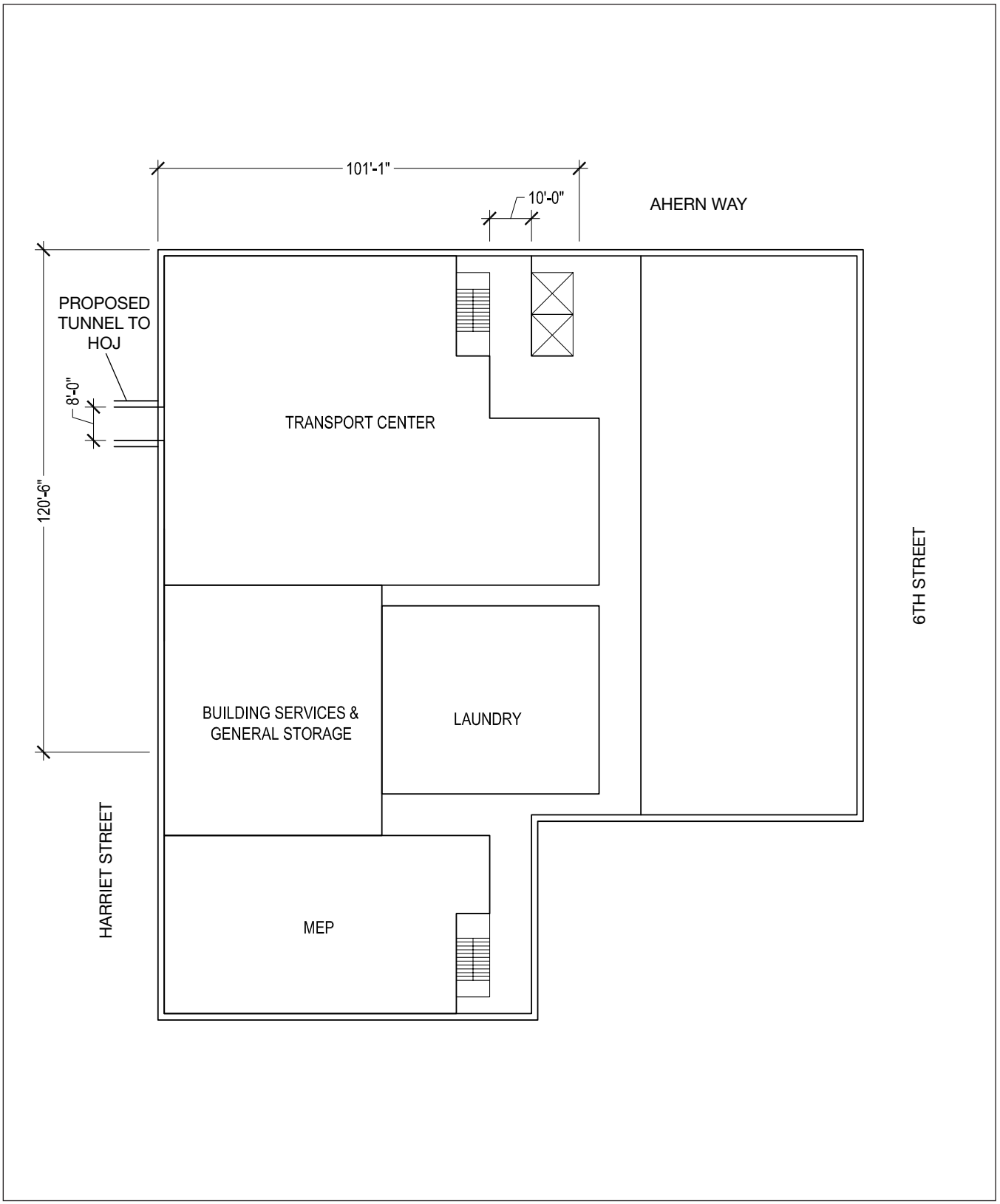
Proposed Right-of-Way Changes

The proposed project would include improvements within the Harriet Street and Ahern Way rights-of-way. As part of the proposed RDF, portions of Harriet Street and Ahern Way would be reconfigured to accommodate designated, secure service and jail transport areas (a loading dock on Harriet Street and a sally port on Ahern Way, respectively) subject to SFMTA and DPW review and approval. In addition, both Harriet Street (from Bryant to Harrison streets) and Ahern Way (west of Sixth Street) would be closed to through traffic in both directions and only official service vehicles would be allowed access.

In addition, a proposed pedestrian tunnel connection would be constructed under the Harriet Street roadway and sidewalks to connect the proposed RDF with the basement level of the existing HOJ. The proposed tunnel would be 8 feet wide and 10 feet tall and would be constructed approximately 17 feet below grade. Inmates and in-custody defendants would be transferred between the proposed RDF and the courts via this tunnel as a secure path of travel. The proposed project also includes renovations to the existing HOJ basement access point to serve as a secure in-custody corridor for jail inmate transport. These renovations would include changes to the existing basement parking access entrance.

Proposed Landscaping

The existing street trees on the HOJ site (along Bryant Street between Harriet and Seventh streets, on Harriet Street between Bryant Street and Ahern Way, and along Seventh Street between Bryant Street and the I-80 overpass) and on the project building site (along Bryant Street between Sixth and Harriet streets, and along Sixth Street between Bryant Street and the I-80 overpass) would remain. Construction of the proposed RDF would require removal of three interior trees located in the rear yard of the existing SRO building at 480-484 Sixth Street. The project sponsor would plant new street trees in compliance with the standards of Planning Code Section 138.1(c)(1) and the Public Works Code, Article 16. According to Planning Code Section 138.1(c)(1), a total of seven new street trees would be required along the Sixth Street and Bryant Street frontages. All new and/or replacement trees on the Sixth Street and Bryant Street frontages would be planted in accordance with the standards set forth in Planning Code Section 138.1(c)(1) and the *Better Streets Plan*. If DPW determines that planting the full complement of required street trees would not be



SOURCE: Mark Cavagnero Associates + Cary Bernstein Architect JV; Turnstone Consulting/SWCA

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FIGURE 12: BASEMENT FLOOR PLAN

feasible due to site constraints or other reasons, a waiver of this requirement may be requested from the Zoning Administrator (Planning Code Section138.1(c)(1)(C)(iii)). In this case, an in-lieu street tree fee would be required pursuant to Planning Code Section428. No additional landscaping is proposed as part of the project.

Project Construction

Foundation and Excavation

Construction of the proposed RDF would require excavation for the partial basement level and reinforced concrete mat foundation. Additional excavation would be required to construct the pedestrian transport tunnel between the proposed RDF and the existing HOJ building. Excavation depth for both the basement level and tunnel excavation would not exceed 17 feet and would require approximately 18,000 cubic yards of soil to be removed from the project site.[12]

Construction Phasing and Duration

The project sponsor estimates that construction of the proposed project would take approximately 30 months to complete, with construction beginning mid-year in 2017 and building occupancy likely in the fall of 2020.

Project Approvals

The proposed project requires the following approval actions. These approvals may be considered by City decision-makers in conjunction with the required environmental review, but they may not be granted until the required environmental review has been completed.

Actions by the Board of Supervisors

- Adoption of ordinances to reclassify the zoning designation of the eastern portion of the project site (project building site) from SALI to P and the height and bulk designations of this portion of the site from 30-X to 95-J.
- Adoption of a resolution to approve purchasing of land and financing of the proposed project through a Certification of Participation.

Actions by the Planning Commission

- Recommendation that the Board of Supervisors adopt ordinances to reclassify the zoning designation of the eastern portion of the project site (project building site) from Service

[12] San Francisco Department of Public Works, Geotechnical Investigation Report - Rehabilitation and Detention Facility, 820 Bryant Street, San Francisco, California, February 23, 2015. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

Arts Light Industrial (SALI) to P and the height and bulk designations of this portion of the site from 30-X to 95-J.

- Approval of a *General Plan* referral determining that the proposed project, including the proposed legislative amendments, is in conformity with the objectives and policies of the *General Plan*.

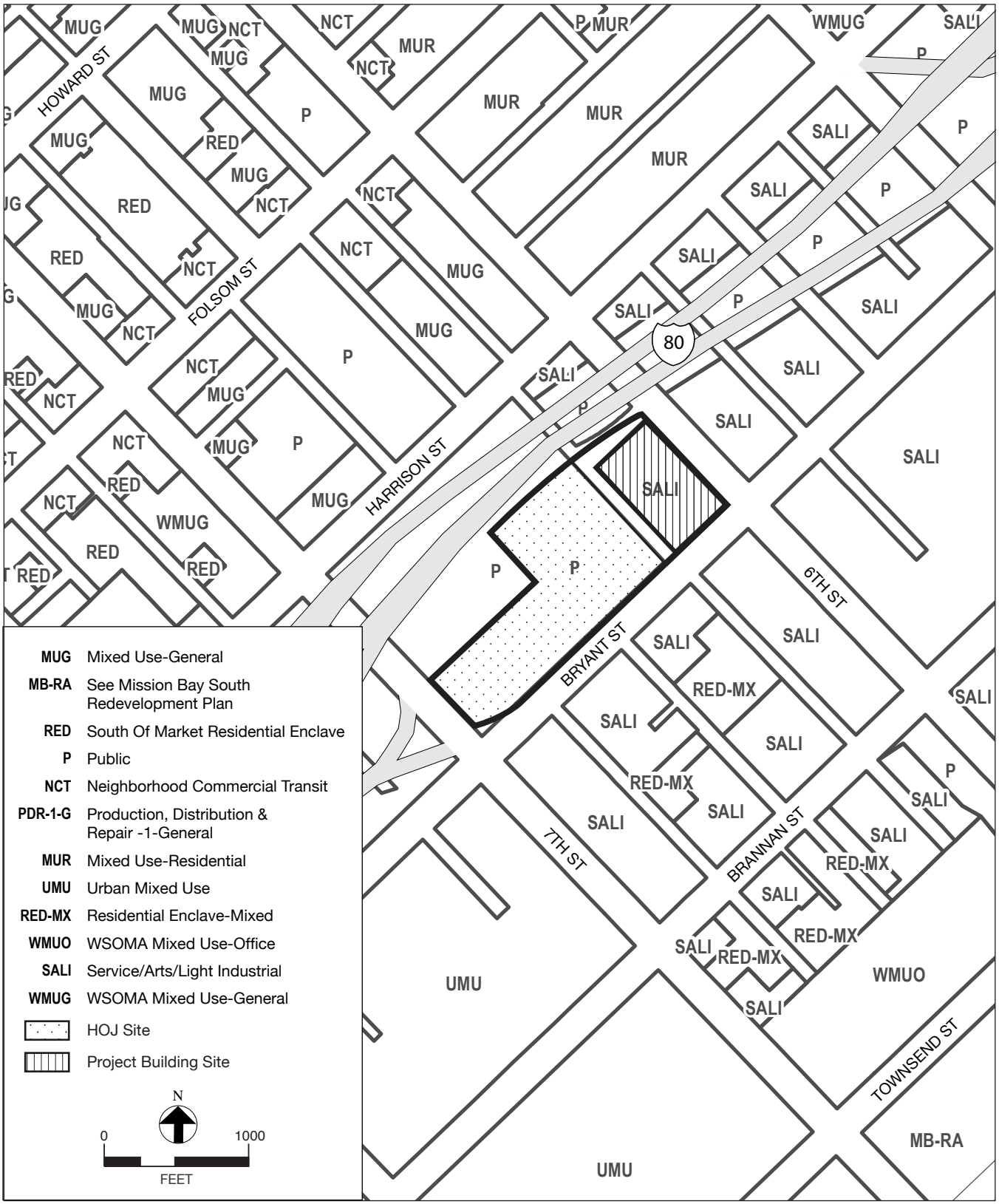
Actions by Other City Departments

- Department of Public Works request for *General Plan* and Street Vacation Referrals from the Planning Department, and Board of Supervisors approval to vacate thru-traffic on portions of the Harriet Street and Ahern Way rights-of-way. To approve the street vacations, the Department of Public Works requests a referral to the Planning Department which would be required for a formal determination as to whether the proposed project is consistent with the objectives and policies of the *General Plan* prior to an action by the Board of Supervisors to approve the street vacations.
- Approval of site permit (*Planning Department, Department of Building Inspection*)
- Approval of grading and building permits (*Planning Department and Department of Building Inspection*)
- Approval of project compliance with the Stormwater Control Guidelines (*Department of Public Works)*
- Approval of a stormwater control plan (*San Francisco Public Utilities Commission*)

B. PROJECT SETTING

As previously noted, the project site is located in San Francisco's South of Market neighborhood, at the intersection of Bryant and Sixth streets, and consists of eight parcels on Assessor's Block 3759, except for a portion of Lot 42, and portions of the Harriet Street and Ahern Way rights-of-way. The topography of the project site and surrounding area is relatively flat, with a slight slope from northwest to southwest. The western portion of the project site (HOJ site), located at 850 Bryant Street, is bounded by Harriet Street on the east, Bryant Street on the south, and Seventh Street on the west. The eastern portion of the project site (project building site) is bounded by Ahern Way to the north, Sixth Street to the east, Bryant Street to the south, and Harriet Street to the west. The HOJ site is in a P Zoning District and a 105-J Height and Bulk District, and the project building site is in a SALI Zoning District and a 30-X Height and Bulk District.[13] (See **Figure 13: Existing Zoning District** and **Figure 14: Existing Height and Bulk Districts**.) The entire project site is within the Western SoMa SUD, the area covered by the *South of Market Area Plan* of the *San Francisco General Plan* as well as the area covered by the *Western SoMa Community Plan*. It is not within any known or potential historic preservation district.

[13] The maximum building height is 105 feet on the HOJ site and 30 feet on the project building site. Bulk controls reduce the size of a building's floorplates as the building increases in height. Pursuant to Planning Code Section 270(a), the bulk controls in a "J" Bulk District become effective above a building height of 40 feet, and there are no bulk controls in an "X" Bulk District.



SOURCE: San Francisco Planning Department; Turnstone Consulting/SWCA

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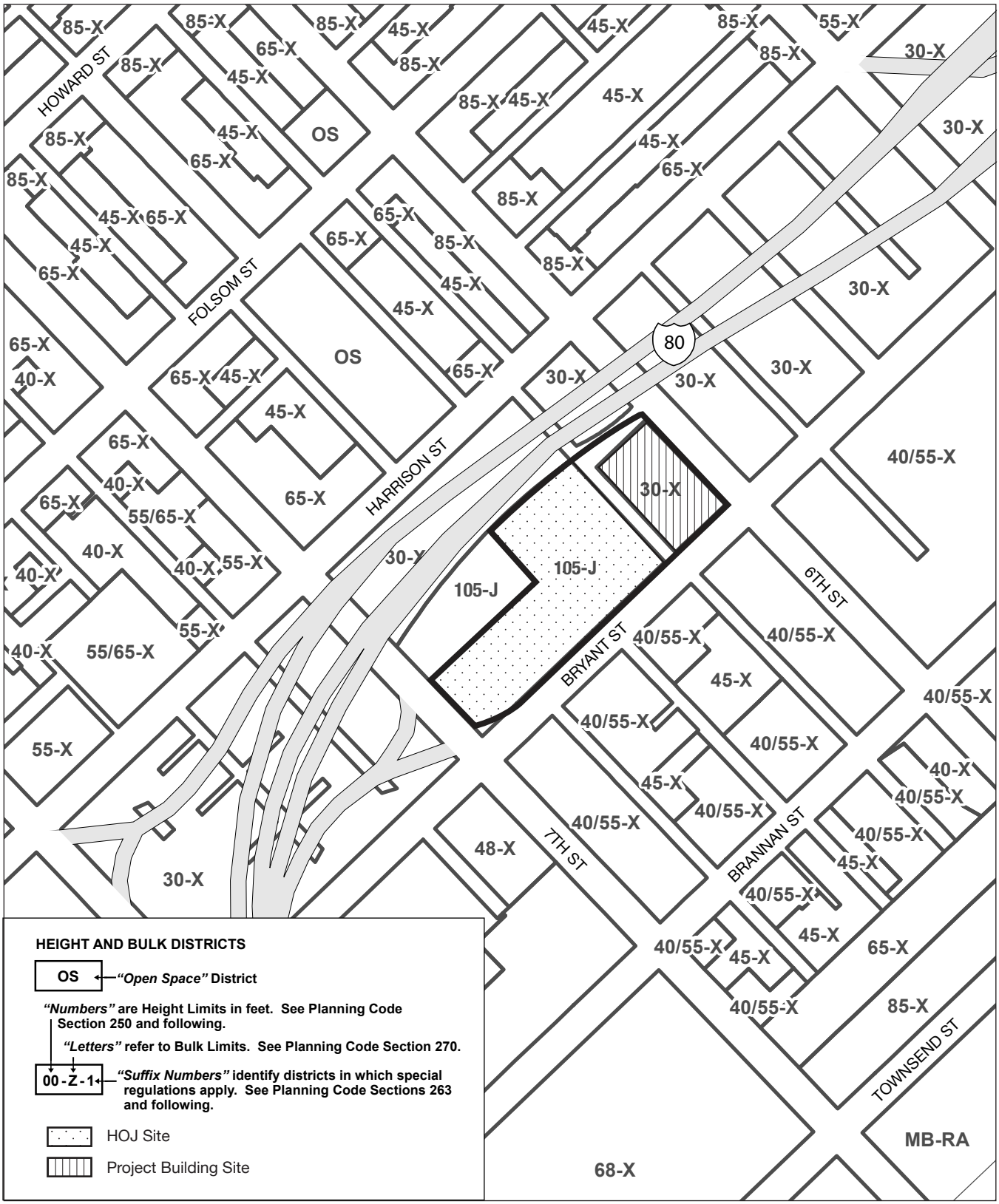
FIGURE 13: EXISTING ZONING DISTRICTS



SOURCE: San Francisco Planning Department; Turnstone Consulting/SWCA

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FIGURE 14: EXISTING HEIGHT & BULK DISTRICTS

The blocks to the east of the project site across Sixth Street are zoned SALI and Western SoMa Mixed Use-Office (WMUO), and the blocks to the south of the project site, across Bryant Street are zoned SALI and Urban Mixed Use (UMU). The blocks to the west of the project site west of 7th Street are zoned Western SoMa Mixed Use-General (WMUG), Residential Enclave (RED), and Neighborhood Commercial Transit (NCT). The blocks to the north of the project site are zoned P, NCT, Mixed Use-General (MUG), and Mixed Use-Residential (MUR). There are two SUDs near the project site: the South of Market Street Hall of Justice Legal Services SUD on the south side of Bryant Street across from the project site, and the Youth and Family Zone SUD on the north side of I-80. The height and bulk districts within three blocks of the project site vary from 30-X to 340-I. The height and bulk controls on the blocks immediately adjacent to the project site include 30-X to the east, 40-X/55-X, and 45-X to the south, 30-X to the west, and OS (Open Space), 45-X, 65-X, and 85-X to the north.

Existing land uses in the project vicinity consist of a mix of residential, retail, office, and light industrial uses. The scale of development varies from one-story buildings to four- and five-story buildings. At 105 feet tall, the existing eight-story HOJ building is the tallest building in the project site vicinity. I-80, the elevated freeway approximately 35 feet above grade, runs northeast-southwest from The Embarcadero before turning almost due south between Seventh and Eighth streets west of the project site.

The block east of the project site is occupied by one- and two-story buildings containing retail, office, and light industrial uses. One of the two-story buildings fronting Sixth Street has two billboards on its roof, and there are two freestanding billboards further east in the middle of the block. At the east end of the block near Fifth Street, there are two more roof-mounted billboards on top of existing one-story buildings.

The block south of the project site is occupied by one- to four-story buildings containing residential, retail, office, and light industrial uses. This block also contains two surface parking lots and a one-story parking garage.

The block west of the project site is primarily occupied by the HOJ service station on the north side of Bryant Street where Police Department and Sheriff's Department vehicles are fueled and serviced. Part of this block is occupied by the I-80 off-ramp that touches down at the intersection of Seventh and Bryant streets.

I-80 is adjacent to and north of the project site. Land uses on the north side of I-80 and across Harrison Street include residential buildings, retail uses, office uses, light industrial uses (auto repair facilities, gas stations, and printing shops), surface parking lots, Bessie Carmichael Elementary School, Victoria Manalo Draves Park, and the Gene Friend Recreation Center.

C. COMPATIBILITY WITH EXISTING ZONING AND PLANS

	Applicable	*Not Applicable*
Discuss any variances, special authorizations, or changes proposed to the Planning Code or Zoning Map, if applicable.	☒	☐
Discuss any conflicts with any adopted plans and goals of the City or Region, if applicable.	☒	☐
Discuss any approvals and/or permits from City departments other than the Planning Department or the Department of Building Inspection, or from Regional, State, or Federal Agencies.	☒	☐

San Francisco General Plan

The *San Francisco General Plan (General Plan)* establishes objectives and policies to guide land use decisions related to the physical development of San Francisco. It is comprised of ten elements, each of which addresses a particular topic that applies citywide: Air Quality; Arts; Commerce and Industry; Community Facilities; Community Safety; Environmental Protection; Housing; Recreation and Open Space; Transportation; and Urban Design. The *General Plan* also includes area plans, each of which focuses on a particular area of the City. The project site is in the area covered by the *Western SoMa (South of Market) Area Plan*,[14] which establishes objectives and policies that guide land use development in the western part of San Francisco's South of Market neighborhood.

The *General Plan* contains many objectives and policies, and some of these objectives and policies conflict with each other. Achieving complete consistency with the *General Plan* is not always possible for a proposed project. Consistency with the *General Plan* is typically based on whether, on balance, a proposed project would be consistent with *General Plan* policies. The California Environmental Quality Act (CEQA) does not require an analysis of the proposed project in relation to all *General Plan* policies; the Initial Study checklist asks whether a proposed project would conflict with any plans or policies adopted to protect the environment. Conflicts with plans, policies, or regulations do not, in and of themselves, indicate a significant environmental effect within the meaning of CEQA. However, such conflicts could result in physical environmental effects.

Implementation of the proposed project, which would be 110 feet tall (95-foot-tall building plus an additional 15-foot-tall mechanical penthouse) and could cast net new shadow on Victoria Manalo Draves Park, potentially conflicts with the following policies of the *General Plan*:

- Recreation and Open Space Element
  - Policy 2.3: Preserve sunlight in public open spaces.

[14] The *Western SoMa Area Plan* is also known as the *Western SoMa Community Plan*. These terms are interchangeable.

- Urban Design Element
    - Policy 3.4: Promote building forms that will respect and improve the integrity of open spaces and other public areas.

The physical environmental impacts that could result from these potential conflicts are discussed in Section E, Evaluation of Environmental Effects, under Section E.8: Wind and Shadow, pp. 135-149. The consistency of the proposed project with *General Plan* objectives and policies that do not relate to physical environmental issues will be considered by City decision-makers as part of their deliberations on whether to approve or disapprove the proposed project, and any potential conflicts identified as part of that process would not alter the physical environmental effects of the proposed project.

San Francisco Planning Code and Zoning Maps

The San Francisco Planning Code (Planning Code), which incorporates by reference the City's Zoning Maps, governs permitted uses, densities, and the configuration of buildings within San Francisco. Permits to construct new buildings (or to alter or demolish existing ones) may not be issued unless the proposed project complies with the Planning Code, an exception or variance is granted pursuant to the provisions of the Planning Code, or legislative amendments to the Planning Code are included and adopted as part of the proposed project.

Land Use Controls

As shown on Zoning Map Sheet ZN08, the project site is in two different zoning districts: a Public Use (P) Zoning District and the Service/Arts/Light Industrial (SALI) Zoning District. The HOJ site is in a P Zoning District, and the project building site is in a SALI Zoning District. Pursuant to Planning Code Section 234, the P Zoning District applies to "land that is owned by a governmental agency and in some form of public use, including open space." Planning Code Sections 234.1 and 234.2 regulate the types of land uses that are principally permitted and conditionally permitted in the P Zoning District, respectively. The proposed project complies with the land use controls for a P Zoning District. Pursuant to Planning Code Section 846, the SALI Zoning District "is largely comprised of low-scale buildings with production, distribution, and repair uses. The district is designed to protect and facilitate the expansion of existing general commercial, manufacturing, home and business service, and light industrial activities, with an emphasis on preserving and expanding arts activities." Planning Code Sections 846.20 through 846.98 regulate the types of land uses that are principally permitted, conditionally permitted, or not permitted in the SALI Zoning District. Government facilities such as the proposed project are not addressed in the land use controls for the SALI Zoning District. Implementation of the proposed project would require adoption of a legislative amendment to reclassify the zoning of the project building site from SALI to P.

The project site is in the Western SoMa Special Use District (SUD). Planning Code Sections 803.6 and 823 apply to the Western SoMa SUD. The provisions of Planning Code Section 803.6 are related to formula retail uses and do not apply to the proposed project. The provisions of Planning Code Section 823 are related to design standards, building envelope, and specific types of land uses. Many of the provisions of Planning Code Section 823 are not applicable to the proposed project, but the proposed project is required to comply with the design policies of the *Western SoMa Design Standards* set forth in Planning Code Section 823(b).

Height and Bulk Controls

As shown on Zoning Map Sheet HT08, the project site is in two different height and bulk districts: 105-J and 30-X (see **Figure 14** on p. 23). The HOJ site has a 105-foot height limit, and the project building site has a 30-foot height limit. The maximum building height permitted on the HOJ site is 105 feet, and the maximum building height permitted on the project building site is 30 feet. Bulk controls reduce the size of a building's floorplates as the building increases in height. The HOJ site is in a "J" Bulk District. Pursuant to Planning Code Section 270(a), the bulk controls in a "J" Bulk District are effective at and above a building height of 40 feet. Beginning at a building height of 40 feet, the building plan dimensions are limited to a maximum length of 250 feet and a maximum diagonal dimension of 300 feet. The project building site is in an "X" Bulk District. Pursuant to Planning Code Section 270(a), there are no bulk controls in an "X" Bulk District. The proposed project complies with the height and bulk controls for the HOJ site. The proposed project complies with the bulk controls for the project building site, but it does not comply with the height limit for the project building site. Implementation of the proposed project would require adoption of a legislative amendment to reclassify the height and bulk limit of the project building site from 30-X to 95-J.

Proposition M – The Accountable Planning Initiative

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added Section 101.1 to the Planning Code and established eight Priority Policies. These policies are (1) preservation and enhancement of neighborhood-serving retail uses and future opportunities for resident employment in and ownership of such businesses; (2) conservation and protection of existing housing and neighborhood character to preserve the cultural and economic diversity of neighborhoods; (3) preservation and enhancement of affordable housing; (4) discouragement of commuter automobiles that impede Muni transit service or that overburden streets or neighborhood parking; (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership; (6) maximization of earthquake preparedness; (7) preservation of landmarks and historic buildings; and (8) protection of parks and open space and their access to sunlight and vistas.

Prior to issuing a permit for any project which requires an Initial Study under CEQA, prior to issuing a permit for any demolition, conversion, or change of use, and prior to taking any action which requires a finding of consistency with the *General Plan*, the City is required to find that the proposed project or legislation would be consistent with the Priority Policies. The consistency of the proposed project with the environmental topics associated with the Priority Policies is discussed in this Initial Study, providing information for use in the Planning Department's staff reports for the proposed project. The staff reports and approval motions prepared for the decision-makers will include a comprehensive project analysis and findings regarding the consistency of the proposed project with the Priority Policies.

Other Local Plans and Policies

In addition to the *General Plan*, the Planning Code and Zoning Maps, and the Accountable Planning Initiative (Proposition M), other local plans and policies that are relevant to the proposed project are discussed below.

- The *San Francisco Sustainability Plan* is a blueprint for achieving long-term environmental sustainability by addressing specific environmental issues including, but not limited to, air quality, climate change, energy, ozone depletion, and transportation. The goal of the *San Francisco Sustainability Plan* is to enable the people of San Francisco to meet their present needs without sacrificing the ability of future generations to meet their own needs.
- The *Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Emissions* is a local action plan that examines the causes of global climate change and the human activities that contribute to global warming, provides projections of climate change impacts on California and San Francisco based on recent scientific reports, presents estimates of San Francisco's baseline greenhouse gas emissions inventory and reduction targets, and describes recommended actions for reducing the City's greenhouse gas emissions.
- The Transit First Policy (City Charter, Section 8A.115) is a set of principles that underscore the City's commitment to give priority to traveling by transit, bicycle, and on foot over traveling by private automobile. These principles are embodied in the objectives and policies of the Transportation Element of the *General Plan.* All City boards, commissions, and departments are required by law to implement Transit First principles in conducting the City's affairs.
- The *San Francisco Bicycle Plan* is a citywide bicycle transportation plan that identifies short-term, long-term, and other minor improvements to San Francisco's bicycle route network. The overall goal of the *San Francisco Bicycle Plan* is to make bicycling an integral part of daily life in San Francisco.
- The *San Francisco Better Streets Plan* consists of illustrative typologies, standards and guidelines for the design of San Francisco's pedestrian environment, with the central focus of enhancing the livability of the City's streets.

The proposed project has been reviewed against these local plans and policies and is not anticipated to be in obvious or substantial conflict with the plans and policies listed above.

Regional Plans and Policies

In addition to local plans and policies, there are several regional planning agencies whose environmental, land use, and transportation plans and policies consider the growth and development of the nine-county San Francisco Bay Area. Some of these plans and policies are advisory, and some include specific goals and provisions that must be adhered to when evaluating a project under CEQA. The regional plans and policies that are relevant to the proposed project are discussed below.

- *Plan Bay Area*, prepared by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC), is a long-range land use and transportation plan for the nine-county Bay Area that covers the period from 2010 to 2040. *Plan Bay Area* calls for concentrating housing and job growth around transit corridors, particularly within areas identified by local jurisdictions as Priority Development Areas. In addition, *Plan Bay Area* specifies strategies and investments for maintaining, managing, and improving the region's multi-modal transportation network and proposes transportation projects and programs to be implemented with reasonably anticipated revenue. *Plan Bay Area* was adopted on July 18, 2013.
- ABAG's *Projections 2013* is an advisory policy document that includes population and employment forecasts to assist in the development of local and regional plans and policy documents.
- The MTC's *Transportation 2035 Plan for the San Francisco Bay Area* is a policy document that outlines transportation projects for highway, transit, rail, and related uses through 2035 for the nine Bay Area counties.
- The Bay Area Air Quality Management District's *Bay Area 2010 Clean Air Plan* updates the Bay Area 2005 Ozone Strategy, in accordance with the requirements of the California Clean Air Act, to implement feasible measures to reduce ozone and provide a control strategy to reduce ozone, particulate matter, air toxics, and greenhouse gases throughout the region.
- The Regional Water Quality Control Board's *Water Quality Control Plan for the San Francisco Bay Basin* is a master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the state, including surface waters and groundwater, and includes implementation programs to achieve water quality objectives.

The proposed project has been reviewed against these regional plans and policies and is not anticipated to be in obvious or substantial conflict with the regional plans and policies listed above.

Required Project Approvals

A list of required project approvals is provided in Section A, Project Description, pp. 20-21.

D. SUMMARY OF ENVIRONMENTAL EFFECTS

The proposed project could potentially affect the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor.

☐ Land Use	☒ Air Quality	☐ Biological Resources
☐ Greenhouse Gas Emissions	☐ Geology and Soils	☒ Hydrology and Water Quality
☐ Population and Housing	☐ Wind and Shadow	☐ Hazards/Hazardous Materials
☒ Cultural and Paleo. Resources	☐ Recreation	☐ Mineral/Energy Resources
☐ Transportation and Circulation	☐ Utilities and Service Systems	☐ Agricultural and Forest Resources
☒ Noise	☐ Public Services	☐ Mandatory Findings of Significance

This Initial Study examines the proposed project to identify potential effects on the environment. For each item on the Initial Study checklist, the evaluation has considered the impacts of the proposed project both individually and cumulatively. All items on the Initial Study Checklist that have been checked "Less than Significant Impact with Mitigation Incorporated," "Less than Significant Impact," "No Impact" or "Not Applicable," indicate that, upon evaluation, staff has determined that the proposed project could not have a significant adverse environmental effect relating to that issue. A discussion is included for those issues checked "Less than Significant Impact with Mitigation Incorporated" and "Less than Significant Impact" and for most items checked with "No Impact" or "Not Applicable." For all of the items checked "No Impact" or "Not Applicable" without discussion, the conclusions regarding potential significant adverse environmental effects are based upon field observation, staff experience and expertise on similar projects, and/or standard reference material available within the Department, such as the Department's *Transportation Impact Analysis Guidelines for Environmental Review*, or the California Natural Diversity Database and maps, published by the California Department of Fish and Wildlife. The items checked above have been determined to be "Less than Significant with Mitigation Incorporated."

Senate Bill 743 and Public Resources Code Section 21099

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743, which became effective on January 1, 2014.[15] Among other provisions, SB 743 amended CEQA by adding Public Resources

[15] Senate Bill 743 is available online at http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB743. Accessed January 15, 2015.

Code Section 21099 regarding the analysis of aesthetics and parking impacts for certain urban infill projects in transit priority areas.[16]

Aesthetics and Parking Analysis

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

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

The proposed project meets each of the above three criteria and thus, this Initial Study does not consider aesthetics and the adequacy of parking in determining the significance of project impacts under CEQA.[17]

Public Resources Code Section 21099(e) states that a Lead Agency maintains the authority to consider aesthetic impacts pursuant to local design review ordinances or other discretionary powers and that aesthetics impacts do not include impacts on historical or cultural resources. As such, there will be no change in the Planning Department's methodology related to design and historic review.

The Planning Department acknowledges that parking conditions may be of interest to the public and the decision-makers. Therefore, this Initial Study presents parking demand analysis for informational purposes and considers any secondary physical impacts associated with constrained supply (e.g., queuing by drivers waiting for scarce on-site parking spaces that affects the public right-of-way) as applicable in the transportation analysis in Section E, Evaluation of Environmental Effects, under Section E.4: Transportation and Circulation, pp. 54-89.

[16] A "transit priority area" is defined as an area within ½-mile of an existing or planned major transit stop. A "major transit stop" is defined in California Public Resources Code Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. A map of San Francisco Transit Priority Areas can be found online at http://sfmea.sfplanning.org/Map%20of%20San%20Francisco%20Transit%20Priority%20Areas.pdf.

[17] San Francisco Planning Department, *Transit-Oriented Infill Project Eligibility Checklist, Case No. 2014.0198E, HOJ RDF Replacement Jail Facility Project,* January 2015. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

E. EVALUATION OF ENVIRONMENTAL EFFECTS

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
1.	**LAND USE AND LAND USE PLANNING— Would the project:**					
a)	Physically divide an established community?	☐	☐	☒	☐	☐
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐	☐
c)	Have a substantial impact upon the existing character of the vicinity?	☐	☐	☒	☐	☐

Impact LU-1: The proposed project would not physically divide an established community. (*Less than Significant*)

The division of an established community typically involves the construction of a physical barrier to neighborhood access, such as a new freeway, or the removal of a means of access, such as a bridge or a roadway. The proposed project would construct a new 5-story, 110-foot-tall RDF (95 foot-tall building plus an additional 15-foot-tall mechanical penthouse) and would not involve the construction of a physical barrier to neighborhood access nor the removal of an existing means of access. On the ground floor, the enclosed sally port for jail inmate transport and the secure service/loading area would partially encroach into the Ahern Way and Harriet Street rights-of-way, and may remove a portion of the sidewalk along the south side of Ahern Way and a portion of the sidewalk along the east side of Harriet Street, adjacent to the proposed RDF (see **Figure 8** on p. 14). In addition, these sidewalks would likely be closed for periods of time during project construction; however, these closures would not temporarily or permanently restrict pedestrian access to the interior of the project site since the sidewalk along the north side of Ahern Way (within the same block) would remain open. Also, although portions of the Ahern Way and Harriet Street rights-of-way would likely be closed for periods of time during project construction, these closures would be temporary in nature. Furthermore, neither street provides connections to any nearby recreational or commercial areas, and alternate access along other streets in the area, such as Sixth and Seventh streets, is available. As described under **Impact TR-3** on pp. 72-74, pedestrian volumes on Harriet Street and Ahern Way were observed to be low, and future pedestrian activity on these sidewalks would be related primarily to the RDF activities. For these reasons, the proposed project would not physically divide an established community and impacts are considered **less than significant**. No mitigation measures are necessary.

Impact LU-2: The proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. (*Less than Significant*)

Examples of land use plans, policies, and regulations are the *Western SoMa Area Plan* of the *General Plan*, which establishes objectives and policies that guide land use development in the western part of San Francisco's South of Market neighborhood, and the Planning Code provisions that establish what types of land uses are principally permitted, conditionally permitted, or not permitted on development sites. The proposed project, which consists of the construction of a rehabilitation and detention facility that would house jail inmates, is generally in conformity with the objectives and policies of the *Western SoMa Area Plan*. The project building site is currently zoned SALI, which does not permit government facilities. As part of the proposed project, the zoning of the project building site would be reclassified from SALI to P. Upon the adoption of this reclassification by the San Francisco Board of Supervisors, the proposed project would comply with the provisions of Planning Code Section 234, which regulate land uses in P Zoning Districts. This impact would be **less than significant**, and no mitigation measures are necessary.

As discussed in Section C, Compatibility with Existing Zoning and Plans, pp. 25-26, the proposed project potentially conflicts with some *General Plan* policies related to urban design and the preservation of sunlight on open spaces. Although the height and bulk limitations on the project site may have been originally adopted for the purpose of avoiding or mitigating physical environmental impacts of new development, Public Resources Code Section 21099 (which became effective January 1, 2014) eliminates the analysis of aesthetics from the environmental review process for infill projects in transit priority zones, such as the proposed project. The topic of aesthetics may no longer be considered in determining the significance of this project's physical environmental effects under CEQA. Therefore, insofar as any impacts resulting from the proposed project's conflict with existing height and bulk limitations may be premised on underlying aesthetic concerns (such as impacts on urban design and visual character), these impacts are not considered significant impacts under Public Resources Code Section 21099. The proposed project's conflict with the existing height and bulk limitations will be analyzed and considered as part of design review for the proposed project by the decision-makers during their deliberations on the merits of the proposed project and as part of their actions to approve, modify, or disapprove the proposed project. The physical environmental impacts that could result from potential conflicts with policies related to open space are discussed under Section E.8: Wind and Shadow, pp. 140-149.

As discussed in Section C, Compatibility with Existing Zoning and Plans, pp. 28-29, the proposed project would not conflict with other plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect, such as the *San Francisco Sustainability Plan*, the *Bay Area 2010 Clean Air Plan*, and the *Water Quality Control Plan for the San Francisco Bay*

Basin. Thus, environmental plans and policies such as the *2010 Clean Air Plan*, that directly address environmental issues and/or contain targets or standards, must be met in order to preserve or improve characteristics of the City's physical environment. The proposed project would not substantially conflict with any such adopted environmental plan or policy and this impact would be **less than significant**. No mitigation measures are necessary.

Impact LU-3: The proposed project would not have a substantial impact upon the existing character of the vicinity. (*Less than Significant*)

The existing land use character of the project vicinity consists of a mix of public, office, residential, retail, open space, and parking uses. The proposed project would introduce a non-industrial public use, specifically a rehabilitation and detention facility which houses jail inmates, to the project building site. This non-industrial public use already exists on the HOJ site, i.e., CJ#3 and CJ#4. The existing facilities on the 6th and 7th floors of the HOJ would be relocated to the proposed RDF. For these reasons, the proposed project would be compatible with the land use character of the project vicinity. The proposed project would not introduce any incompatible uses, such as heavy industrial uses, that would have a substantial impact on the existing character of the project vicinity. The proposed project would include land uses permitted and already existing within the project vicinity. Therefore, the proposed project would have a **less-than-significant** impact on the existing character of the project's vicinity. No mitigation measures are necessary.

Reuse options for the 6th and 7th floors of the HOJ building have not been determined as part of the proposed project. However, any potential reuse would likely be similar to uses that already exist in the HOJ building, e.g., administrative, office, or records storage, and would be temporary due to the seismic deficiency of the existing HOJ building. Thus, reuse of this space would have a **less-than-significant** indirect land use impact. Further, demolition of the seismically deficient portions of the HOJ building (i.e., the west wing), if considered in the future, would require separate environmental review.

Impact C-LU-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a considerable contribution to a significant cumulative land use impact. (*Less than Significant*)

Cumulative development in the project vicinity (within a quarter-mile radius of the project site) includes the following projects that are either under construction, approved, or for which the Planning Department has an Environmental Evaluation Application on file:

- Development proposed under the *Western SoMa Community Plan* and analyzed in the *Western SoMa Community Plan, Rezoning of Adjacent Parcels, and 350 Eighth Street Project EIR* (2,883 dwelling units and 6,354 jobs);
- Land use, height limit, and street circulation changes as well as streetscape and open space improvements proposed under the *Central SoMA Plan* and currently undergoing separate environmental review (up to 5,400 dwelling units and 13,300 jobs);

- 345 Sixth Street (89 SRO units and 3,090 gsf of retail space);
- 363 Sixth Street (103 dwelling units);
- 377 Sixth Street (116 dwelling units and 4,820 gsf of retail space);
- 280 Seventh Street (29 dwelling units, 4,000 gsf of retail space);
- 598 Brannan Street (700,460 gsf of office space);
- 190 Russ Street (9 dwelling units); and
- 510-520 Townsend Street (317,160 gsf of office space).

These nearby development projects would not physically divide an established community by constructing any physical barriers to neighborhood access or removing any means of access. These nearby development projects are generally in conformity with the objectives and policies of the *Western SoMa Area Plan* and would not obviously or substantially conflict with other plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. The nearby cumulative development would introduce new residential, commercial/retail, and office uses to the project vicinity. All of these uses currently exist in the project vicinity. The nearby cumulative development would not introduce any incompatible uses, such as heavy industrial uses, that would have a substantial impact on the existing character of the project vicinity. For these reasons, the proposed project would not combine with past, present, and reasonably foreseeable future projects to create a significant cumulative land use impact.

Topics:		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
2.	**POPULATION AND HOUSING— Would the project:**					
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐	☐
b)	Displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing?	☐	☐	☒	☐	☐
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐	☐

Impact PH-1: The proposed project would not induce substantial population growth in an area, either directly or indirectly. ***(Less than Significant)***

The proposed project would not include new housing and therefore would not directly induce population growth on the project site, in the project area, or citywide. The proposed project would not indirectly increase population through changes or extensions to area roads, utilities, or other infrastructure. The limited amount of work proposed in the Ahern Way and Harriet Street rights-of-way would not qualify as a growth-inducing change to the existing roadway network.

Development of the proposed 200,000-gsf RDF would require demolition of three existing one-story commercial buildings on the eastern portion of the project site (444 Sixth Street, 450 Sixth Street, and 820 Bryant Street). The proposed project may also include the conversion of the existing, three-story, 14-unit SRO residential building at 480-484 Sixth Street (with ground-floor retail) to commercial/office use.

The proposed project would replace the existing 905 beds in CJ#3 and CJ#4, located on the 6th and 7th floors of the HOJ building at 850 Bryant Street, with a new up to 640-bed RDF. With implementation of the proposed project, employment related to CJ#3 and CJ#4 is expected to increase from an existing staff of 248 full time equivalent (FTE) employees to 295, an increase of 47 FTE employees. However, demolition of the existing commercial buildings at 444 Sixth Street, 450 Sixth Street, and 820 Bryant Street (a McDonald's restaurant) for development of the proposed RDF would result in the displacement of approximately 43 employees, resulting in a net increase of about 4 employees.[18]

San Francisco's overall employment is projected to increase from about 617,420 employees in 2015 to approximately 759,500 in 2040, an increase of about 23 percent over a 25-year period.[19] Even if all of the net new employees associated with the proposed project were conservatively assumed to be new to San Francisco, the project-related increase of up to 4 net new employees would represent considerably less than 1 percent (0.003 percent) of the City's estimated employment growth between the years 2015 and 2040. This increase in employment would be considered a less-than-significant impact in the context of total employment in the City and County of San Francisco. Further, this minor increase in employment would not generate a substantial demand for additional housing in the context of citywide employment growth.

Therefore, the proposed project would not directly or indirectly induce substantial population growth or concentration of employment on the project site, in the project area, or citywide that would cause an adverse physical change to the environment. The impact would be **less than significant** and no mitigation measures are necessary.

[18] San Francisco Planning Department, *Transportation Impact Analysis Guidelines for Environmental Review*, October 2002, Appendix C, Table C-1. An employment factor of 276 gsf/employee is used for office-government administrative uses (444 Sixth Street), an employment factor of 350 gsf/employee is used for general retail uses (450 Sixth Street), and an employment factor of 240 gsf/employee is used for fast food restaurant uses (820 Bryant Street).

[19] Association of Bay Area Governments (ABAG), *Projections 2013*, p. 75.

Impact PH-2: The proposed project would not displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing. ***(Less than Significant)***

As stated in Section A, Project Description, p. 8, the building at 480-484 Sixth Street, a 14-unit SRO residential building with ground-floor retail, would remain on the project building site. However, as part of DPW's acquisition of the parcels on the project building site existing residents at 480-484 Sixth Street may need to be relocated before the proposed RDF is ready for use, resulting in the displacement of these residents. No other residences would be affected, and no other residents would be displaced. Although housing demand at all income levels has outpaced housing production in the City, the residential displacement of 14 SRO housing units would not be substantial enough to necessitate the construction of replacement housing. As stated in Section A, Project Description, p. 8, in accordance with the California Relocation Act (Chapter 16, Section 7260 et seq. of the California Government Code), the proposed project includes a provision for a residential relocation plan, which, if needed, would be prepared by the Real Estate Division of the San Francisco General Services Agency. The relocation plan would establish a program to help affected residential tenants who qualify for assistance with relocation expenses, including moving expenses, and social services. Therefore, compliance with the California Relocation Act would address the potential demand for additional housing created by the residential displacement.

Approximately 43 employees at the existing commercial buildings on the eastern portion of the project site (444 Sixth Street, 450 Sixth Street, and 820 Bryant Street) would be permanently displaced. The displaced businesses would relocate in the general area or in other parts of the City, if they so desire. Since the proposed project would not permanently displace any residents (the relocation plan would ensure that existing residents would receive assistance in finding housing elsewhere in the City) and the displacement of 43 employees in the project area would not be substantial, the proposed project would not require the construction of replacement housing elsewhere. Thus, this impact would be **less than significant**, and no mitigation is necessary.

Impact PH-3: The proposed project would not displace substantial numbers of people necessitating the construction of replacement housing elsewhere. ***(Less than Significant)***

The proposed project could displace 14 SRO housing units with the conversion of the mixed-use residential building at 480-484 Sixth Street to commercial/office use. The net increase in the number of employees (approximately four employees) on the project site would not result in a substantial increase in the demand for housing.

The number of households in San Francisco in 2015 is estimated to be 362,440. This number is expected to increase to about 447,350 by 2040 (approximately 84,910 new households), an increase

of about 23 percent between the years 2015 and 2040.[20] According to ABAG *Projections 2013*, the City and County of San Francisco has an estimated 1.27 workers per household.[21] Based on this figure and the conservative assumption that all new employees would be new residents in San Francisco, the proposed project (with an estimated four net new employees) would generate a potential demand for about three new housing units by 2040. The project employment-related net new housing units would represent less than 1 percent (0.004 percent) of the City's estimated household growth between the years 2015 and 2040. Based upon information in ABAG's *Projections 2013*, the proposed project's employment-related housing demand for three new housing units could be accommodated by the projected housing unit growth between 2015 and 2040. Thus, the proposed project's contribution to citywide housing demand would not be considered substantial in the context of total housing demand in San Francisco over the same time period (2015 to 2040). In addition, the actual increase in housing demand due to the proposed project may likely be lower, because some of the future employees may not be new to San Francisco. Given all of the above, the proposed project would have a less-than-significant impact on housing displacement and demand, and would not create substantial demand for additional housing that would necessitate the construction of replacement housing. No mitigation measures are necessary.

Although housing demand, in and of itself, is not a physical environmental effect, an imbalance between local employment and housing can lead to long commutes with associated traffic, noise, and air quality and greenhouse gas emissions impacts. Traffic, noise, air quality, and greenhouse gas emissions issues are discussed below under Section E.4: Transportation and Circulation, on pp. 54-89; Section E.5: Noise, on pp. 89-111; Section E.6: Air Quality, on pp. 112-131; and Section E.7: Greenhouse Gas Emissions, on pp. 131-135.

Impact C-PH-1: The proposed project, in combination with past, present, and reasonably foreseeable future development in the site vicinity, would not result in a considerable contribution to significant cumulative impacts related to population and housing. ***(Less than Significant)***

As discussed under **Impact C-LU-1** on pp. 34-35, cumulative development in the project vicinity would include development proposed under the *Western SoMa Community Plan*, the *Central SoMa Plan*, and several proposed mixed-use, residential, and office developments. These reasonably foreseeable future projects are expected to be developed within an approximately ¼-mile radius of the project site. Taken together, these projects would add approximately 8,629 residential units (including 89 SRO units) and 19,654 jobs, approximately 11,910 gsf of retail space, and approximately 1,017,620 gsf of office space to this area. Thus, the development of these

[20] ABAG, *Projections 2013*, p. 75.
[21] ABAG, *Projections 2013*, p. 74.

cumulative projects would add new residential units to the City's housing stock and generate new demand for housing, primarily through more intensive development on rezoned parcels.

As discussed under **Impact PH-1**, the proposed project would not add housing units and would slightly increase the number of employees on the project site, compared to existing conditions. The employment increase would not be considered substantial in relation to the overall demand for housing in the City, because project-related growth in employment (approximately four net new employees) would not induce substantial population growth or concentration of employment. Thus, when considered in combination with other projects in the immediate vicinity, the proposed project's contribution to cumulative impacts related to the inducement of population growth or employment concentration in the project area (either directly or indirectly) would not be considerable.

The proposed project would not involve the removal or displacement of a substantial number of workers, existing residents, or housing units, nor would it create substantial new employment-related demand for additional housing that would require construction of replacement housing elsewhere in the City or Bay Area beyond that which is expected to occur (discussed above under **Impact PH-2**). Thus, when considered in combination with other projects in the immediate vicinity, the proposed project's contribution to cumulative impacts related to the displacement of residents or employees in the project area (either directly or indirectly) would not be considerable.

As discussed under **Impact PH-2**, the proposed project could displace 14 SRO housing units if the mixed-use residential building at 480-484 Sixth Street were converted to commercial/office use. In accordance with the California Relocation Act (Chapter 16, Section 7260 et seq. of the Government Code), the proposed project includes a provision for a residential relocation plan to assist displaced residents. Furthermore, the proposed project would not displace a substantial number of employed persons. Except for the proposed project, cumulative development within a ¼-mile radius of the project site would not displace housing units or likely result in a substantial increase in housing demand in the greater San Francisco area that could not be accommodated by existing and anticipated housing growth. Thus, when the proposed project is considered in combination with other cumulative projects in the immediate vicinity, its contribution to cumulative impacts on the displacement of housing units or people, or its contribution to residential housing demand would not be considered cumulatively considerable. Therefore, the proposed project's impacts on population and housing would be less than significant, and as a result, the proposed project would not contribute considerably to any potential cumulative effects related to population and housing.

Topics:	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
3. CULTURAL AND PALEONTOLOGICAL RESOURCES—Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco *Planning Code*?	☐	☒	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐	☐

Impact CP-1: The demolition of buildings and new construction under the proposed project would not cause a substantial adverse change in the significance of an historic architectural resource. ***(Less than Significant)***

Existing Buildings within the Project Site and Vicinity

The project site is not located within, nor found eligible for inclusion within, any historic district identified in a national, state or local register of historical resources.

HOJ Building

The western portion of the project site (HOJ site) is occupied by the existing HOJ building, an eight-story, 105-foot-tall, 610,000-gsf institutional building, constructed in 1958-1961. The HOJ building is not included in any national, state, or local register of historical resources. An independent historic architectural resource consultant has prepared an Historic Resource Evaluation (HRE)[22] to determine if the building meets the eligibility criteria for inclusion in the California Register of Historical Resources (CRHR). According to the HRE, the property appears eligible for listing in the California Register under Criterion 1 (Events) on the basis of the many high-profile trials that took place there and the central role it played in several notable events in San Francisco during the 1960s and 1970s. As a resource eligible for listing in the CRHR, the HOJ is considered an "historical resource" for the purposes of CEQA Guidelines 15064(a).[23]

[22] VerPlanck Historic Preservation Consulting, Historic Resource Evaluation, *RDF HOJ Replacement Jail Project*, December 19, 2014.

[23] San Francisco Planning Department, Preservation Team Review Form, April 3, 2015 (see Appendix A of this PMND).

The eastern portion of the project site (the project building site) contains two vacant lots and five existing buildings that are described below.

480-484 Sixth Street

The building at 480-484 Sixth Street is a three-story, 7,150-gsf, 14-unit single room occupancy (SRO) residential building with retail on the ground floor, constructed in 1916. It is currently rated as a California Register-eligible property. The San Francisco Planning Department has assigned the building a Status Code of 3CS, "Appears eligible for CR as an individual property through survey evaluation."

450 Sixth Street

The building at 450 Sixth Street is a one-story, 5,100-gsf commercial building, constructed in 1956. The building is constructed of concrete block with a bowstring truss roof, designed in a utilitarian "Contractor Modern" mode with minimal ornament. The building is not included in, nor found eligible for inclusion in, any national, state, or local register of historical resources. The historic architectural resource consultant has evaluated the building in light of the San Francisco Planning Department's historic context statement, *San Francisco Modern Architecture and Landscape Design: 1935-1970*, and has concluded that the building appears ineligible for listing in the California Register and is therefore not an historical resource under CEQA.[24]

444 Sixth Street

The building at 444 Sixth Street is a one-story, 6,000-gsf office building, constructed in 1959. The building is constructed of concrete block and has a flat roof, designed in a utilitarian "Contractor Modern" mode with minimal ornament. The building is not included in, nor found eligible for inclusion in, any national, state, or local register of historical resources. The historic architectural resource consultant has evaluated the building in light of the San Francisco Planning Department's historic context statement, *San Francisco Modern Architecture and Landscape Design: 1935-1970*, and has concluded that the building appears ineligible for listing in the California Register and is therefore not a historical resource under CEQA.[25]

800-804 Bryant Street and 820 Bryant Street

The two remaining buildings on the eastern portion of the project site, 800-804 Bryant Street (built in 2003) and the McDonald's restaurant at 820 Bryant Street (built in 1996), are less than 50 years of age. As structures that are less than 50 years of age and for which the City has no information

[24] Ibid.
[25] VerPlanck Historic Preservation Consulting, Memorandum to Rich Sucre, San Francisco Planning Department, September 22, 2014.

indicating that the structure qualifies as an historical resource, the buildings at 800-804 Bryant Street and 820 Bryant Street are considered "Category C" properties under the San Francisco Planning Department's *CEQA Review Procedures for Historic Resources*, and are not considered historical resources for the purposes of CEQA.[26]

Off-site Buildings in the Vicinity of the Proposed Project

The HRE also identifies a CEQA Area of Potential Effect (C-APE) that includes the project site and nearby off-site properties: properties on the east side of Sixth Street across from the project building site; properties at the southeastern corner of Bryant and Sixth streets; and properties along the south side of Bryant Street between Sixth and Seventh streets. The C-APE was included as part of a larger comprehensive South of Market Area Historic Resource Survey. Only one off-site property within the C-APE, an Art Deco style commercial building at 887-891 Bryant Street (built in 1920) at the southeast corner of Bryant and Seventh streets, was found to meet the criteria for inclusion within the CRHR. 887-891 Bryant Street is assigned a rating of "5S3, Appears to be individually eligible for local listing or designation through survey evaluation."

Impacts of demolition of buildings, new construction, and alterations to historical resources under the proposed project are described and analyzed below.

Impact of Proposed Demolition of Buildings on the Project Building Site

The proposed project calls for demolition of three buildings on the project building site: the building at 444 Sixth Street, the building at 450 Sixth Street, and the building at 820 Bryant Street. As discussed above, these three buildings are not considered individual historical resources for the purposes of CEQA, nor are they within any historic district. Therefore, demolition of these building would not have any direct impact on the significance of an historical resource under CEQA. No alterations are proposed to the SRO building at 480-484 Sixth Street, the only structure on the project building site that is eligible for the CRHR.

As discussed above, the project site is not located within, nor found eligible for inclusion within, any historic district identified in a national, state or local register of historical resources. The individual significance of the HOJ building, the 800-804 Sixth Street building, or the historical resource at 480-484 Sixth Street within the C-APE, is not premised on their possessing a historical connection or cohesive visual relationship with any of the buildings that would be demolished under the proposed project. Therefore, the demolition of buildings under the proposed project would not impact the significance of an historical resource under CEQA.

[26] San Francisco Planning Department, Draft *CEQA Review Procedures for Historic Resources*, March 31, 2008, pp. 3-8.

Impact of the Proposed RDF on the Visual Setting of Historical Resources

The proposed approximately 200,000-gsf, five-story, 110-foot-tall (95 feet tall to the roof top, plus an additional 15-foot-tall mechanical penthouse) RDF would be constructed in place of the demolished buildings (444 Sixth Street, 450 Sixth Street, and 820 Bryant Street) and surface parking lots. The proposed RDF would be contemporary in visual character and would be clad in glass and metal. The proposed RDF would be separated from the HOJ building by about 95 feet, consisting of the width of Harriet Street (35 feet) and the setback of the HOJ building from its eastern property line along Harriet Street (about 60 feet). It would be set back from Bryant Street by about 96 feet.

As discussed below, although the proposed RDF would change the visual setting of adjacent historical resources, it would not result in any adverse change in the significance of an historical resource under CEQA.

On the HOJ Building

The proposed RDF's separation from the HOJ building would allow the HOJ building to continue to convey its significance as a singular building. The proposed RDF's deep setback along Bryant Street would diminish its visual presence along Bryant Street and its visual impact on the HOJ building. Physical connection between the proposed RDF and the HOJ building would be below grade and would not entail any visible exterior changes to the HOJ building. In addition, the individual significance of the HOJ building is not premised on its possessing a cohesive visual relationship with surroundings buildings. Rather, the surrounding visual context of the HOJ building is varied in terms of building height, scale, character, age, architectural style, and materials.

On the 480-484 Sixth Street Building

The proposed RDF would be approximately three times as tall as the 480-484 Sixth Street building. The proposed RDF would be separated from the 480-484 Sixth Street building by a setback of 20 feet along the 480-484 Sixth Street building's northern side lot line wall, and by 23 feet, 9 inches from its rear wall. The setbacks would minimize physical and visual impacts of the proposed RDF on the 480-484 Sixth Street building. Although the proposed RDF would transform the existing visual setting of the 480-484 Sixth Street building, the surrounding visual context is already characterized by much taller buildings, including the existing HOJ building. In addition, the individual significance of the 480-484 Sixth Street building is not premised on its possessing a cohesive visual relationship with surroundings buildings. Rather, the surrounding visual context of the 480-484 Sixth Street building is varied in terms of building height, scale, character, age, architectural style, and materials.

On the C-APE

As discussed above, the only off-site historical resource within the C-APE is the building at 887-891 Bryant Street (built 1920) at the southeast corner of Bryant and Seventh streets. Visual interaction between the proposed RDF and the existing 887-891 Bryant Street building at the opposite end of the Bryant Street block between Sixth and Seventh streets, would be limited by distance (about 650 feet) and mediated by the intervening HOJ building. Because the proposed RDF would be set back 96 feet from Bryant Street, there is no direct line of sight between the proposed RDF and the 887-891 Bryant Street building.

Impacts of Potential Alterations to Historical Resources

The proposed project calls for retention of the HOJ building and the 480-484 Sixth Street building, each considered an individual historical resource under CEQA. The corner building at 800-804 Bryant Street/498 Sixth Street would also be retained under the proposed project, although it is not an historical resource under CEQA.

The reallocation of uses within the HOJ building would not call for the removal of any distinctive character-defining features from the exterior or interior of these buildings. A below-grade tunnel beneath Harriet Street would be constructed to provide passage between the HOJ building and the proposed RDF. These alterations would not be visible from the exterior of the building and the affected below-grade interior spaces are utilitarian and without distinctive historical or architectural features.

Likewise, the continued use of the 480-484 Sixth Street building as housing, or its potential reuse as office space, would not require the removal of any distinctive character-defining features from the exterior or interior of this building.

Conclusion

For these reasons, the proposed demolition of buildings, new construction, and alterations to historical resources under the proposed project would not result in any adverse change to the significance of an historic architectural resource under CEQA. Therefore, this impact would be **less than significant**. No mitigation measures are necessary.

Impact CP-2: Construction activity under the proposed project could result in damage to historic architectural resources. ***(Less than Significant with Mitigation)***

The *Western SoMa Community Plan, Rezoning of Adjacent Parcels and 350 Eighth Street Project Final EIR* identified a potentially significant impact on historical resources related to construction

vibration.[27] That EIR concluded that implementation of the following Mitigation Measures (numbered **M-CP-2a** and **M-CP-2b** in this Initial Study) would reduce potential construction impacts on nearby historic architectural resources to less-than-significant levels. These mitigation measures are applicable to all construction projects within the *Western SoMa Community Plan Area*, like the proposed project.

Mitigation Measure M-CP-2a: Protect Historical Resources from Adjacent Construction Activities

The project sponsor of a development project in the Draft Plan Area and on the Adjacent Parcels shall consult with Planning Department environmental planning/preservation staff to determine whether adjacent or nearby buildings constitute historical resources that could be adversely affected by construction-generated vibration. For purposes of this measure, nearby historic buildings shall include those within 100 feet of a construction site if pile driving would be used in a subsequent development project; otherwise, it shall include historic buildings within 25 feet if heavy equipment would be used on the subsequent development project. (No measures need be applied if no heavy equipment would be employed.) If one or more historical resources is identified that could be adversely affected, the project sponsor shall incorporate into construction specifications for the proposed project a requirement that the construction contractor(s) use all feasible means to avoid damage to adjacent and nearby historic buildings. Such methods may include maintaining a safe distance between the construction site and the historic buildings (as identified by the Planning Department preservation staff), using construction techniques that reduce vibration, appropriate excavation shoring methods to prevent movement of adjacent structures, and providing adequate security to minimize risks of vandalism and fire.

Mitigation Measure M-CP-2b: Construction Monitoring Program for Historical Resources

For those historical resources identified in **Mitigation Measure M-CP-2a**, and where heavy equipment would be used on a subsequent development project, the project sponsor of such a project shall undertake a monitoring program to minimize damage to adjacent historic buildings and to ensure that any such damage is documented and repaired. The monitoring program, which shall apply within 100 feet where pile driving would be used and within 25 feet otherwise, shall include the following components. Prior to the start of any ground-disturbing activity, the project sponsor shall engage a historic architect or qualified historic preservation professional to undertake a pre-construction survey of historical resource(s) identified by the San Francisco Planning Department within 125 feet of planned construction to document and photograph the buildings of existing conditions. Based on the construction and condition of the resource(s), the consultant shall also establish a maximum vibration level that shall not be exceeded at each building, based on existing condition, character-defining features, soils conditions, and anticipated construction practices (a common standard is 0.2 inch per second, peak particle velocity). To ensure that vibration levels do not exceed the established standard, the project sponsor shall monitor vibration levels at each structure and shall prohibit vibratory construction activities that generate vibration levels in excess of the standard. Should vibration levels be observed in excess of the standard, construction shall be halted and alternative

[27] City and County of San Francisco, *Western SoMa Community Plan, Rezoning of Adjacent Parcels and 350 Eighth Street Project Final EIR,* Case File Nos. 2008.0877E and 2007.1035E, certified December 6, 2012, pp. 4.D.54-4.D.55.

construction techniques put in practice, to the extent feasible. (For example, pre-drilled piles could be substituted for driven piles, if feasible based on soils conditions; smaller, lighter equipment might be able to be used in some cases.) The consultant shall conduct regular periodic inspections of each building during ground-disturbing activity on the project site. Should damage to either building occur, the building(s) shall be remediated to its pre-construction condition at the conclusion of ground-disturbing activity on the site.

With implementation of **Mitigation Measures M-CP-2a** and **M-CP-2b,** the proposed project would not expose nearby historic architectural resources to construction vibration levels that are in excess of standards established by the FTA. Therefore, this impact would be **less than significant with mitigation**.

Impact CP-3: Construction activities for the proposed project could cause a substantial adverse change in the significance of archaeological resources, if such resources are present within the project site. ***(Less than Significant with Mitigation)***

The proposed project is currently in the preliminary design phase but the most recent project design[28] would include one sub-grade partial basement level resulting in soils disturbance to a depth of about 17 feet below grade surface (bgs) including additional soils disturbance for a mat foundation. Additional foundation support in the form of piles or soils improvement is not currently regarded as warranted. The proposed project also includes the construction of a pedestrian transport tunnel between the proposed RDF and the basement level of the existing HOJ building, which would result in soils disturbance to a depth of approximately 17 feet bgs. Construction techniques necessary for construction of the pedestrian tunnel have not been determined by the project sponsor and its consultants but could result in soils disturbance to a depth in excess of that required for the tunnel. The subsurface disturbance resulting from the proposed project may potentially adversely affect a legally-significant archeological resource.[29] This is considered a potentially significant impact.

The proposed project was subject to Preliminary Archeological Review (PAR) by Planning Department archeologists with a determination[30] that the proposed project has the potential to affect legally-significant archeological resources.[31] The project site is also located within the Archeological Study Area of an archeological research design and treatment plan (ARDTP) prepared for Caltrans for the section of I-80 nearest the project site.[32] The ARDTP found that the

[28] San Francisco Department of Public Works (DPW), Geotechnical Investigation Report - Rehabilitation and Detention Facility, 820 Bryant Street, San Francisco, California, February 23, 2015.

[29] The term "legally-significant archeological resource" is intended to mean an archeological resource that meets the criterion of an "historical resources" or a "unique archaeological resource" in the CEQA Statutes and Guidelines (CEQA and Guidelines 21083.2(g) and 15064.5(A)(2)).

[30] San Francisco Planning Department, Preliminary Archeological Review Log, September 28, 2014.

[31] San Francisco Planning Department, Randall Dean to Monica Pereira. September 28, 2014.

[32] McIlroy, Jack and Mary Praetzellis (ed.), *Vanished Community Archaeological Research Design and Treatment Plan (ARDTP) for the SF-80 Bayshore Viaduct Seismic Retrofit Project*, September, 1997.

block containing the project site is sensitive for prehistoric period and Gold Rush Period to later 19th Century archeological resources, especially with respect to an early German community. Archeological field investigations[33] to the north of the project site did not identify prehistoric deposits but did disclose a National Register-eligible historical archeological feature (artifactual assemblage within a domestic privy) associated with the household of Charles A.C. Duisenberg (1869-1906) – a prominent immigrant German family.

The project site borders or straddles the northern edge of Sullivan's Marsh and was, up until the early 1850s, located in a willow thicket along the marsh. In geotechnical sampling that has been conducted within this block there is relatively shallow fill over native sand dune deposits of greater (but variable) depth over marsh (New Bay Mud/peat) deposits. To the extreme west side of the block, along 7th Street, about 3 feet of shell deposits were previously found that could be naturally-occurring shell, but may also be prehistoric shell midden deposits. The National Register-Eligible Prehistoric Shell Midden Archeological District is located in the area northeast of 5th Street. Sand dune deposits within the project site could potentially be sensitive for prehistoric archeological deposits.

The project site was filled-in by the early 1850s and may have included a part of "Russ Gardens," the first proprietary park in San Francisco, and created for the local German community residing in the project vicinity. Through the later 19th century, the project site was characterized by tenement housing along Harriet Street (also historically known as "Garden Street"). Thus, the project site also has the potential to contain legally-significant prehistoric deposits and historical archeological domestic deposits preserved in hollow features such as wells, privies, or trash pits.

Due to the archeological sensitivity of the project site described above, implementation of **Mitigation Measure M-CP-3: Archeological Testing** would be included in the proposed project. **Mitigation Measure M-CP-3** would apply to any components of the proposed project resulting in soils disturbance of ten feet or greater below the ground surface. This mitigation measure requires, among other things, that the project sponsor prepare an Addendum to the 1997 ARDTP prepared for the SF-80 Bayshore Viaduct Seismic Retrofit Project.[34]

> **Mitigation Measure M-CP-3: Archeological Testing**
>
> Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archaeological consultant from the rotational

[33] McIlroy, Jack and Mary Praetzellis (ed.), *SF-80 Bayshore Viaduct Seismic Retrofit Project Report on Construction Monitoring, Geoarchaeology, and Technical and Interpretive Studies for Historic Archaeology*, June 2004.

[34] McIlroy, Jack & Mary Praetzellis (ed.), *SF-80 Bayshore Viaduct Seismic Retrofit Project Report on Construction Monitoring, Geoarchaeology, and Technical and Interpretive Studies for Historic Archaeology*, June 2004.

Department Qualified Archaeological Consultants List (QACL) maintained by the Planning Department archaeologist. The project sponsor shall contact the Department archeologist to obtain the names and contact information for the next three archeological consultants on the QACL. The archeological consultant shall prepare an Addendum to the Vanished Community: Archaeological Research Design and Treatment Plan for the SF-80 Bayshore Viaduct Seismic Retrofit Project (J. McIlroy & M. Praetzellis (ed. 1997).

The Addendum to the ARDTP shall have the following content:

1) Summary: Description of subsurface effect of the proposed project and of previous soils-disturbing activities;
2) Historical Development: If demographic data for the project site is absent in the discussion in the ARDTP, the addendum shall include new demographic data regarding former site occupants;
3) Identification of potential archeological resources: Discussion of any identified potential prehistoric or historical archeological resources;
4) Integrity and Significance: Eligibility of identified expected resources for listing to the CRHR; Identification of applicable Research Themes/Questions (in the ARDTP) that would be addressed by the expected archeological resources that are identified;
5) Impacts of Proposed Project;
6) Potential Soils Hazards: Update discussion for proposed project;
7) Archeological Testing Plan (if archeological testing is determined warranted): the Archeological Testing Plan (ATP) shall include:
    A) Proposed archeological testing strategies and their justification
    B) Expected archeological resources
    C) For historic archeological resources
        a) Historic address or other location identification
        b) Archeological property type
    D) For all archeological resources
        a) Estimate depth below the surface
        b) Expected integrity
        c) Preliminary assessment of eligibility to the CRHR
    E) ATP Map
        a) Location of expected archeological resources
        b) Location of expected project sub-grade impacts
        c) Areas of prior soils disturbance
        d) Archeological testing locations by type of testing
        e) Base map: 1886/7 Sanborn Fire Insurance Co. map

The archeological consultant's work shall be conducted in accordance with this measure at the direction of the Environmental Review Officer (ERO). All plans and reports prepared by the

consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5 (a)(c).

Consultation with Descendant Communities: On discovery of an archeological site[35] associated with descendant Native Americans, the Overseas Chinese, or other potentially interested descendant group an appropriate representative[36] of the descendant group and the ERO shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to offer recommendations to the ERO regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the Final Archaeological Resources Report shall be provided to the representative of the descendant group.

Archeological Testing Program. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological resource(s) that potentially could be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.

At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. No archeological data recovery shall be undertaken without the prior approval of the ERO or the Planning Department archeologist. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:

A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or

[35] The term "archeological site" is intended here to minimally include any archeological deposit, feature, burial, or evidence of burial.

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

B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archeological Monitoring Program. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context;
- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO.

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected

resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures*. Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis*. Description of selected cataloguing system and artifact analysis procedures.
- *Discard and Deaccession Policy*. Description of and rationale for field and post-field discard and deaccession policies.
- *Interpretive Program*. Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
- *Security Measures*. Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- *Final Report*. Description of proposed report format and distribution of results.
- *Curation*. Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains and Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, ERO, and MLD shall have up to but not beyond six days of discovery to make all reasonable efforts to develop an agreement for the treatment of , human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)) with appropriate dignity. The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. Nothing in existing State regulations or in this mitigation measure compels the project sponsor and the ERO to accept recommendations of an MLD. The archeological consultant shall retain possession of any Native American human remains and associated or unassociated burial objects until completion of any scientific analyses of the human remains or objects as specified in the treatment agreement if such as agreement has been made or, otherwise, as determined by the archeological consultant and the ERO.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Environmental Planning division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

With implementation of **Mitigation Measure M-CP-3**, to which the project sponsor has agreed, the proposed project would not result in the loss of legally-significant archeological resources. Therefore, this impact would be **less than significant with mitigation**.

Impact CP-4: Construction activities of the proposed project would not affect a unique paleontological resource or a unique geologic feature. ***(Less than Significant)***

The *Western SoMa Community Plan, Rezoning of Adjacent Parcels and 350 Eighth Street Project Final EIR* identified a less-than-significant impact on paleontological resources for projects, like the proposed project, within the *Western SoMa Community Plan Area*.[37] According to that EIR, the *Western SoMa Community Plan Area* is underlain with native Dune sands, the Colma Formation, or artificial fill associated with previous development (e.g., road bases, foundations, and previous backfills for underground utilities). Due to their age and origin, these geological materials have little to no likelihood of containing unique or significant fossils. As such, excavation within the *Western SoMa Community Plan Area* would have a low potential for uncovering unique or significant fossils. Therefore, the impact of the proposed project related to paleontological resources would be **less than significant**. No mitigation measures are necessary.

Impact CP-5: Construction activities of the proposed project could disturb human remains, including those interred outside of formal cemeteries. (*Less than Significant*)

Archeological materials, including human burials, have been found in the City. Human burials outside of formal cemeteries often occur in prehistoric archeological contexts. Excavation associated with new construction activities in the project area may have the potential to disturb these resources, including Native American burials. Project-specific ground-disturbing activity could result in direct impacts on previously undiscovered human remains. The treatment of human remains and of associated or unassociated funerary objects discovered during any soil-disturbing activities must comply with applicable state laws. This includes immediate notification of the county coroner and, in the event of the coroner's determination that the human remains are Native American, notification of the California Native American Heritage Commission, which shall

[37] City and County of San Francisco, *Western SoMa Community Plan, Rezoning of Adjacent Parcels and 350 Eighth Street Project Final EIR,* Case File Nos. 2008.0877E and 2007.1035E, certified December 6, 2012, p. 4.D.53.

appoint a Most Likely Descendant (MLD) (California Public Resources Code Section 5097.98). In the event of such discovery, the archeological consultant, the San Francisco Planning Department, and MLD would have up to but not beyond six days of discovery to make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity, in accordance with CEQA Guidelines Section 15064.5(d). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. The Public Resources Code allows 48 hours to reach agreement on these matters. If the MLD and the other parties do not agree on the reburial method, the project sponsor must comply with Section 5097.98(b) of the Public Resources Code, which states that the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance. Because the potential disturbance to human remains is governed by state laws and regulations, as described above, compliance with these laws and regulations would ensure that impacts related to such disturbance of human remains would be **less than significant**. No mitigation measures are necessary.

Impact C-CP-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the vicinity, would not result in a considerable contribution to significant cumulative impacts on cultural resources. ***(Less than Significant with Mitigation)***

As discussed above, although the proposed demolition of three existing buildings on the project building site and construction of the proposed RDF would change the visual setting of adjacent historical resources, the proposed project would not result in any adverse change in the significance of any historic architectural resource under CEQA with implementation of **Mitigation Measures M-CP-2a** and **M-CP2-b**. As such, the proposed project would not contribute to any cumulative impact on historic architectural resources that could result from past, present, or reasonably foreseeable future projects in the vicinity of the project site.

As discussed above, the proposed project is unlikely to affect paleontological resources. As such, the proposed project would not contribute to any cumulative impact on historic paleontological resources that could result from past, present, or reasonably foreseeable future projects in the vicinity of the project site.

The significance of impacts on archaeological resources is premised on the potential loss of historic and scientific information. When considered with other past and proposed projects within San Francisco and the Bay Area region, the potential disturbance of archaeological resources within the project site could make a cumulatively considerable contribution to a loss of significant historic and scientific information about California, Bay Area, and San Francisco history and prehistory. Implementation of the approved plans for testing, monitoring, and data recovery would preserve and realize the information potential of archaeological resources if any are encountered. The

recovery, documentation, and interpretation of information about archaeological resources that may be encountered within the project site would enhance knowledge of prehistory and history. This information would be available to future archaeological studies, contributing to the collective body of scientific and historic knowledge. With implementation of **Mitigation Measure M-CP-3: Archaeological Testing** the proposed project's contribution to cumulative impacts, if any, would not be cumulatively considerable. Therefore, any potential contribution to significant cumulative impacts would not be considerable. No additional mitigation measures are necessary.

Topics:		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
4.	**TRANSPORTATION AND CIRCULATION— Would the project:**					
a)	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐	☐
b)	Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐	☐
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?	☐	☐	☐	☐	☒
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	☐	☐	☒	☐	☐
e)	Result in inadequate emergency access?	☐	☐	☒	☐	☐
f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐	☐

Due to the nature and scope of the proposed project, implementation of the proposed project does not have the potential to change air traffic patterns. In addition, the proposed project would not

involve the installation of structures that could interfere with air space. Therefore, Topic E.4(c) is not applicable to the proposed project.

SETTING

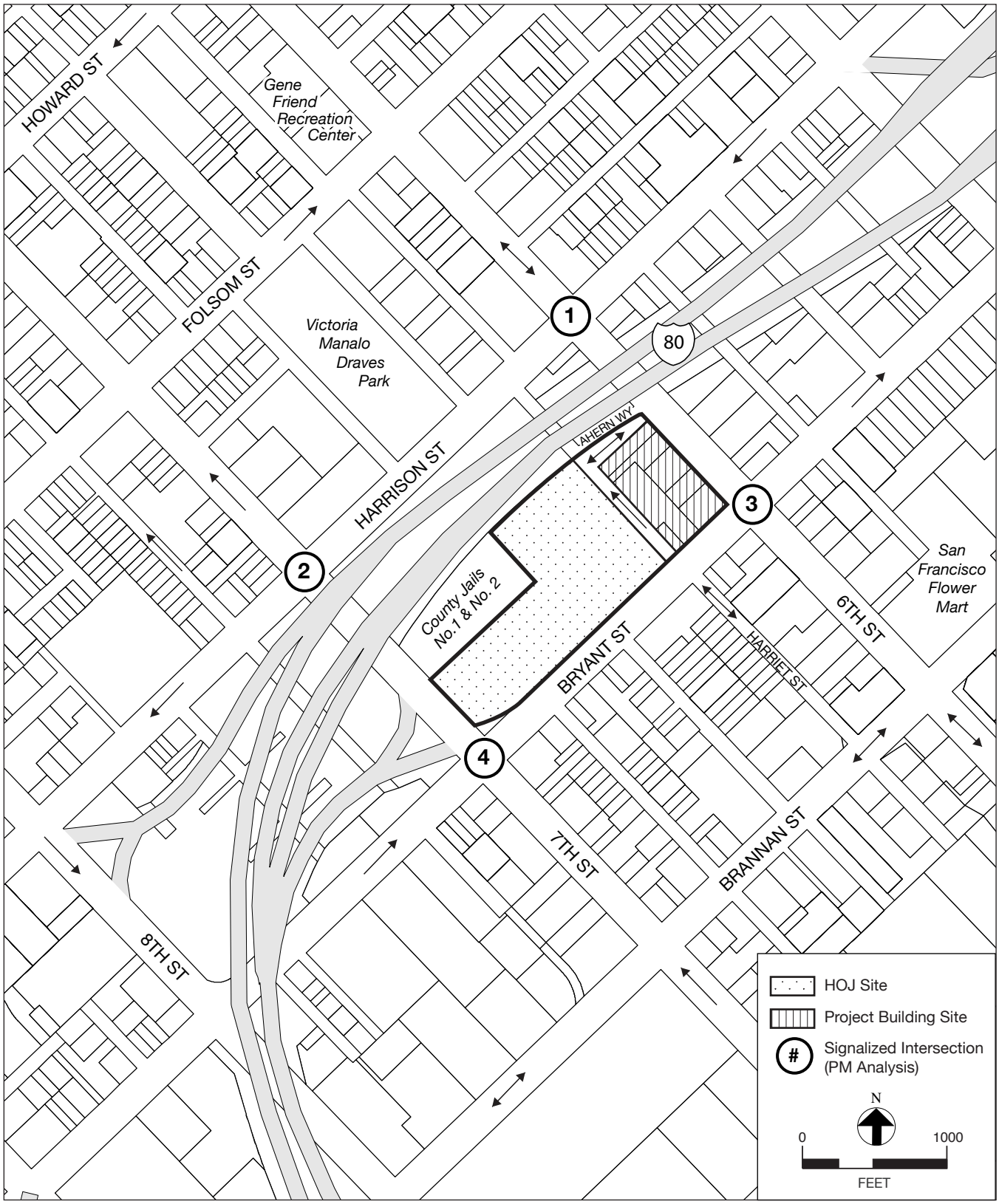
Transportation conditions were evaluated for a study area generally bounded by Harrison Street to the north, Sixth Street to the east, Bryant Street to the south, and Seventh Street to the west (see **Figure 15: Transportation Study Area**). In the South of Market area, streets that run in the northwest/southeast direction are considered north-south streets (e.g., Sixth Street), whereas streets that run in the southwest/northeast direction are considered east-west streets (e.g., Bryant Street).

Traffic Conditions

The project site is generally bounded by Sixth, Bryant and Seventh streets and the I-80 freeway structure. The project building site is located on the block bounded by Sixth, Bryant and Harriet streets, and Ahern Way immediately south of the I-80 freeway. Local vehicular access to and from the project building site is provided primarily via Bryant and Sixth streets. Sixth Street has two travel lanes in each direction, while Bryant Street has four eastbound travel lanes. Harriet Street is one-way northbound, with two travel lanes between Bryant Street and Ahern Way, adjacent to the project building site. Most other streets in the project vicinity, including Ahern Way, have one travel lane in each direction. The intersections of Sixth Street/Ahern Way and Harriet Street/Ahern Way are stop-controlled on the minor approach of Ahern Way eastbound and Harriet Street northbound.

Regional access to the project site is provided by U.S. 101 and I-280. U.S. 101 connects to I-80, which connects San Francisco to the East Bay and other locations east via the San Francisco-Oakland Bay Bridge. U.S. 101 and I-280 serve San Francisco and the South Bay, and U.S. 101 provides access north via the Golden Gate Bridge. Access from I-80 eastbound is via the off-ramp at Bryant/Seventh streets, and access to I-80 eastbound is via the on-ramp at Bryant/Eighth streets. Access from I-80 westbound is via the off-ramp at Harrison/Eighth streets, and access to I-80 westbound is via the on-ramp at Harrison/Seventh. The closest access to I-280 is provided via on- and off-ramps at the intersection of Sixth/Brannan streets.

Harrison Street runs in the east-west direction between The Embarcadero and 13th/Division streets, operating one-way westbound between Third and Tenth streets. Harrison Street runs in the north-south direction between 13th/Division and Norwich streets. In the downtown area, Harrison Street is a primary route to the I-80 freeway, with on-ramps at the First Street and Essex Street intersections, and to U.S. 101 southbound, with an on-ramp at Fourth Street and another at Seventh Street. In the *San Francisco General Plan*, it is a designated Major Arterial in the Congestion Management Network (between The Embarcadero and Division Street), a Primary Transit



SOURCE: LCW Consulting

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Case No. 2014.0198E

FIGURE 15: TRANSPORTATION STUDY AREA AND STUDY INTERSECTIONS

Preferential Street (Transit Important Street between Fourth Street and Seventh Street), a Secondary Transit Preferential Street (between Seventh and 11th streets), and a Neighborhood Commercial Pedestrian Street (between Fourth and 16th streets). Muni routes 8X Bayshore, 8AX/BX Bayshore Expresses, 12 Folsom, 27 Bryant, and 47 Van Ness operate along portions of Harrison Street between Second and 11th streets. Harrison Street, similar to other streets in the area, is classified as a mixed-use street type under the *Better Streets Plan*, and sidewalk widths within the study area are less than the minimum required by the *Better Streets Plan* (12 feet).[38]

Bryant Street extends from The Embarcadero in the South of Market area to Precita Avenue in Peralta Heights. Between The Embarcadero and Second Street, Bryant Street operates two-way in the east-west direction with two to three lanes. Bryant Street is designated as a Primary Transit Preferential Street (Transit Important Street between Fourth and Seventh streets) and a Secondary Transit Preferential Street (between Seventh and Eleventh streets). The 8X Bayshore (between Seventh and Third streets), 8AX/8BX Bayshore Expresses (between Seventh and Third streets), 27 Bryant (between Division and Fifth streets), and 47 Van Ness (between Division and Fifth streets) routes run on Bryant Street. Bryant Street is classified as a mixed-use street type under the *Better Streets Plan,* and sidewalk widths in front of the existing HOJ building meet the minimum required by the *Better Streets Plan* (12 feet) and are narrower elsewhere (8 feet) in the vicinity.

Sixth Street is a north-south roadway between Market Street and Brannan Street. It is a two-way roadway with two travel lanes in each direction. In the *San Francisco General Plan*, it is classified as a Congestion Management Network Major Arterial, a Neighborhood Commercial Street (between Market and Howard streets), and is part of the MTS network. At Brannan Street, Sixth Street merges with off- and on-ramps to I-280. Additionally, at the intersection of Sixth Street and Ahern Way, there is a peak period No Left Turn sign posted in the northbound direction, which restricts left turns from Sixth Street northbound onto Ahern Way westbound between 3:00 and 7:00 p.m. Muni route 14X Mission Express runs on Sixth Street between Mission and Brannan streets and 8BX Bayshore Express runs on Sixth Street between Harrison and Brannan streets. The Sixth Street sidewalk widths are generally less than the minimum required by the *Better Streets Plan* (12 feet).

Seventh Street is a principal north-south arterial between Market and 16th streets. Seventh Street has one-way traffic traveling northbound in four travel lanes. In the *San Francisco General Plan*, it is classified as a Congestion Management Network Major Arterial between Market and Bryant

[38] The *San Francisco Better Streets Plan*, which was adopted in 2010, creates a unified set of standards, guidelines, and implementation strategies to govern how the City designs, builds, and maintains its pedestrian environment. A key goal of the Better Streets Plan is to prioritize the needs of walking, bicycling, transit use, and the use of streets as public spaces for social interaction and community life, following San Francisco's *General Plan*, *Transit First* Policy, and Better Streets Policy. A minimum width of 12 feet and recommended width of 15 feet is specified for a mixed-use street, and a minimum width of 6 feet and recommended width of 9 feet is specified for an alley.

streets, and the section between Howard and 16th streets is part of the Metropolitan Transportation System. Muni route 19 Polk runs on Seventh Street. Seventh Street has a bicycle lane (Class II) in the northbound direction between Market and 16th streets, part of Bicycle Route 23. The Seventh Street sidewalk widths are generally less than the minimum required by the *Better Streets Plan*.

Harriet Street is a north-south alley that runs between Brannan and Harrison streets. Between Bryant Street and Ahern Way it has two northbound lanes, and on-street commercial loading spaces and motorcycle parking on the west side of the street.[39] Access to the at-grade building services area of the existing HOJ, the surface parking and ambulance loading area for the Office of the Chief Medical Examiner, below-grade parking, and the secure transport area/sally port[40] for the existing CJ#1 and CJ#2 is provided from the west side of Harriet Street. Between Ahern Way and Harrison Street, Harriet Street has one northbound lane with on-street parking on the west side of the street and curb cuts that provide access to the surface parking lots under the I-80 freeway reserved for HOJ, Sheriff's Department and SFPD (San Francisco Police Department) use. The Harriet Street sidewalk width within the project building site meets the minimum width required by the *Better Streets Plan*, six feet for an alley. There is no sidewalk on the west side of Harriet Street between Bryant Street and Ahern Way (i.e., across the street from the project building site). North of Ahern Way toward Harrison Street there are 7-foot-wide sidewalks on both sides of Harriet Street.

Ahern Way is an east-west alley that runs two-way between Sixth and Harriet streets. It has one travel lane in each direction, and on-street parking on both sides of the street. Ahern Way provides access to the ambulance loading for the Office of the Chief Medical Examiner, the below-grade parking in the existing HOJ, the secure transport area/sally port for CJ#1 and CJ#2, and the surface parking lots under the I-80 structure reserved for HOJ, Sheriff's Department, and SFPD use. Ahern Way sidewalk widths within the study area meet the minimum required by the *Better Streets Plan* (six feet).

Existing traffic conditions for the intersections in the project vicinity were obtained from the transportation impact analysis being conducted for the *Central SoMa Plan Transportation Impact Study*. **Table 1: Intersection LOS – Existing Conditions - Weekday P.M. Peak Hour** presents the results of the intersection LOS analysis and corresponding delay at each study intersection for the weekday p.m. peak hour, as obtained from the transportation impact analysis for the Central SoMa TIS. The intersections operate at LOS C or better, with the exception of the intersection of Bryant Street/Sixth Street, which operates at LOS F conditions during the weekday p.m. peak hour.[41]

[39] While on-street parking is not permitted on the east side of Harriet Street between Bryant Street and Ahern Way, marked and unmarked official vehicles were observed parking along this street segment.

[40] A sally port is an enclosed, secured, controlled entryway into highly restricted or protected areas, such as the proposed RDF.

[41] CHS Consulting Group, *Intersection LOS Information,* February 20, 2015 (see Appendix B of this PMND).

Table 1: Intersection LOS – Existing Conditions - Weekday P.M. Peak Hour

Intersection	Average Vehicle Delay [a]	LOS
1. Harrison Street/Sixth Street [b]	31.6	C
2. Harrison Street/Seventh Street [c]	30.2	C
3. Bryant Street/Sixth Street [b]	**>80**	**F**
4. Bryant Street/Seventh Street [c]	18.7	B

Notes:
[a] Delay is presented in seconds per vehicle.
[b] Traffic counts conducted in September 2012.
[c] Traffic counts conducted in September 2009.

Source: LCW Consulting (LOS analysis taken from Central SoMa Plan Transportation Impact Study, October 2014).

Intersection turning movement volume counts at the unsignalized intersections of Sixth Street/Ahern Way, Harriet Street/Bryant Street, and Harriet Street/Harrison Street were conducted on Wednesday, February 11, 2015 during the weekday p.m. peak period to estimate vehicle trips on Harriet Street and Ahern Way. During the weekday p.m. peak hour, there are about 50 vehicles traveling on Harriet Street between Bryant Street and Ahern Way, and about 40 vehicles on Ahern Way between Sixth and Harriet streets (i.e., about 30 eastbound and 10 westbound vehicles). There are about 80 vehicles exiting Harriet Street at Harrison Street during the weekday p.m. peak hour.[42] As noted above, both Harriet Street and Ahern Way provide access to the ambulance loading area for the Office of the Chief Medical Examiner; the below-grade parking in the existing HOJ; the surface parking lots under the I-80 structure reserved for HOJ, Sheriff's Department, and SFPD use; and to on-street parking spaces that are generally occupied by marked and unmarked official City vehicles. Thus, the majority of vehicles on these streets are related to existing HOJ activities. While not observed during field surveys, some vehicles, such as the SFPD police cars that double park on Bryant Street in front of the HOJ, may use Harriet Street to travel between Bryant and Harrison streets.

Transit Conditions

The project site is well served by public transit. Local service is provided by the San Francisco Municipal Railway (Muni) bus routes, which can be used to transfer to other bus lines, cable car lines, the F Market & Wharves historic streetcar line, and Muni Metro light rail lines. Service to and from the East Bay is provided by Bay Area Rapid Transit (BART) along Market and Mission streets, and AC Transit buses from the Transbay Terminal. Service to and from the North Bay is provided by Golden Gate Transit along Van Ness Avenue and at the Transbay Terminal, and ferry service from the Ferry Building. Service to and from the Peninsula and South Bay is provided by Caltrain at its terminal located at Fourth and Townsend streets, and by the San Mateo County Transit District (SamTrans) at the Transbay Terminal.

[42] Ibid.

Muni operates numerous bus routes in the project vicinity, including the 8X Bayshore and 8AX/BX Bayshore Expresses (Harrison and Bryant streets), 19 Polk (Seventh and Eighth Streets), 27 Bryant (Bryant and Sixth streets), 47 Van Ness (Bryant and Harrison streets), 12 Folsom (Folsom and Harrison streets), and 14X Mission Express (Sixth Street). The nearest Muni bus stops to the project site are on Bryant Street, east of Seventh Street, which serve the 27 Bryant and 47 Van Ness routes; Bryant Street, east of Sixth Street, which serve the 8X Bayshore, 8AX/BX Bayshore Expresses, and 47 Van Ness routes; and Sixth Street, north of Bryant Street, which serve the 14X Mission Express and 27 Bryant routes. Other nearby stops are on Seventh Street, north of Bryant Street, which serve the 19 Polk route; and Harrison Street, west of Sixth Street, which serve the 8X Bayshore, 8AX/BX Bayshore Expresses, 12 Folsom, 27 Bryant, and 47 Van Ness routes. Golden Gate Transit operates bus routes within three blocks of the project site (Mission, Howard, and Folsom streets), as does SamTrans (Mission, Ninth, and Tenth streets). **Table 2: Muni Ridership and Capacity Utilization by Route – Existing Conditions at MLP – Weekday P.M. Peak Hour** presents the ridership and capacity utilization at the maximum load point (MLP) for the nearby routes during the weekday p.m. peak hour. As noted in **Table 2**, during the weekday p.m. peak hour, capacity utilization for all routes serving the project vicinity is less than Muni's 85 percent capacity utilization standard.

Table 2: Muni Ridership and Capacity Utilization by Route – Existing Conditions at MLP – Weekday P.M. Peak Hour

Route	Inbound (towards downtown)			Outbound (away from downtown)		
	Ridership	Capacity	Capacity Utilization [a]	Ridership	Capacity	Capacity Utilization [a]
8X Bayshore	408	752	54%	416	752	55%
8AX Bayshore Express	--	--	--	472	752	63%
8BX Bayshore Express	--	--	--	568	752	76%
12 Folsom	135	189	71%	126	189	67%
14X Mission Express	--	--	--	368	705	52%
19 Polk	172	252	68%	124	252	49%
27 Bryant	160	252	63%	116	252	46%
47 Van Ness	276	378	73%	258	378	68%

Note:
[a] Capacity utilization at the maximum load point (MLP).

Source: SF Planning Department Memorandum, Transit Data for Transportation Studies, June 2013.

Regional transit operations are evaluated at three regional screenlines (East Bay, North Bay, and South Bay) for the peak direction of travel and ridership loads, which corresponds with the evening commute outbound from downtown San Francisco to the region. The analysis is documented in the San Francisco Planning Department memorandum titled *Transit Data for Transportation*

Impact Studies (June 2013).[43] During the weekday p.m. peak hour, all regional transit providers operate at less than their load factor standard of 100 percent, which indicates that seats are generally available.

Pedestrian Conditions

Adjacent to the project building site, sidewalk widths are 10 feet on Sixth Street, 8-12 feet on Bryant Street, 6 feet on Harriet Street,[44] and 6 feet on Ahern Way. Most existing sidewalk widths adjacent to the project building site are less than the recommended sidewalk widths in the *Better Streets Plan* (i.e., minimum of 12 feet and recommended of 15 feet for a mixed-use street, and minimum of 6 feet and recommended of 9 feet for an alley). The sidewalk on Bryant Street meets the *Better Streets Plan* minimum requirement of 12 feet for a mixed-use street, while the sidewalks on Ahern Way and Harriet Street meet the *Better Streets Plan* minimum requirement of 6 feet for an alley.

Pedestrian crosswalks and pedestrian signals are provided at the signalized intersections in the project vicinity. A signalized midblock pedestrian crossing is provided across Bryant Street at Boardman Place (Boardman Place is located between Harriet and Seventh streets). In the vicinity of the project site, pedestrian volumes are light to moderate throughout the day, with higher pedestrian volumes on Bryant and Sixth streets. Counts of pedestrians walking on Bryant and on Sixth streets adjacent to the project building site were conducted in February 2015 during the 12:00 to 2:00 p.m. and 4:00 to 6:00 p.m. peak periods. The peak hour of the weekday midday pedestrian observations was between 12:00 and 1:00 p.m., and pedestrian volumes were 237 pedestrians per hour on Sixth Street, and 408 pedestrians per hour on Bryant Street. The peak hour of the p.m. peak period was between 4:00 and 5:00 p.m., and pedestrian volumes were 132 pedestrians per hour on Sixth Street, and 212 pedestrians per hour on Bryant Street. Overall, the sidewalks and crosswalks adjacent to the project site were observed to be operating under satisfactory conditions, with pedestrians moving at normal walking speeds and with freedom and sufficient space to bypass other pedestrians.

Bicycle Conditions

San Francisco Bicycle Route facilities in the area include Bicycle Route 23 that runs north along Seventh Street between Townsend and Market streets as a Class II bicycle lane, and south along Eighth Street between Market and Townsend streets as a Class II bicycle lane. Bicycle Route 36 runs along Townsend Street between Division Street and The Embarcadero. It is a Class II facility

[43] Planning Department Transportation Team, *Transit Data for Transportation Impact Studies*, Memo to Planning Department Transportation Consultants, June 21, 2013. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

[44] North of the project building site there are sidewalks on both sides of Harriet Street between Ahern Way and Harrison Street. These sidewalks are approximately 7 feet wide.

(signed route with bicycle lane) between Division and Second streets, and as a Class III facility between Second Street and The Embarcadero (signed route only).

Bicycle volumes on Sixth, Bryant and Harrison Streets were counted during the weekday p.m. peak period in February 2015. The number of bicyclists was greatest on Harrison Street, with about 30 bicyclists traveling westbound during the weekday p.m. peak hour. During the weekday p.m. peak hour, there were about 15 bicyclists traveling eastbound on Bryant Street, about 10 bicyclists traveling southbound on Sixth Street, and 5 bicyclists traveling northbound on Sixth Street.

There are two bicycle parking spaces (i.e., one U-shaped bicycle rack) on Sixth Street between Ahern Way and Bryant Street, and 16 bicycle parking spaces (i.e., eight U-shaped bicycle racks) located on the north side of Bryant Street, between Harriet and Seventh streets. The closest Bay Area Bike Share station is located on Townsend Street between Seventh and Eighth streets (accommodating 15 bicycles).[45]

Loading Conditions

On the west side of Sixth Street between Bryant Street and Ahern Way there is one commercial loading space adjacent to the project site. The southbound curb lane is subject to tow-away restrictions between 7:00 and 9:00 a.m. and 3:00 and 7:00 p.m. On the west side of Harriet Street between Bryant Street and Ahern Way there are eight commercial loading spaces (yellow zone) dedicated for truck loading between 6:00 a.m. and 3:00 p.m., Monday through Friday. Parking is not permitted within these spaces before 6:00 a.m. or after 3:00 p.m. During field observations, all on-street commercial loading spaces in the project vicinity were occupied.

On the west side of Harriet Street between Bryant Street and Ahern Way, there is an existing HOJ building services area with two driveways serving this area, a surface parking/ambulance loading area for the Office of the Chief Medical Examiner with two driveways serving this area, and an entry and exit driveway to the below-grade HOJ basement level. On the west side of Harriet Street at Ahern Way there is a driveway to the secure transport area/sally port for the existing CJ#1 and CJ#2. The off-street HOJ building services area and surface parking/ambulance loading area are located within the existing HOJ's approximately 60-foot-deep setback from Harriet Street. Loading for the HOJ building takes place on Harriet Street because there is no off-street loading dock. The on-street loading spaces on the west side of the street are used for freight deliveries. Service and delivery vehicles park between the two driveways that serve the HOJ building service area and hand transport boxes to a freight elevator via a pathway in the existing HOJ's setback area.

[45] Bay Area Bike Share is a pilot project in a partnership among local government agencies including the Air District, San Francisco Municipal Transportation Agency, SamTrans, Caltrain, the County of San Mateo, the San Mateo County Transportation Authority, the city of Redwood City, and the Santa Clara Valley Transportation Authority. Available online at http://www.bayareabikeshare.com/about. Accessed March 31, 2015.

Emergency Vehicle Access

Emergency vehicle access to the project building site is primarily from Bryant and Sixth streets, with secondary access via Harriet Street and Ahern Way. The nearest San Francisco Fire Department (SFFD) station is Station #8 at 36 Bluxome Street between Fourth and Fifth streets, about 0.6 miles southeast of the project site.

Parking Conditions

The existing parking conditions were examined within a parking study area generally bounded by Folsom, Fifth, Brannan, and Seventh streets. On-street parking occupancy conditions were assessed in March 2015 for the weekday midday (1:00 to 2:00 p.m.) period. Overall, there are about 1,030 on-street parking spaces within the study area, and weekday midday occupancy is high, approximately 95 percent.[46]

On-street parking conditions adjacent to the project building site (i.e., on the block bounded by Sixth Street, Bryant Street, Harriet Street and Ahern Way) are as follows:

- On the west side of Sixth Street between Bryant Street and Ahern Way, there are 14 parking spaces subject to two-hour time limits between 9 a.m. and 3 p.m. During the field surveys these spaces were about 64 percent occupied during the midday period. The curb lane is subject to tow-away restrictions between 7:00 and 9:00 a.m. and 3:00 and 7:00 p.m.
- On the north side of Bryant Street between Harriet and Sixth streets, there are six short-term metered parking spaces, which were 100 percent occupied during the midday period. West of Harriet Street on-street parking is reserved for police vehicles, and police vehicles were observed to double park on Bryant Street between Harriet and Seventh streets.
- On the east side of Harriet Street between Bryant Street and Ahern Way, there is a No Stopping regulation that is not enforced. During field surveys 11 vehicles were typically parked adjacent to the project building site.
- On the south side of Ahern Way between Sixth and Harriet streets, there are eight unrestricted parking spaces, which were 100 percent occupied during the midday period.

On the west side of Harriet Street between Bryant Street and Ahern Way there are also 10 on-street motorcycle parking spaces between the two driveways that provide access to the at-grade surface parking and ambulance loading area on the west side of the street. These spaces were 100 percent occupied during the midday period.

North of the project building site, there are two off-street surface parking lots under the I-80 structure between Sixth and Seventh Streets that are reserved for HOJ, Sheriff's Department, and SFPD use. These surface lots are accessed via driveways on either side of Harriet Street between

[46] CHS Consulting Group/Baymetrics, Data Collection, February 11, 2015 (see Appendix C of this PMND).

Ahern Way and Harrison Street. The surface parking lot on the east side of Harriet Street can also be accessed via Seventh Street.

PROJECT TRAVEL DEMAND

Because the proposed project is a replacement of an existing rehabilitation and detention facility (CJ#3 and CJ#4), and because the Planning Department's *San Francisco Transportation Impact Analysis Guidelines for Environmental Review (SF Guidelines)* do not include trip generation rates for rehabilitation and detention facility (RDF) uses, travel demand associated with the proposed project was based on information from DPW and the Sheriff's Department on the operating characteristics of the existing facility, as well as programming projections of the number of employees and beds for the proposed RDF.

In addition, because with the proposed project all the existing buildings on the block bounded by Sixth Street, Bryant Street, Harriet Street, and Ahern Way, with the exception of the buildings at 480-484 Sixth Street and 800-804 Bryant Street/498 Sixth Street, would be demolished, a credit was applied for the uses that would be eliminated. The credit was based on field surveys of persons and vehicles entering and exiting the buildings. While the 14-unit single room occupancy (SRO) residential building with ground-floor retail at 480-484 Sixth Street would remain on the project building site, it may be decided through the process of DPW's future acquisition of the property to relocate some or all of the building occupants before the proposed RDF is ready for use. If relocation of the building tenants is determined necessary, it is likely the building could accommodate future commercial/office uses. Thus, for purposes of the transportation analysis, it was assumed (as a worst-case scenario) that the existing residential and restaurant uses within the building would be relocated, and upon completion of the proposed project, the building would contain about 4,770 gsf of office uses and 2,380 gsf of ground floor retail uses.[47]

Proposed RDF. Travel demand for the proposed RDF assumes that the proposed facility would be fully occupied, and therefore only the net new travel demand associated with an increase in occupancy over existing conditions was estimated. The net new travel demand to the project area was estimated based on the increase in the number of occupied beds (current versus maximum capacity of proposed RDF). Currently about 439 of the 905 beds at the existing CJ#3 and CJ#4 facilities are occupied. In the past both jails operated at approximately 50 to 60 percent occupancy, or approximately up to 550 beds. The proposed RDF would accommodate 640 beds. Although this is a reduction from the 905 beds in CJ#3 and CJ#4 and the proposed replacement beds may not be fully (100 percent) occupied, the travel demand estimates for the project analysis assumed an increase of 201 inmate beds using the current occupancy of beds in CJ#3 and CJ#4 (i.e., 439 of the 905 beds are currently occupied) and potential full (100 percent) occupancy of the 640 beds. Since

[47] LCW Consulting, *Hall of Justice Rehabilitation and Detention Facility Project Summary of Daily and PM Peak Hour Trip Generation,* April 9, 2015 (see Appendix D of this PMND).

occupancy in the past has been higher, and future occupancy is unknown, this is a conservative estimate of the weekday travel demand generated by the proposed project, specifically the number of inmate beds. Inmate visitation occurs on Saturdays, Sundays and holidays, and therefore would not add travel demand to the weekday p.m. peak hour.

Weekday travel demand was estimated based on the projected increase in the number of employees, as well as visitation to the facility by lawyers, vendors, and other criminal justice partners. Because inmates are housed on-site and do not travel to and from the facility on a daily basis, they do not contribute to the travel demand estimates. Based on the above, the number of employees associated with the increase in occupancy of 201 inmate beds is projected to increase from 248 to 295 FTE (an increase of 47 employees). The proposed RDF, similar to existing CJ#3 and CJ#4, would operate three employee shifts: 11 p.m. to 7 a.m., 7 a.m. to 3 p.m., and 3 p.m. to 11 p.m. Based on the total existing and projected staffing levels, approximately 22 percent of staff would work the midnight shift (i.e., between 11 p.m. and 7 a.m.), 48 percent the daytime shift (i.e., between 7 a.m. and 3 p.m.), and 30 percent the swing shift (i.e., between 3 p.m. and 11 p.m.). Therefore, most of employee travel demand would occur outside of the p.m. peak period (4 p.m. to 6 p.m.). For daily travel demand estimation, it was assumed that daytime and swing shift employees would make up to three trips per day (two to and from work, and about 50 percent also leave the facility once during the day and swing shifts), while the midnight shift employees would make two trips per day (to and from work). For the p.m. peak hour travel demand, although most employee trips would occur outside of the p.m. peak hour, some employees could leave or arrive to work late (after 4 p.m.), and it was assumed that 25 percent of the day and swing employee arrivals or departures would occur during the p.m. peak hour. The travel mode of the employee trips was based on information on employee trips from the *SF Guidelines* for Superdistrict 1. Although inmate visitation hours are on weekends and holidays, there are weekday business visitors to the jail, such as lawyers, vendors, and other criminal justice partners (i.e., business visitation). The current average weekday visitation rate was not available, although it was reported that such visitation mostly occurs during the hours of 9:00 a.m. to 4:00 p.m. As a conservative estimate of business visitation, it was estimated that on average there would be one visitor per every four inmate beds on weekdays (i.e., 0.5 trips per bed on a daily basis), and that 10 percent of trips would occur during the p.m. peak hour.

480-484 Sixth Street Reuse. As noted above, the transportation assessment assumes that the 480-484 Sixth Street building, which currently contains 14 SRO units and a restaurant on the ground floor, could in the future contain about 4,770 gsf of office uses and 2,380 gsf of ground floor retail (i.e., restaurant uses).[48] Travel demand associated with these potential uses was based

[48] The 14-unit SRO residential building with ground-floor retail at 480-484 Sixth Street would remain on the project building site, although it may be decided through the process of DPW's future acquisition of the property to relocate some or all of the building occupants before the proposed RDF is ready for use.

on the trip generation rates in the *SF Guidelines* for office and restaurant (composite rate) uses, and mode split for work trips and visitor trips to Superdistrict 1.

Credit to Uses on Project Block that Would Be Eliminated. In order to account for the person and vehicle trips that would no longer travel to the project site, person and vehicle counts were conducted in February 2015 at the doorways to buildings and at driveways to the facilities that would no longer exist. Based on these surveys of the existing land uses, a total of 136 person trips (58 inbound and 78 outbound) and 82 vehicle trips (34 inbound and 48 outbound) during the weekday p.m. peak hour would no longer travel to or from the project site. The majority of both the pedestrian and vehicle trips that would be eliminated were associated with the McDonald's restaurant (the McDonald's restaurant has a parking lot with 21 parking spaces reserved for McDonald's customers).

Table 3: Proposed Project Travel Demand by Mode - Weekday P.M. Peak Hour summarizes the travel demand associated with the proposed project. Taking into consideration the credit for the existing land uses that would be removed, during the weekday p.m. peak hour, the proposed RDF would generate 83 net new person trips, the majority from the potential reuse of the 480-484 Sixth Street building as restaurant and office space, and a net decrease of 47 vehicle trips.

Table 3: Proposed Project Travel Demand by Mode - Weekday P.M. Peak Hour

Project Component	Person-Trips					Vehicle Trips
	Auto	Transit	Walk	Other[a]	Total	
New Trips						
RDF Employees	3	5	1	0	9	2
RDF Visitors	3	3	3	1	10	1
480-484 Sixth Street Reuse	72	55	61	12	200	32
Total New Trips	78	63	65	13	219	35
Credit for Existing Uses	(49)	(35)	(43)	(9)	(136)	(82)
Net new Trips	***29***	***28***	***22***	***4***	***83***	***(47)***

Note:
[a] Other includes bicycle, taxis, and other modes.
Source: *SF Guidelines*, SF Planning Department, LCW Consulting.

Loading Demand. The proposed 200,000-gsf RDF would replace the existing CJ#3 and CJ#4, currently located within the existing HOJ building to the west of the project building site. Delivery information for the existing CJ#4 that is currently occupied was not available, and deliveries were not observed during the data collection for the transportation analysis.[49] However, because deliveries are currently made to the existing CJ#4 with 439 occupied inmate beds, a substantial increase in delivery and service vehicle trips for the proposed RDF with a maximum occupancy of 640 inmate beds would not be anticipated.

The proposed project would also eliminate delivery and service vehicle trips to the existing land uses on the project building site that would be displaced (i.e., the residential and restaurant land

[49] CJ#3 was vacated in November 2013.

uses within the 480-484 Sixth Street building, and the McDonald's restaurant), and overall, the number of delivery and service vehicle trips to the project site would likely decrease.

The delivery/service vehicle demand for the new 200,000-gsf RDF was estimated based on the methodology and truck trip generation rates presented in the *SF Guidelines*. The truck trip generation rate for institutional uses was used for the proposed RDF. As shown in **Table 4: Proposed Project Total Loading Demand**, the proposed 200,000-gsf RDF would generate about 20 delivery and service vehicle-trips to the project site per day (with some of those existing deliveries), which corresponds to a demand for one loading space during the peak and average hour of loading activities. As indicated above, the project site's overall loading demand would likely decrease.

Table 4: Proposed Project Total Loading Demand

Project Component	Daily Truck Trip Generation	Peak Hour Loading Spaces	Average Hour Loading Spaces
RDF[a]	20	1.2	0.9
480-484 Sixth Street Reuse	10	0.6	0.4

Note:
[a] No credit was taken for existing deliveries to the existing CJ#3 and CJ#4 within the HOJ.
Source: *SF Guidelines*, LCW Consulting.

The proposed office and restaurant uses within the 480-484 Sixth Street building would generate about 10 delivery and service vehicle-trips to the project site per day, which corresponds to a demand for less than one loading space during the peak and average hour of loading activities. As stated above, the existing commercial deliveries to the land uses to be eliminated were not counted or credited. Because the proposed project would reduce the overall amount of commercial space (i.e., the McDonald's restaurant and the restaurant at the 480-484 Sixth Street building) at the project building site, the proposed project would be expected to result in a reduction in the amount of commercial loading demand related to these uses.

Parking Demand. The parking demand delivery/service vehicle demand was estimated based on the methodology presented in the *SF Guidelines*. Parking demand consists of both long-term demand (typically employees) and short-term demand (typically visitors). For the proposed uses, the long-term parking demand was derived by estimating the number of net new daytime and swing shift employees, and applying a trip mode split and average vehicle occupancy from the trip generation calculations. The short-term parking demand was estimated from the total daily visitor trips by private auto and an average turnover rate of 5.5 vehicles per space.

Table 5: Proposed Project Net New Parking Demand presents the estimated net new parking demand for the proposed uses. During the peak midday period, the proposed RDF would generate a net new parking demand of 10 spaces (nine long-term and one short-term), while the office and restaurant uses that may replace the residential use in the 480-484 Sixth Street building would generate a parking demand of 26 spaces (six long-term and 20 short-term). As discussed above,

this demand would replace existing parking demand related to the residential and restaurant land uses that would be removed. Overall, this would result in a decrease in the amount of vehicle trips to the project area and similarly parking demand would likely be lower than under existing conditions.

Table 5: Proposed Project Net New Parking Demand

Project Component	Long-Term Parking Spaces	Short-Term Parking Spaces	Total
RDF	9	1	10
480-484 Sixth Street Reuse	6	20	26

Source: *SF Guidelines*, LCW Consulting.

IMPACTS

Traffic Impacts

Impact TR-1: The proposed project would not cause a substantial increase in traffic that would cause operating conditions at study intersections, on adjacent streets, or at I-80 on-ramps and off-ramps in the project vicinity to substantially alter. The proposed project would not cause major traffic hazards. (*Less than Significant*)

As presented in **Table 3** on p. 66, the proposed project would result in a net-reduction in the number of vehicle trips traveling to and from the project site during the weekday p.m. peak hour (i.e., considering existing land uses, an approximate reduction of 47 vehicles during the weekday p.m. peak hour). Therefore, the proposed project would not substantially affect the existing LOS conditions at intersections (presented in **Table 1** on p. 59), streets, or freeway on-ramps and off-ramps in the project vicinity, and would not contribute considerably to the existing LOS E conditions at the intersection of Sixth Street/Bryant Street during the weekday p.m. peak hour.

As part of the proposed project, portions of Harriet Street and Ahern Way would be reconfigured to accommodate designated, secure service and jail transport areas constructed as part of the proposed RDF, subject to SFMTA and DPW review and approval. Specifically, Ahern Way would be converted from two-way to one-way westbound operation. Harriet Street between Bryant Street and Ahern Way, and Ahern Way between Sixth and Harriet streets would be closed to through traffic in both directions, and only HOJ and RDF-related official service vehicles, scheduled delivery and service vehicles, and emergency response vehicles would be allowed access.[50] Additionally, on-street parking on Harriet Street would not be permitted on either side of the street (a loss of about 22 parking spaces on both sides of the street – on-street parking is currently not permitted on the east side of the street; however, vehicles were observed parking on this segment and parking restrictions are not enforced), while on Ahern Way on-street parking would not be permitted on either side of the street (a loss of about 17 spaces). Between Ahern Way and Harrison

[50] The method for restricting and securing access to Harriet Street and Ahern Way adjacent to the project building site is not currently known, but would be developed in consultation with the SFMTA.

Street, Harriet Street has on-street parking for SFPD police vehicles, and provides access to and from the off-street surface parking lots under the I-80 structure reserved for HOJ and SFPD use. Harriet Street and Ahern Way also provide access to the secure transport area/sally port for CJ#1 and CJ#2. With the proposed project, vehicular access to Harriet Street and Ahern Way would be maintained for HOJ and RDF-related vehicles. Vehicular access to the existing HOJ building services area, the surface parking/ambulance loading area for the Office of the Chief Medical Examiner, and below-grade parking in the HOJ from the west side of Harriet Street, as well as the on-street and off-street parking activities on Harriet Street north of Ahern Way would remain. As currently designed, the proposed project would not change the travel direction of Harriet Street between Ahern Way and Harrison Street, and therefore vehicles exiting the reserved on-street parking spaces on Harriet Street between Ahern Way and Harrison Street and the off-street surface parking lots under the I-80 structure would continue to travel north to Harrison Street (where they would turn left onto Harrison Street westbound).

Neither the proposed RDF or the reuse of the 480-484 Sixth Street building would include off-street parking spaces, and therefore, the only vehicle trips accessing the project building site would include the net new service/loading vehicle trips and jail transport trips to the proposed RDF. Due to the absence of on-site parking, the proposed access restrictions to Harriet Street and Ahern Way, the reconfiguration of Ahern Way from two-way to one-way, and the elimination of on-street parking (about 45 spaces), the proposed project would result in a decrease in the number of vehicles, particularly non-HOJ-related vehicles, accessing these streets. Some drivers may currently use Harriet Street to travel from Bryant Street to Harrison Street, and these drivers would no longer be able to travel on Harriet Street and instead would need to turn northbound prior to Harriet Street (e.g., at Seventh Street which is one-way northbound), or east of Harriet Street at Sixth Street (two-way), or other streets. Non-HOJ-related drivers who currently use Ahern Way to travel from Sixth Street to Harrison Street would no longer be able to travel on Ahern Way, and instead would need to continue on Sixth Street northbound to Harrison Street, while access to the secure transport area/sally port for CJ#1 and CJ#2 on the west side of Harriet Street at Ahern Way would be maintained. As described under existing conditions, traffic counts taken during the p.m. peak hour indicated that 50 vehicles traveled northbound on Harriet Street, 40 vehicles traveled on Ahern Way (both directions), and approximately 80 vehicles exited Harriet Street onto Harrison Street. Given the limited amount of traffic that utilizes Ahern Way and Harriet Street, and that some of this traffic was likely related to the existing HOJ uses as well as land uses on the project site that would be removed, this level of traffic diversion to other nearby streets would not be considered significant. Commercial loading access is addressed further below.

As noted above, the proposed project would alter access to the HOJ and adjacent facilities, and would implement controlled access on both Harriet Street and Ahern Way adjacent to the project building site, subject to SFMTA and DPW review and approval. Designated secure service/loading and sally port areas would be provided on both Ahern Way and Harriet Street, respectively. On

Ahern Way a designated secure jail transport area and a bypass lane with a width of 14 to 22 feet (or more) to the north of the transport area and length of approximately 100 feet could be provided. On Harriet Street, a narrower 12-foot-wide by 80-foot-long service/loading area is proposed on the east side of Harriet Street adjacent to the proposed RDF. Adjacent travel lanes would be designed on the one-way streets to ensure that emergency response and other vehicles would be able to bypass the proposed sally port and service/loading areas, and that service vehicles would be able to enter the existing HOJ building services area on Harriet Street. See **Figure 8** on p. 14.

The methods by which access to Harriet Street and Ahern Way would be restricted have not yet been determined by DPW, and would be subject to review and approval by the SFMTA to ensure that Sheriff's Department vehicles accessing these streets do not block traffic flow on Sixth or Bryant streets. On Sixth Street at Ahern Way, KEEP CLEAR is currently striped across the southbound lanes to facilitate access into and out of Ahern Way, and this striping would remain with the proposed project. In addition, there is a peak period No Left Turn sign posted in the northbound direction, which restricts left turns from Sixth Street onto Ahern Way between 3:00 and 7:00 p.m.

Overall, the proposed project would reduce the number of vehicle trips from the project site and would not substantially affect traffic operations at nearby study intersections, streets, and freeway on- and off-ramps in the project vicinity. Therefore, project-related impacts on traffic operations would be **less than significant** and no mitigation measures are necessary.

While the proposed project's traffic impacts would be less than significant, **Improvement Measure I-TR-1: Transportation Demand Management Plan** may be recommended for consideration by City decision-makers to further reduce the less-than-significant transportation impacts.

Improvement Measure I-TR-1: Transportation Demand Management (TDM) Plan

As an improvement measure to reduce vehicle miles traveled (VMT) by the proposed project and to encourage use of alternate modes, the SFDPW could develop and implement a TDM Plan as part of project approval. The following TDM measures have been identified for the proposed project, and are based on the standard Planning Department TDM Program measures:

1. Identify TDM Coordinator

The project sponsor should identify a TDM Coordinator for the project site. The TDM Coordinator would be responsible for the implementation and ongoing operation of all applicable TDM measures described below. The TDM Coordinator could be a brokered service through an existing transportation management association (e.g., the Transportation Management Association of San Francisco, TMASF), or the TDM Coordinator could be a staff member (e.g., DPW or Sheriff's Department facility manager). The TDM Coordinator would not have to work full-time at the project site. However, the TDM Coordinator should be the single point of contact for all transportation-related questions from facility employees and City (i.e., Planning Department) staff. The TDM Coordinator should provide TDM information to facility employees about the transportation amenities

and options available at the project site (e.g., Class 1 bicycle parking spaces) and nearby (e.g., Muni bus routes).

2. Provide TDM Training for the TDM Coordinator

3. Provide Transportation and Trip Planning Information to Facility Employees and Visitors

3a. New-hire packet. Provide a transportation insert in the new-hire packet that includes information on transit service (local and regional, schedules and fares), information on where transit passes could be purchased, information on the 511 Regional Rideshare Program and nearby bike and car share programs, and information on where to find additional web-based alternative transportation materials (e.g., NextMuni phone app). This new-hire packet should be continuously updated as local transportation options change, and the packet should be provided to each new facility employee. Provide Muni maps, San Francisco Bicycle and Pedestrian maps upon request.

3b. Current transportation resources. Maintain an available supply of Muni maps, San Francisco Bicycle and Pedestrian maps, schedules, information and updates, for visitors.

3c. Posted and real-time information. A local map and real-time transit information could be installed on-site in a prominent and visible location, such as within the public lobby of the proposed RDF. The local map should clearly identify transit, bicycle, and key pedestrian routes, and also depict nearby destinations and commercial corridors. Real-time transit information via NextMuni data could be displayed on a digital screen.

4. Annually conduct a City-approved commuter survey to staff and visitors

5. City Access for Data Collection

As part of an ongoing effort to quantify the efficacy of TDM measures, City staff may need to access the project site to perform trip counts, and/or intercept surveys and/or other types of data collection. All on-site activities should be coordinated through the TDM Coordinator. DPW or Sheriff's Department should assure future access to the site by City staff.

With implementation of **Improvement Measure I-TR-1**, alternative modes would be encouraged and the use of single-occupant vehicles would be discouraged to reduce VMT generated by the proposed project.

Transit Impacts

Impact TR-2: The proposed project would not result in a substantial increase in transit demand that could not be accommodated by adjacent local and regional transit capacity, nor would it cause a substantial increase in delays or operating costs such that significant adverse impacts to local or regional transit service could occur. ***(Less than Significant)***

As discussed above and presented in **Table 3** on p. 66, the proposed project would result in an increase of 28 net new transit trips to and from the project site during the weekday p.m. peak hour. These new transit trips, distributed among the routes serving the project vicinity, would not substantially change the ridership and capacity utilization of the nearby transit routes. As presented in **Table 2** on p. 60, the existing Muni routes in the project vicinity have available capacity during the weekday p.m. peak hour. While some existing Muni bus routes run along Bryant Street (8X Bayshore, 8AX/BX Bayshore Expresses, 27 Bryant, 47 Van Ness) and Sixth Street (14X Mission Express and 27 Bryant), there are no bus stops directly adjacent to the project building site, and therefore, vehicle access to the project building site, including the proposed changes to site circulation via Harriet Street or Ahern Way, would not affect transit operations on other nearby streets.

A portion of the 28 net new transit trips during the weekday p.m. peak hour would also utilize regional transit providers. During the weekday p.m. peak hour, the regional screenlines currently operate at less than the capacity utilization standard, and regional transit routes have capacity to accommodate additional passengers. Thus, the additional transit trips would not substantially change the ridership and capacity utilization of the regional screenlines, and would not affect regional transit service.

Because the proposed project would not substantially affect the capacity utilization of the local and regional transit routes, and would not affect the operations of the nearby Muni bus routes, the project-related impacts on transit would be **less than significant** and no mitigation measures are necessary.

Pedestrian Impacts

Impact TR-3: The proposed project would not result in a substantial overcrowding on public sidewalks, nor create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility on the site and adjoining areas. ***(Less than Significant)***

As discussed above and presented in **Table 3** on p. 66, the proposed project would result in an increase of 50 net new pedestrian trips (28 transit and 22 walk trips) to and from the project building site during the weekday p.m. peak hour. Primary public pedestrian access to the proposed RDF would be on Sixth Street, and therefore the number of pedestrians on Sixth Street would increase over existing conditions. Pedestrian volumes on Sixth Street between Bryant Street and Ahern

Way are low (about 237 pedestrians during the weekday midday peak hour and 130 pedestrians during the weekday p.m. peak hour), and additional pedestrian trips could be accommodated without substantially affecting walking conditions. The addition of the net new pedestrian trips to Bryant and Sixth streets would not substantially change the existing pedestrian conditions on the adjacent streets.

The proposed project would maintain the east sidewalk on Harriet Street between Bryant Street and Ahern Way (i.e., adjacent to the project building site) at its current width – 7 feet-3 inches. Future pedestrian access along Harriet Street and Ahern Way is unclear based on preliminary designs. Although access could be maintained along these two streets, this analysis assumes access could be limited to HOJ and RDF traffic. On Harriet Street, pedestrian access on the east sidewalk would be constrained at the location of the secure loading area outside of the proposed RDF, which would extend about 12 feet into Harriet Street and extend 80 feet to the north. Similarly, on Ahern Way, the six-foot-wide sidewalk on the south side of the street would be interrupted by the secure transport area/sally port, and preliminary designs do not indicate how pedestrians would circumvent this secure area or the secure area on Harriet Street. Given the restricted secure access of both Ahern Way and Harriet Street, it is unclear how much general (non-RDF) pedestrian activity would be permitted or encouraged in the area. Neither street provides sole pedestrian connection to any nearby recreational or commercial areas, and alternate access along other streets in the area, such as Sixth and Seventh streets, is available. As described under existing conditions, pedestrian volumes on Harriet Street and Ahern Way were observed to be low, and pedestrian activity on these sidewalks would likely decrease, and would be related primarily to the RDF activities.

As described in Section A,Project Description, on p. 18, a subterranean tunnel is proposed underneath the Harriet Street roadway, sidewalks, and existing driveway to the HOJ building services area to connect the basement level of the existing HOJ building to the basement level of the proposed RDF, as shown in **Figure 8** on p. 14. This tunnel, subject to SFMTA approval, would be used to provide secure, direct transport of inmates between the proposed RDF and the courts in the existing HOJ building. Construction of the proposed subterranean tunnel is discussed further below.

Overall, the proposed project would likely reduce the amount of pedestrian and vehicle traffic on Harriet Street and Ahern Way, potentially discouraging or limiting it to HOJ and RDF-related travel. Instead the proposed project would add pedestrian traffic to Bryant and Sixth streets. These alterations to pedestrian and vehicle traffic on Ahern Way and Harriet Street, likely unique to this type of project, would not be considered significant. As indicated above, neither street would be considered a significant pedestrian connection to areas outside the block, and alternate routes would be available. Increases in pedestrian traffic on Bryant Street, Sixth Street, and other nearby streets would not substantially affect the pedestrian conditions on these streets, create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the

proposed RDF and adjoining areas. Therefore, the project-related impacts on pedestrians would be **less than significant** and no mitigation measures are necessary.

Bicycle Impacts

Impact TR-4: The proposed project would not result in potentially hazardous conditions for bicyclists, or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas. ***(Less than Significant)***

The proposed RDF building would include on-site Class 1 bicycle parking spaces and shower and locker facilities, as well as on-street Class 2 bicycle parking spaces to meet the Planning Code requirements, although the number and location of these facilities have not been determined at this time. Similarly, the reuse of the 480-484 Sixth Street building would require the provision of Class 1 and Class 2 bicycle parking spaces, which would be provided to meet the Planning Code requirements. Shower and locker facilities would not be required under the Planning Code, as the occupied floor area of the 480-484 Sixth Street building does not currently exceed 10,000 gsf.

A portion of the net new other trips presented in **Table 3** on p. 66 would be bicycle trips (i.e., a portion of the four net new other trips during the weekday p.m. peak hour), and these trips would be accommodated on the existing bicycle facilities in the project vicinity.

Although the proposed project would result in an increase in the number of bicycles in the vicinity of the project site, the increase would not be substantial enough to affect bicycle travel or facilities in the area. Similarly, the proposed project would result in a reduction of vehicle traffic and would therefore not result in an increase in potential vehicle-bicycle conflicts. Therefore, proposed project impacts to bicyclists would be **less than significant** and no mitigation measures are necessary.

Loading Impacts

Impact TR-5: The loading demand for the proposed project would be accommodated within the proposed on-site loading facilities, and would not create potentially hazardous conditions or significant delays for traffic, transit, bicyclists or pedestrians. ***(Less than Significant)***

Truck deliveries and service vehicles, including trash collection, for the proposed RDF would be accommodated within the secure loading area along Harriet Street. The loading area would be approximately 12 feet wide and 80 feet in length, subject to SFMTA review and approval, and would extend up to 12 feet into the Harriet Street right-of-way (see **Figure 8** on p. 14). The loading demand of less than one loading space during the average and peak hour of loading activities, as discussed above in the Project Travel Demand section, would be accommodated within this loading area. On-street parking that currently occurs on the east side of Harriet Street (i.e., the No Stopping Anytime regulation is not enforced) would be removed, as would the on-street parking on the west side of the street, in order to provide adequate maneuvering space around the secure loading area.

In addition, Harriet Street would be closed to vehicular through traffic; only official service vehicles and emergency service vehicles would be allowed access, subject to SFMTA and DPW review and approval.

RDF inmate passenger loading/unloading would be conducted from a secure transport area/sally port on Ahern Way that would be able to accommodate two inmate transfer vehicles at one time. Ahern Way between Sixth and Harriet streets would be converted from a two-way to a one-way westbound street to allow for a bypass lane around the secure transport area/sally port. Ahern Way would be closed to vehicular though traffic; only official service vehicles and emergency service vehicles would be allowed access (see **Figure 8** on p. 14).

As part of the proposed project, on-street parking would not be permitted adjacent to the proposed RDF on Sixth Street, and DPW would request that the curb adjacent to the proposed RDF on Sixth Street be designated either as a red zone or restricted to RDF-use only. This would result in the elimination of the existing commercial loading space on Sixth Street. As part of the proposed project, the existing driveway into the McDonald's parking lot (which is located south of the proposed RDF on Bryant Street) would be eliminated, and up to two on-street commercial loading or parking spaces could be provided at this location. As presented in **Table 4** on p. 67, the new office and restaurant uses that may occupy the 480-484 Sixth Street building would result in a demand for less than one loading space during the peak and average hours of loading activities, and the demand could be accommodated on-street within the new commercial loading space(s) that could be striped on Bryant Street or in the remaining parking spaces on Sixth Street between the 480-484 Sixth Street building and Bryant Street.

As described above, on the west side of Harriet Street between Bryant Street and Ahern Way, there is an existing HOJ building services area with two driveways serving this area, a surface parking and ambulance loading area for the Office of the Chief Medical Examiner with two driveways serving this area, and exit and entry driveways to the existing HOJ's basement level. In addition, on the west side of Harriet Street at Ahern Way there is a driveway to the secure transport area/sally port for the existing CJ#1 and CJ#2. The construction of secure service and jail transport areas within the Harriet Street and Ahern Way roadways would not substantially affect the existing HOJ building services, parking and ambulance loading areas, or the driveway to the secure transport area/sally port for CJ#1 and CJ#2, as they would be designed to allow adequate travel lane widths to accommodate access into and out of these facilities. Harriet Street between Bryant Street and Ahern Way, and Ahern Way between Sixth and Harriet streets would be closed to non-HOJ and RDF-related traffic, and only scheduled service and deliveries, and HOJ and RDF-related official service vehicles (e.g., ambulances, inmate transfer vehicles) would be allowed access, and therefore access to the existing HOJ building services area, the surface parking/ambulance loading area, and the HOJ basement level from Harriet Street would be maintained.

Because the proposed project loading demand would be accommodated within the proposed secure service/loading area or the secure jail transport area, or on-street at the Sixth Street curb for the 480-484 Sixth Street building, because existing service and loading activities at the existing HOJ building would be maintained, and because proposed loading operations would not result in significant delays affecting traffic, transit, bicycles or pedestrians, the proposed project's impact on loading would be **less than significant** and no mitigation measures are necessary.

While the proposed project's loading impacts would be less than significant, **Improvement Measure I-TR-2: On-Street Commercial Loading Spaces** may be recommended for consideration by City decision-makers.

> **Improvement Measure I-TR-2: On-Street Commercial Loading Spaces**
>
> As an improvement measure to accommodate commercial loading/unloading activities for the 480-484 Sixth Street building, DPW could replace the existing driveway on Sixth Street that would be eliminated with up to two commercial loading spaces. The commercial loading/unloading spaces would need to be approved at a public hearing through the SFMTA.

Implementation of **Improvement Measure I-TR-2** would reduce the less-than-significant loading impacts.

Emergency Vehicle Access Impacts

Impact TR-6: The proposed project would not result in significant impacts on emergency vehicle access. (*Less than Significant*)

Emergency vehicle access to the project block via Bryant and Sixth streets would remain unchanged from existing conditions, as the proposed project would not change the travel lanes on these streets. Emergency service providers would continue to be able to pull up to the project block from both Bryant and Sixth streets. Secondary emergency vehicle access to the existing HOJ building is also currently provided via Harriet Street and Ahern Way, and with implementation of the proposed project, both Harriet Street between Bryant Street and Ahern Way, and Ahern Way between Sixth and Harriet streets would be closed to vehicular through traffic, and only official service and emergency vehicles would be allowed access, subject to SFMTA and DPW review and approval. A travel lane would be maintained at the locations of the secure service/loading area on Harriet Street and secure transport area/sally port on Ahern Way to ensure that emergency vehicles and other HOJ and RDF-related traffic would be able to travel on these streets. Thus, the proposed project's impacts on emergency vehicle access would be **less than significant** and no mitigation measures are necessary.

Construction Impacts

Impact TR-7: The proposed project would not result in construction-related transportation impacts because of their temporary and limited duration. (*Less than Significant*)

Detailed plans for construction of the proposed project have not been developed. The project sponsor estimates that construction of the proposed project would take approximately 30 months to complete, with construction beginning mid-year in 2017, and building occupancy in the fall of 2020. Construction-related activities would typically occur Monday through Saturday, between 7:00 a.m. and 8:00 p.m.[51] Construction is not anticipated to occur on Sundays or major legal holidays, but may occur on an as-needed basis. The hours of construction would be stipulated by the Department of Building Inspection, and the contractor would need to comply with the San Francisco Noise Ordinance and the City's *Regulations for Working in San Francisco Streets.*[52]

It is anticipated that construction staging would occur primarily on the project building site. It is not anticipated that sidewalks adjacent to the project building site on Sixth Street or Bryant Street would need to be closed during building construction. The sidewalk adjacent to the project building site on Harriet Street would be widened from 4 feet to 7 feet-3 inches, and the sidewalk would be closed, with pedestrian traffic diverted around the construction area, during construction of the sidewalk. Similarly, it is anticipated that the sidewalk adjacent to the project building site on Ahern Way would be closed during a portion of or entire duration of the project construction and pedestrian traffic diverted around or to the north sidewalk on Ahern Way. Construction of the subterranean tunnel underneath Harriet Street would likely require closure of Harriet Street for a portion of the construction period. It is not anticipated that travel lane closures on Sixth or Bryant streets would be required; however, the construction contractor would be required to coordinate with the City regarding any temporary travel lane closures in order to minimize the impacts on traffic. Lane and sidewalk closures or diversions are subject to review and approval by the City's Transportation Advisory Staff Committee (TASC), which consists of representatives from the Fire Department, Police Department, SFMTA Traffic Engineering Division, and DPW.

There are no transit stops adjacent to the project building site, and therefore, project construction would not substantially affect transit routes on Bryant or Sixth streets. In addition, prior to construction, the project contractor would be required to coordinate with Muni's Street Operations and Special Events Office to coordinate construction activities and reduce any impacts to transit operations.

Throughout the construction period, there would be a flow of construction-related trucks into and out of the site. The impact of construction truck traffic would be a temporary lessening of the capacities of local streets due to the slower movement and larger turning radii of trucks, which may temporarily affect traffic operations.

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[51] The San Francisco Noise Control Ordinance (San Francisco Police Code Article 29) permits construction activities seven days a week, between 7:00 a.m. and 8:00 p.m. Available online at https://www.sfdph.org/dph/EH/Noise/default.asp. Accessed March 19, 2015.

[52] *Regulations for Working in San Francisco Streets, 8th Edition*, January 2012. Available online at http://www.sfmta.com/services/streets-sidewalks/construction-regulations. Accessed March 19, 2015.

Construction activities would generate construction worker trips to the building site throughout the construction period, and the additional workers would result in a temporary increase in the number of person and vehicle trips traveling to and from the project site. Construction workers who drive to the site would cause a temporary parking demand, and would likely be accommodated within off-street facilities, as most on-street parking in the project vicinity is time-limited metered parking.

Overall, the proposed project's construction-related transportation impacts would be **less than significant** and no mitigation measures are necessary.

While the proposed project's construction-related transportation impacts would be less than significant, the following improvement measure is recommended for consideration by City decision makers.

Improvement Measure I-TR-3: **Construction Management Plan and Public Updates**

Construction Coordination – To reduce potential conflicts between construction activities and pedestrians, bicyclists, transit and vehicles at the project site, the contractor is required to prepare a Construction Management Plan for the project construction period. The project sponsor/construction contractor(s) is also required to meet with DPW, SFMTA, the Fire Department, Muni Operations and other City agencies to coordinate feasible measures to reduce traffic congestion, and other measures to reduce potential traffic, bicycle, and transit disruption and pedestrian circulation effects during construction of the proposed project. This review considers other ongoing construction in the project area.

Construction Truck Traffic Restrictions – To minimize potential for conflicts between construction truck traffic traveling to and from the project building site, and nearby peak period commute traffic, to the extent feasible, the construction contractor shall limit construction truck trips to and from the project building site, as well as staging or unloading of equipment and materials, to between the hours of 9:00 a.m. and 4:00 p.m. The hours of construction truck restrictions would be determined by the SFMTA.

Carpool, Bicycle, Walk and Transit Access for Construction Workers – In addition to required elements of the Construction Management Plan, to minimize parking demand and vehicle trips associated with construction workers, the construction contractor shall include as part of the Construction Management Plan methods to encourage carpooling, bicycle, walk, and transit access to the project site by construction workers (such as providing transit subsidies to construction workers, providing secure bicycle parking spaces, participating in free-to-employee ride matching program from *www.511.org*, participating in emergency rider home program through the City of San Francisco (*www.sferh.org*), and providing transit information to construction workers).

Project Construction Updates for Adjacent Businesses and Residents – In addition to required elements of the Construction Management Plan, to minimize construction impacts on access to nearby institutions, businesses and residents, the project sponsor, as part of the Construction Management Plan, shall provide nearby residences and adjacent businesses with regularly-updated information regarding project construction, including construction activities, peak construction vehicle activities (e.g., concrete pours), travel lane closures, parking lane and sidewalk closures. For example, a regular email notice could be distributed by the project sponsor that would provide current construction information of interest to neighbors, as well

as contact information for specific construction inquiries or concerns. Similarly, a construction website could be created to provide such construction information.

Implementation of **Improvement Measure I-TR-3** would further reduce the magnitude of the proposed project's less-than-significant construction-related transportation impacts, and would not result in any secondary transportation-related impacts.

Parking Information

Senate Bill 743 amended CEQA by adding Public Resources Code §21099 regarding the analysis of parking impacts for certain urban infill projects in transit priority areas.[53] Public Resources Code §21099(d), effective January 1, 2014, provides that "… parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment." Accordingly, parking is no longer to be considered in determining if a project has the potential to result in significant environmental effects for projects that meet all three criteria established in the statute. The proposed project meets the criteria of an "employment center" in a transit priority area, and thus the transportation impact analysis does not consider the adequacy of parking in determining the significance of project impacts under CEQA. However, the Planning Department acknowledges that parking conditions may be of interest to the public and the decision-makers. Therefore, this section presents parking information for informational purposes and considers any secondary physical impacts associated with constrained supply (e.g., queuing by drivers waiting for scarce on-site parking spaces that affects the public right-of-way) as applicable in the transportation impact analysis.

Neither the proposed RDF nor the reuse of the 480-484 Sixth Street building would include off-street parking spaces, and the 21 existing parking spaces within the McDonald's parking lot would be eliminated. In addition, the proposed reconfiguration of Harriet Street and Ahern Way, subject to SFMTA and DPW review and approval, would eliminate 45 on-street parking spaces on these streets. Specifically, on Harriet Street between Bryant Street and Ahern Way a total of 22 parking spaces would be eliminated from both sides of the street (as noted above, the existing parking restrictions on the east side of the street are not enforced), while on Ahern Way between Sixth and Harriet streets a total of 17 parking spaces would be eliminated from both sides of the street. The ten motorcycle parking spaces on the west side of Harriet Street (near its intersection with Ahern Way) would also be eliminated. In addition, on-street parking would not be permitted adjacent to the proposed RDF on Sixth Street. DPW would request that the curb adjacent to the proposed RDF

[53] A "transit priority area" is defined as an area within one-half mile of an existing or planned major transit stop. A "major transit stop" is defined in California Public Resources Code §21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. A map of San Francisco's Transit Priority Areas is available online at http://sfmea.sfplanning.org/Map%20of%20San%20Francisco%20Transit%20Priority%20Areas.pdf. Accessed March 19, 2015.

on Sixth Street (i.e., the curb between Ahern Way and the existing driveway to McDonald's) be designated either as a red zone, which would eliminate six on-street parking spaces, including one commercial loading space, or restricted to RDF-use only. During field surveys on-street parking spaces on Harriet Street, Ahern Way, and Sixth Street were at or close to 100 percent occupied throughout the day. It is unclear whether the vehicles parked along Harriet Street, Ahern Way or Sixth Street were related to existing HOJ or adjacent commercial and office building activity, some of which would be removed as part of the proposed project. The elimination of the existing driveways into the project building site on Sixth Street and on Bryant Street would add about four on-street parking spaces, resulting in a net reduction of 41 on-street parking spaces.

As discussed above, the proposed project would, overall, result in a net reduction in the number of vehicle trips traveling to and from the project site during the weekday p.m. peak hour (a reduction of about 47 p.m. peak hour vehicle trips) to the project site, and would result in a decrease in the associated parking demand. The net new weekday parking demand associated with the new uses would be 10 spaces for the proposed RDF and 26 for the office/restaurant reuse of 480-484 Sixth Street (see **Table 5** on p. 68). Although not quantified, the proposed project would eliminate parking demand associated with the existing residential and retail uses at the 480-484 Sixth Street building, and the McDonald's restaurant, although the parking demand associated with the McDonald's restaurant is primarily accommodated within its 21-space parking lot. In addition, 45 on-street parking spaces would be eliminated on Harriet Street (22 spaces), Ahern Way (17 spaces), and Sixth Street (6 spaces). HOJ, Sheriff's Department, and SFPD employees who may have utilized this on-street parking could be accommodated in the available off-street parking under the I-80 structure, which extends on both sides of Harriet Street between Sixth and Seventh streets. Visitors or others that utilize the on-street parking on Harriet Street, Ahern Way, and Sixth Street would need to be accommodated elsewhere in the project vicinity, either on street or in other off-street facilities. Access to the off-street surface parking lots under the I-80 structure that are reserved for HOJ, Sheriff's Department, and SFPD use, the surface parking area for the Office of the Chief Medical Examiner, and below-grade parking in the basement level of the HOJ building would be maintained, as vehicles parked in these facilities would be permitted to access the secure sections of Harriet Street and Ahern Way.

Overall, off-street and on-street parking occupancy in the project vicinity could increase due to the proposed elimination of on-street parking spaces. Due to the existing high occupancy of on-street parking, and likely difficulty in finding parking in the study area, some drivers may park outside of the study area, switch to transit, carpool, bicycle or other forms of travel.

Cumulative Impacts

This section discusses the cumulative impacts on transportation that could result from the proposed project, in conjunction with past, present, and reasonably foreseeable future projects. The geographic context for the analysis of cumulative transportation impacts includes the sidewalks

and roadways adjacent to the project site, and the local roadway and transit network in the vicinity of the project site. The discussion of cumulative transportation impacts assesses the degree to which the proposed project would affect the transportation network in conjunction with other reasonably foreseeable projects, including the following:

Central Subway Project.[54] The Central Subway Project is the second phase of the Third Street light rail line (i.e., T Third), which opened in 2007. Construction is currently underway, and the Central Subway will extend the T Third line northward from its current terminus at Fourth and King streets to a surface station south of Bryant Street and go underground at a portal under US 101. From there it will continue north to stations at Moscone Center (i.e., on the west side of Fourth Street between Folsom and Clementina streets), Union Square – where it will provide passenger connections to the Powell Street Station and BART – and in Chinatown, where the line will terminate at Stockton and Clay streets.

Construction associated with utility relocation has been completed. Work is underway on the tunnels contract, which consists of 1.5 miles of twin-bore tunnels underneath Fourth Street and Stockton Street, from I-80 to North Beach. Its major components include construction of the TBM launch box and cross passages; construction of an extraction shaft and portal; and monitoring and protection of existing utilities, buildings, and BART tunnels. Construction of the Central Subway is scheduled to be completed in 2017, and revenue service is scheduled for 2019.

San Francisco Bicycle Plan.[55] The *San Francisco Bicycle Plan* includes planned short-term improvements to Bicycle Route 19 on Fifth Street. Fifth Street improvements include the construction of Class II bicycle lanes and Class III bicycle routes in both directions between Market and Townsend streets. Bicycle Plan improvements on Fifth Street would reduce the number of travel lanes and prohibit northbound and southbound left turns, as well as implement other minor changes to lane geometry and on-street parking.

Transit Effectiveness Project.[56] The Transit Effectiveness Project (TEP), part of Muni Forward, presents a thorough review of San Francisco's public transit system, initiated by SFMTA in collaboration with the City Controller's Office. The TEP is aimed at improving reliability, reducing travel times, providing more frequent service and updating Muni bus routes and rail lines to better match current travel patterns. The Planning Department published a Draft EIR for the TEP Implementation Strategy in July 2013; the Final EIR was certified by the Planning Commission on March 27, 2014. The SFMTA Board of Directors approved the TEP on March 28, 2014. The TEP components will be implemented based on funding and resource availability, and it is anticipated that the first group of service improvements will be implemented in Fiscal Year 2015 and the second group in a subsequent phase. TEP recommendations include new routes and route realignments, increased service frequency and speed on busy routes, and elimination or consolidation of certain routes or route segments with low ridership. The following changes are proposed by the TEP for routes in the vicinity of the project site.

[54] SFMTA Central Subway. Available online at http://www.centralsubwaysf.com/content/project-overview. Accessed April 7, 2015.

[55] SFMTA Bicycle Plan. Available online at http://www.sfmta.com/projects-planning/projects/2009-san-francisco-bicycle-plan. Accessed April 7, 2015.

[56] SFMTA Transit Effectiveness Project (TEP). Available online at http://www.sfmta.com/projects-planning/projects/tep-transit-effectiveness-project. Accessed April 7, 2015.

- The 8AX/BX Bayshore Expresses frequencies will increase during the peak periods. Route segment north of Broadway would be eliminated, and segments south of 16th Street would be rerouted.
- A new 11 Downtown Connector will serve SoMa and North Beach, and would run on Harrison and Folsom streets.
- The 12 Folsom-Pacific will be discontinued.
- The 14X Mission Express will have increased service frequency during the peak periods.
- The 19 Polk will run from Seventh and McAllister streets to Polk Street, and from Polk, McAllister, to Hyde Street. With these changes, the 19 Polk will no longer run on Market Street (between Seventh and Ninth streets), Larkin, Eddy or Hyde (between Eddy and McAllister) streets, or on Geary Boulevard (between Larkin and Polk streets).
- A new 27 Folsom line will circulate around downtown, replacing the 12 Folsom in SoMa, and also connecting North Beach with the Montgomery BART/Muni station. Service on Bryant Street will be discontinued.
- The 47 Van Ness route will be realigned. The route will terminate at Van Ness Avenue and North Point Street and will share a terminal with the 49L Van Ness-Mission Limited. A common terminal for both routes serving Van Ness Avenue would improve reliability by allowing line management from a single point; the North Point segment will be covered by new Route 11 Downtown Connector. The midday frequency will change from 10 to 9 minutes, and the proposed route change will coordinate with planned Van Ness BRT project.

Central SoMa Plan.[57] The *Central SoMa Plan* is being developed and analyzed by the San Francisco Planning Department to formalize an integrated community vision for the southern portion of the Central Subway rail corridor. This area is located generally between Townsend and Market streets along Fourth Street, between Second and Sixth streets. The plan's goal is to integrate transportation and land uses by implementing changes to the allowed land uses and building heights. The plan also includes a strategy for improving the pedestrian experience in this area. The following street network changes are proposed for Harrison and Bryant streets in the vicinity of the project site:

- Bryant Street would be modified between Second and Seventh streets. Between Seventh and Sixth streets, Bryant Street would have four eastbound travel lanes, one eastbound transit-only lane, and parallel parking along the north and south curbs at all times. Sidewalks would remain 8 feet wide.
- Harrison Street would be modified between Second and 11th streets. Currently this section of Harrison Street is configured with five travel lanes in the westbound direction, parallel parking along both the north and south curbs, and 8-foot wide sidewalks. The *Central SoMa Plan* would reconfigure Harrison Street to include a transit-only lane for the 8X Bayshore, and sidewalks would be widened within the Plan area between Sixth and Second streets. The length of the transit-only lane would vary between the Howard/Folsom One-way and Two-way options. Under the

[57] City and County of San Francisco Planning Department, *Central SoMa Plan*. Available online at http://www.sf-planning.org/index.aspx?page=2557. Accessed April 7, 2015.

Howard/Folsom Two-way Option, Harrison Street between Seventh and Tenth streets would have angled parking and fewer travel lanes. This is elaborated below.

Howard/Folsom One-way Option: Between Sixth and Tenth streets, Harrison Street would have four westbound travel lanes, one westbound transit-only lane, and parallel parking along the north and south curbs at all times. Sidewalks would remain 8 feet wide. At Seventh Street, there would be a transit-only signal phase that would enable the outbound 8X Bayshore bus to turn left onto the southbound US 101 freeway on-ramp from the right lane.

Howard/Folsom Two-way Option: Between Sixth and Seventh streets, Harrison Street would have four westbound travel lanes, one westbound transit-only lane, and parallel parking along the north and south curbs at all times. Sidewalks would remain 8 feet wide. At Seventh Street, there would be a transit-only signal phase that would enable the outbound 8X Bayshore bus to turn left onto the southbound US 101 freeway on-ramp from the right lane.

Cumulative Traffic Impacts

Impact C-TR-1: The proposed project in combination with past, present and reasonably foreseeable future development would not contribute considerably to significant cumulative traffic impacts. (*Less than Significant*)

Future 2040 Cumulative traffic conditions for the intersections in the project vicinity were obtained from the transportation impact analysis being conducted for the *Central SoMa Plan Transportation Impact Study*. The traffic volumes used in the analysis were estimated based on cumulative development and growth identified by the San Francisco County Transportation Authority (SFCTA) SF-CHAMP travel demand model, using model output that represents Existing conditions and model output for 2040 Cumulative conditions. The 2040 Cumulative conditions assume implementation of the Central SoMa Plan Howard/Folsom One-way Option, where both streets would retain a one-way configuration (except Folsom Street east of Second Street which would retain its existing two-way operation).

Table 6: Intersection LOS – Existing and 2040 Cumulative Conditions - Weekday P.M. Peak Hour presents the 2040 Cumulative intersection operating conditions for the weekday p.m. peak hour for the four signalized intersections adjacent to the project block. Under 2040 Cumulative conditions, three of the four intersections would operate at LOS E or LOS F conditions. As noted in **Impact TR-1**, the proposed project would result in a net decrease in the number of vehicle trips traveling to and from the project site; thus it would not contribute to the poor operating conditions at these three intersections. Therefore, the proposed project would not contribute considerably to significant cumulative impacts at these intersections.

As described above, as part of the proposed project, portions of Harriet Street and Ahern Way would be reconfigured to accommodate designated, secure service and jail transport areas constructed as part of the proposed RDF, subject to SFMTA and DPW review and approval. Harriet Street between Bryant Street and Ahern Way, and Ahern Way between Sixth and Harriet streets

Table 6: Intersection LOS – Existing and 2040 Cumulative Conditions - Weekday P.M. Peak Hour

Intersection		Existing Conditions		2040 Cumulative Conditions	
		Average Vehicle Delay [a]	LOS	Average Vehicle Delay [a]	LOS
1.	Harrison Street/Sixth Street [b]	31.6	C	**66.5**	**E**
2.	Harrison Street/Seventh Street [c]	30.2	C	**67.1**	**E**
3.	Bryant Street/Sixth Street [b]	**>80**	**F**	**>80**	**F**
4.	Bryant Street/Seventh Street [c]	18.7	B	39.5	D

Notes:
[a] Delay is presented in seconds per vehicle.
[b] Traffic counts conducted in September 2012.
[c] Traffic counts conducted in September 2009.
Source: LCW Consulting (LOS analysis taken from Central SoMa Plan Transportation Impact Study, October 2014.

would be closed to through traffic in both directions, and only HOJ and RDF-related official service vehicles, scheduled delivery and service vehicles, and emergency response vehicles would be allowed access. Non-HOJ related drivers on the portions of Harriet Street and Ahern Way that would be restricted would need to divert to other streets. Given the limited amount of traffic that utilizes Ahern Way and Harriet Street, this level of traffic diversion to other nearby streets would not substantially affect cumulative traffic conditions in the project vicinity.

For the above reasons, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in less-than-significant cumulative traffic impacts and no mitigation is necessary.

Cumulative Transit Impacts

Impact C-TR-2: The proposed project in combination with past, present and reasonably foreseeable development would not contribute to significant cumulative transit impacts on local or regional transit capacity. (*Less than Significant*)

Future year 2040 Cumulative transit conditions were utilized to assess the cumulative effects of a proposed project and other development that would occur though the year 2040. Consistent with San Francisco Planning Department guidance the impact assessment is conducted for the San Francisco downtown and regional screenlines.[58] The 2040 Cumulative transit screenline analysis accounts for ridership and/or capacity changes associated with the TEP and the Central Subway Project (which is scheduled to open in 2019), among other transit projects. The 2040 Cumulative transit screenlines were developed in coordination with SFMTA based on the SFCTA travel demand model analysis. Forecasted future hourly ridership demand was then compared to expected hourly capacity, as determined by the likely route and headway changes identified in the TEP to estimate capacity utilization under 2040 Cumulative conditions. As noted above, the year 2040

[58] Planning Department Transportation Team, *Regional & Local 2014 Cumulative Transit Screenlines for Transportation Impact Studies*, Memo to Planning Department Transportation Consultants, March 10, 2014. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

Cumulative analysis assumes changes to the capacity of the lines as identified by route changes and headway changes indicated within the recommended TEP and other transit improvement projects (such as the Van Ness Avenue Bus Rapid Transit Project).

Under 2040 Cumulative conditions during the weekday p.m. peak hour, the Northwest screenline is projected to operate at 87 percent capacity utilization, which would be above the SFMTA's 85 percent capacity utilization standard. All other screenlines would operate below the 85 percent capacity utilization standard. Five transit corridors within the San Francisco downtown screenlines, specifically the California, Sutter/Clement and Fulton/Hayes corridors within the Northwest screenline, and the Mission and San Bruno/Bayshore corridors within the Southeast screenline, would exceed the 85 percent capacity utilization standard during the weekday p.m. peak hour. The proposed project would generate 28 net new transit trips during the weekday p.m. peak hour that would be distributed to both local and regional transit lines in both the peak and non-peak directions.[59] This level of contribution of transit trips would not substantially change the transit operating conditions for local transit lines, even those operating above SFMTA's 85 percent capacity utilization standard. Therefore, the proposed project would result in a less-than-significant contribution to 2040 Cumulative transit conditions, including to the Northwest and Southeast screenlines and corridors within these screenlines.

For the regional screenlines, all regional transit service providers are projected to operate below the capacity utilization standard of 100 percent during the weekday p.m. peak hour.[60] As discussed above, the project would generate 28 net new transit trips to be distributed to both local and regional transit lines during the weekday p.m. peak hour. This level of transit trips would not substantially affect cumulative ridership on regional transit service. Therefore, the cumulative impacts to regional transit would be less than significant and no mitigation is necessary.

Overall, for the above reasons, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in **less-than-significant** cumulative transit impacts.

Cumulative Pedestrian Impacts

Impact C-TR-3: The proposed project in combination with past, present and reasonably foreseeable future development in the project vicinity would not contribute considerably to any significant cumulative pedestrian impacts. (*Less than Significant*)

[59] During the weekday p.m. peak period the peak direction for transit routes is in the outbound direction from downtown San Francisco, and in the weekday a.m. peak period it is in the inbound direction towards downtown San Francisco.

[60] Planning Department Transportation Team, *Regional & Local 2014 Cumulative Transit Screenlines for Transportation Impact Studies*, Memo to Planning Department Transportation Consultants, March 10, 2014. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

Pedestrian circulation impacts by their nature are site-specific and generally do not contribute to impacts from other development projects. The proposed project would not result in overcrowding of sidewalks or create new potentially hazardous conditions for pedestrians under existing or cumulative conditions. Overall, the proposed project would likely reduce the amount of pedestrian and vehicle traffic travelling on Harriet Street and Ahern Way, potentially discouraging or limiting it to HOJ and RDF-related travel. Instead, the proposed project would add pedestrians to Bryant and Sixth streets. Project-related increases in pedestrians on Bryant, Sixth, and other nearby streets would not substantially affect the pedestrian conditions on these streets, or contribute substantially to cumulative conditions in the project vicinity. Walk trips may increase between the completion of the proposed project and the 2040 Cumulative conditions due to development in the area, although not to the level that would induce overcrowding of sidewalks under the cumulative conditions. Furthermore, as part of the *Central SoMa Plan*, the sidewalks on Bryant Street would be widened between Second and Sixth streets from 8 feet to 15 feet (and would remain 12 feet west of Sixth Street).

For the above reasons, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in **less-than-significant** cumulative pedestrian impacts and no mitigation is necessary.

Cumulative Bicycle Impacts

Impact C-TR-4: The proposed project in combination with past, present and reasonably foreseeable future development in the project vicinity would not contribute considerably to any significant cumulative bicycle impacts. (*Less than Significant*)

The proposed project would not contribute considerably to cumulative bicycle circulation conditions in the area, although some of the project travel demand would occur by bicycle. Bicycling trips in the area may increase between the completion of the proposed project and the cumulative scenario due to general growth in the area. As noted above, under 2040 Cumulative conditions, there is a projected increase in vehicles at intersections in the vicinity of the proposed project, which may result in an increase in vehicle-bicycle conflicts at intersections and driveways in the study area. While there would be a general increase in vehicle traffic that is expected through the future 2040 Cumulative conditions, the proposed project would not result in an increase in vehicle trips and therefore would not contribute to any potentially hazardous conditions for bicycles, or otherwise interfere with bicycle accessibility to the site and adjoining areas. Therefore, for the above reasons, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in **less-than-significant** cumulative impacts on bicyclists and no mitigation is necessary.

Cumulative Loading Impacts

Impact C-TR-5: The proposed project in combination with past, present and reasonably foreseeable future development in the project vicinity would not contribute considerably to any significant cumulative loading impacts. (*Less than Significant*)

Loading impacts, like pedestrian impacts, are by their nature localized and site-specific, and would not contribute to impacts from other development projects near the project building site. Moreover, the proposed project would not result in loading impacts, as the estimated loading demand would be met on site within the secure areas on the project building site – a loading area on Harriet Street and a secure jail transport area (sally port) on Ahern Way – or on street on Sixth Street. As part of the proposed project, Harriet Street between Bryant Street and Ahern Way, and Ahern Way between Sixth and Harriet streets would be closed to non-HOJ and RDF-related traffic. Because scheduled service and deliveries and HOJ and RDF-related official service vehicles (e.g., ambulances, inmate transfer vehicles) would be permitted, access to the existing HOJ building services area, surface parking and ambulance loading area, below-grade parking driveways, and the driveway to the secure jail transport/sally port for CJ#1 and CJ#2 off Harriet Street, would be maintained. In addition, **Improvement Measure I-TR-2: On-Street Commercial Loading Spaces** would further reduce the proposed project's less-than-significant impacts related to loading by ensuring that on-street commercial loading spaces are provided on Sixth Street. Therefore, for the above reasons, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in **less-than-significant** cumulative loading impacts and no mitigation is necessary.

Cumulative Emergency Vehicle Access Impacts

Impact C-TR-6: The proposed project in combination with past, present and reasonably foreseeable future development in the project vicinity would not contribute considerably to any significant cumulative emergency vehicle access impacts. (*Less than Significant*)

The proposed project would not substantially affect cumulative emergency vehicle access conditions in the area. With implementation of the proposed project, emergency vehicle access to the project site would be maintained via Sixth and Bryant streets. Emergency vehicles would be permitted access to Harriet Street and Ahern Way. Therefore, for the above reasons, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in **less-than-significant** cumulative emergency vehicle access impacts and no mitigation is necessary.

Cumulative Construction Impacts

Impact C-TR-7: The proposed project in combination with past, present and reasonably foreseeable future development in the project vicinity would not contribute considerably to any significant cumulative construction-related transportation impacts. (*Less than Significant*)

The construction of the proposed project may overlap with construction of other projects that are under construction, approved, or for which the Planning Department has an Environmental Evaluation Application on file, including 350 Eighth Street (under construction), 345 Sixth Street, 363 Sixth Street, 377 Sixth Street, 280 Seventh Street, 598 Brannan Street, 190 Russ Street, and 510-520 Townsend Street, as well as other development projects proposed under the *Western SoMa Community Plan* and *Central SoMa Plan*. Construction activities associated with these projects would cumulatively affect access, traffic, and pedestrians on streets used as access routes to and from the project sites (e.g., Bryant Street, I-80 off-ramp and on-ramps). The cumulative impacts of multiple nearby construction projects would, although potentially disruptive to local traffic, not be cumulatively considerable, as construction periods would be of temporary duration, and the proposed project's construction contractor would be required to coordinate with various City departments such as SFMTA and DPW through the TASC to develop construction management plans that would address construction-related vehicle routing and pedestrian movements adjacent to the construction area for the duration of construction period. In addition, **Improvement Measure I-TR-3: Construction Management Plan and Public Updates**, would further reduce the proposed project's less-than-significant impacts related to potential conflicts between construction activities and pedestrians, transit, and autos, including construction truck traffic management, project construction updates for adjacent businesses and residents, and carpool and transit access for construction workers. Therefore, for the above reasons, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in less-than-significant cumulative construction-related transportation impacts and no mitigation is necessary.

Cumulative Parking Conditions

Senate Bill 743 amended CEQA by adding Public Resources Code §21099 directing that parking impacts for urban infill projects in transit priority areas shall not parking as a significant impact on the environment. Therefore, the transportation impact analysis does not consider parking as a potential impact under CEQA, and the following is provided for informational purposes. Considering cumulative parking conditions, over time, due to the land use development and increased density anticipated within the City, parking demand and competition for on- and off-street parking is likely to increase. Consistent with the City's Transit First Policy, the City's *Better Streets Plan* and related projects, the proposed project would not provide on-site parking spaces. In addition, the 21 parking spaces within the existing McDonald's parking lot would be eliminated,

as would the demand associated with this use and other uses on the project building site that would be eliminated. On Harriet Street, Ahern Way, and Sixth Street, on-street parking on one side (i.e., on Sixth Street) or both sides of the street (i.e., on Harriet Street and Ahern Way) would be prohibited, subject to SFMTA and DPW review and approval, while up to four additional parking spaces could be provided by eliminating the existing driveways into the project building site on Bryant and Sixth streets, resulting in a net reduction of 41 on-street parking spaces. In addition, 10 motorcycle parking spaces on the west side of Harriet Street (near its intersection with Ahern Way) would be eliminated. As under existing conditions, the net new project parking demand, and the demand associated with the parking spaces that would be eliminated, would need to be accommodated on-street or within nearby off-street facilities, and area-wide parking occupancy would increase further. Under cumulative conditions, as under existing conditions, due to the difficulty in finding on-street parking in the study area, some drivers may park outside of the study area, switch to transit, car-sharing, carpooling, walking, or bicycling.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
5. NOISE—Would the project:					
a) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐	☐
b) Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐	☐
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	☐
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐	☐
e) For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?	☐	☐	☐	☐	☒
f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☐	☒
g) Be substantially affected by existing noise levels?	☐	☒	☐	☐	☐

The project site is not located within an airport land use plan area or within two miles of a public use airport, nor is it within the vicinity of a private airstrip. Therefore, the proposed project would not expose people residing or working in the area to excessive aviation-related noise levels, and Topics E.5(e) and E.5(f) are not applicable to the proposed project.

SETTING

Sound Fundamentals

Sound is characterized by various parameters that describe the rate of oscillation (frequency) of sound waves, the distance between successive troughs or crests in the wave, the speed that it travels, and the pressure level or energy content of a given sound. The sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound, and the decibel (dB) scale is used to quantify sound intensity. Because sound can vary in intensity by over one million times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, human response is factored into sound descriptions in a process called "A-weighting," expressed as "dBA." The dBA, or A-weighted decibel, refers to a scale of noise measurement that approximates the range of sensitivity of the human ear to sounds of different frequencies. On this scale, the normal range of human hearing extends from about 0 dBA to about 140 dBA. Except in carefully controlled laboratory experiments, a change of only 1 dBA in sound level cannot be perceived. Outside of the laboratory, a 3 dBA change is considered a perceptible difference. A 10 dBA increase in the level of a continuous noise represents a perceived doubling of loudness.

Noise Descriptors

Noise is generally defined as sound that is loud, disagreeable, unexpected, or unwanted. Sound is mechanical energy transmitted in the form of a wave by a disturbance or vibration that causes pressure variation in air the human ear can detect. Variations in noise exposure over time are typically expressed in terms of a steady-state energy level (called Leq) that represents the acoustical energy of a given measurement, or alternatively as a statistical description of what sound level is exceeded over some fraction (10, 50 or 90 percent) of a given observation period (i.e., L_{10}, L_{50}, L_{90}). Leq (24) is the steady-state acoustical energy level measured over a 24-hour period. Lmax is the maximum, instantaneous noise level registered during a measurement period. Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dBA increment be added to evening and nighttime noise levels to form a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL). CNEL adds a 5 dBA penalty during the evening (7 p.m. to 10 p.m.) and a 10 dBA penalty at night (10 p.m. to 7 a.m.). Another 24-hour noise descriptor, called the day-night noise level (Ldn), is similar to CNEL. Both CNEL and Ldn add a 10 dBA penalty to all

nighttime noise levels between 10 p.m. and 7 a.m., but Ldn does not add the evening 5 dBA penalty between 7 p.m. and 10 p.m. In practice, Ldn and CNEL usually differ by less than 1 dBA at any given location for transportation noise sources. **Table 7: Representative Environmental Noise Levels** presents representative noise sources and their corresponding noise levels in dBA at varying distances from the noise sources.

Table 7: Representative Environmental Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Fly-over at 100 feet		
	100	
Gas Lawnmower at 3 feet		
	90	
Diesel Truck going 50 mph at 50 feet		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noise Urban Area during Daytime		
Gas Lawnmower at 100 feet	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal Speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Area during Daytime	50	Dishwasher in Next Room
		Theater, Large Conference Room
Quiet Urban Area during Nighttime	40	(background)
Quiet Suburban Area during Nighttime		
	30	Library
		Bedroom at Night, Concert Hall
Quiet Rural Area during Nighttime		(background)
	20	
		Broadcast/Recording Studio
	10	
	0	

Source: California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Attenuation of Noise

A receptor's distance from a noise source affects how noise levels attenuate (decrease). Transportation noise sources tend to be arranged linearly, such that roadway traffic attenuates at a rate of 3.0 dBA to 4.5 dBA per doubling of distance from the source; on the other hand, point sources of noise, including stationary, fixed, and idle mobile sources, like idling vehicles or construction equipment, typically attenuate at a rate of 6.0 dBA to 7.5 dBA per doubling of distance

from the source.[61] Noise levels can also be attenuated by "shielding" or providing a barrier between the source and the receptor.

Vibration and Groundborne Noise

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Vibration is typically measured by peak particle velocity (PPV) in inches per second (in/sec). With the exception of long-term occupational exposure, vibration levels rarely affect human health. Instead, most people consider vibration to be an annoyance that can affect concentration or disturb sleep. People may tolerate infrequent, short duration vibration levels, but human annoyance to vibration becomes more pronounced if the vibration is continuous or occurs frequently. High levels of vibration can damage fragile buildings or interfere with sensitive equipment. According to the Federal Transit Administration, if groundborne vibration exceeds 0.5 in/sec PPV, it could cause cosmetic damage to a structure.[62]

Typical sources of groundborne vibration in San Francisco are large-scale construction projects that involve pile driving or underground tunneling, and Muni Metro's light rail vehicles and historic streetcars. Vibration is also caused by transit vehicles in the subway system under Market Street, including Muni Metro light rail vehicles and Bay Area Rapid Transit (BART) trains. Because rubber tires provide vibration isolation, rubber tire vehicles, such as Muni buses, trucks, and automobiles, rarely create substantial groundborne vibration effects unless there is a discontinuity or bump in the road that causes the vibration.[63]

Existing Conditions

Ambient Noise Levels

The project site is bounded by the existing County Jail Facilities in the 425 Seventh Street building (CJ#1 and CJ#2) and the I-80 freeway on the north, Seventh Street on the west, Sixth Street on the east, and Bryant Street on the south (see **Figure 3** on p. 6). The project site block is bisected by Harriet Street to form the HOJ site (the western portion of the project site) and the project building

[61] The additional 1.5 dBA of attenuation is from ground-effect attenuation that occurs above soft absorptive ground (such as normal earth and most ground with vegetation). Over hard ground (such as concrete, stone, and very hard-packed earth) these effects do not occur. (U.S. Housing and Urban Development, *The Noise Guidebook*, 1985, p. 24.)

[62] Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment, DTA-VA-90-1003-06*, May 2006, p. 12-9. Available online at http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf. Accessed February 27, 2015.

[63] FTA, *Transit Noise and Vibration Impact Assessment, DTA-VA-90-1003-06*, May 2006, p. 7-9. Available online at http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf. Accessed February 27, 2015.

site (the eastern portion of the project site). Harriet Street provides vehicular access to the at-grade HOJ building services area, the at-grade surface parking/ambulance loading area for the Office of the Chief Medical Examiner, and sub-surface parking in the HOJ's below-grade basement level (at the northeast corner of the HOJ building and Ahern Way). The project site is located in an urban area where the sound of vehicular traffic (autos, trucks, buses) on the I-80 freeway and adjacent streets dominates the existing ambient noise environment.

The San Francisco Department of Public Health (DPH) has mapped background noise levels throughout the City. The San Francisco DPH Background Noise Levels – 2009 map is based on both a citywide modeling of traffic volumes and on a sample of sound level readings.[64] The map presents background noise levels between a range of 50-55 dBA (Ldn) on the low end to over 70 dBA (Ldn) on the high end. Based on the DPH map, noise levels immediately adjacent to project site frontages (Sixth, Harriet, Bryant, and Seventh) exceed 70 dBA (L_{dn}). Consistent with this mapping, the daytime noise level adjacent to Sixth Street was measured to be 70 dBA (L_{eq}) at 40 feet from the centerline,[65] which indicates that the 24-hour L_{dn} noise level would be above 70 dBA.

Groundborne Vibration

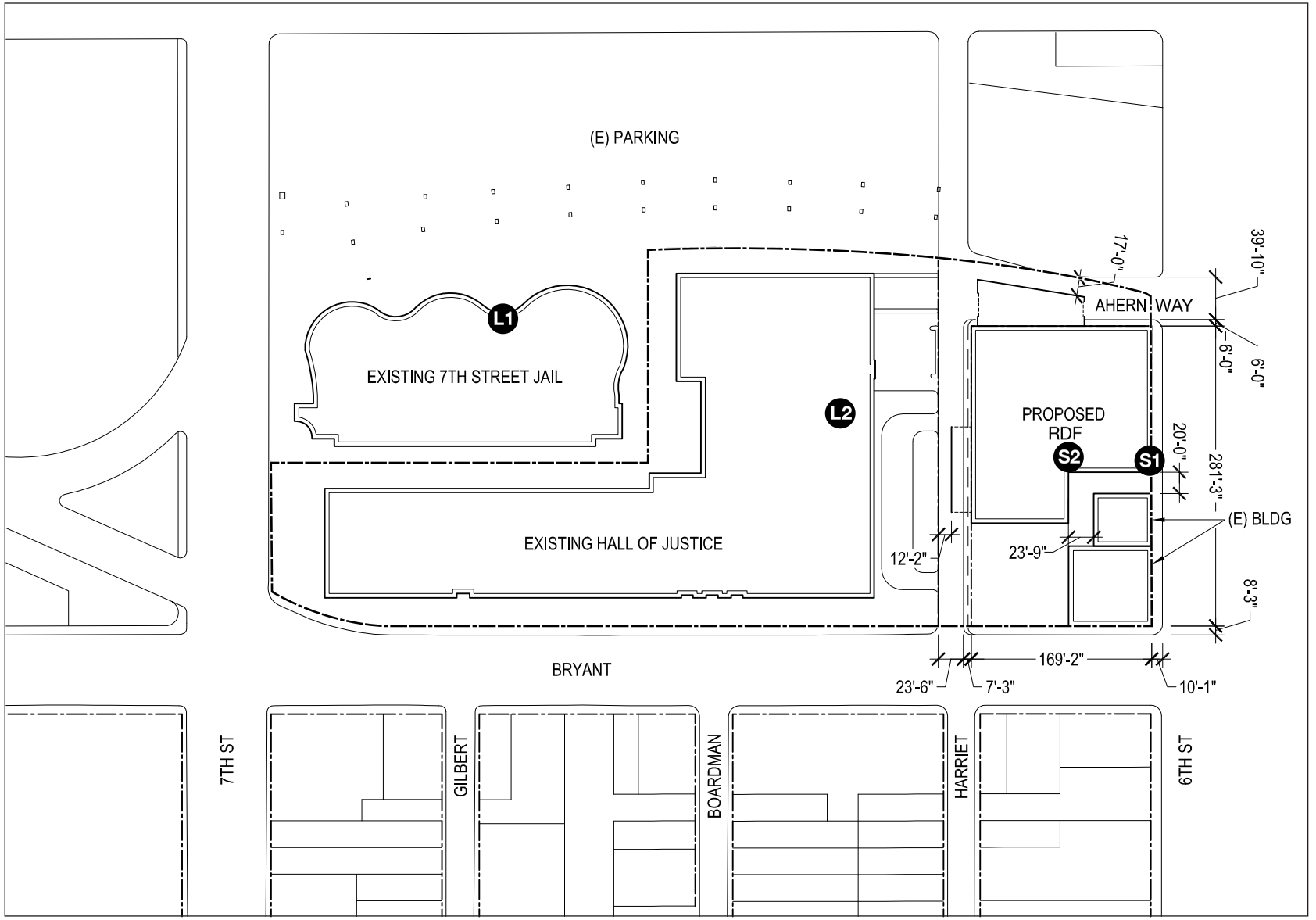
There are no known sources of existing groundborne vibration in the vicinity of the project site.

Ambient Noise Measurements

Noise measurements were collected at the project site (and its immediate vicinity) to characterize the existing noise environment (see Appendix E of this PMND). Two long-term site-specific noise measurements were collected for a 48-hour period from Tuesday, September 16, 2014 to Thursday, September 18, 2014. Measurement #1 was taken on the roof of the CJ#1/CJ#2 building at 134 feet from the freeway centerline, while Measurement #2 was taken on the roof of the Hall of Justice (where CJ#3 and CJ#4 are located) at 228 feet from the freeway centerline. Measurement locations #1 and #2 were five and seven floors above street level, respectively. Measurement locations are indicated on **Figure 16: Noise Measurement Locations**. These measurements indicate that existing noise levels (at or above the freeway elevation) range from 77 to 79 dBA (L_{dn}) at 228 feet and 134 feet from the freeway centerline, respectively. The I-80 freeway is elevated in the site

[64] San Francisco Planning Department, *San Francisco General Plan, Environmental Protection Element, Map 1: Background Noise Levels – 2009*. Available online at http://www.sf-planning.org/ftp/general_plan/images/I6.environmental/ENV_Map1_Background_Noise%20Levels.pdf. Accessed February 22, 2015.

[65] This 15-minute short-term noise measurement (S1) was taken mid-day on September 15, 2014.



SOURCE: Mark Cavagnero Associates + Cary Bernstein Architect JV; Turnstone Consulting/SWCA

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Case No. 2014.0198E

FIGURE 16: NOISE MEASUREMENT LOCATIONS

vicinity (approximately 35 feet high) so that freeway noise levels are lower at street level (about 5 to 6 dB less) than on upper floors.[66]

Existing Sensitive Receptors

Some land uses (and associated users) are considered more sensitive to ambient noise levels than others due to the types of activities typically involved with the land use and the amount of noise exposure (in terms of both exposure duration and insulation from noise). In general, occupants of residences, schools, daycare centers, hospitals, places of worship, and nursing homes are considered to be sensitive receptors (i.e., persons who are sensitive to noise based on their specific activities, age, health, etc.). Land uses in the vicinity of the project site include institutional, office, commercial, industrial, and residential uses. These are described in further detail in Section B, Project Setting, on pp. 21-24. On the project building site, there is an SRO residential building located at 480-484 Sixth Street along the eastern project building site boundary. On the HOJ site, these are existing inmates located in CJ#3 and CJ#4 on the 6th and 7th floors of the HOJ building (see **Table 8: Noise Sensitive Receptors on and in the Vicinity of the Project Site**. Off-site noise-sensitive receptors in the project vicinity include the existing inmates located in CJ#1 and CJ#2 along the north boundary of the HOJ site, residences, a pre-K to 5th grade public school, and a church. There are no daycare facilities, hospitals, skilled nursing facilities, or public libraries in the project vicinity.

Table 8: Noise Sensitive Receptors on and in the Vicinity of the Project Site

Type of Sensitive Receptor	Address	Direction from Site
Sensitive Receptors on the Project Site		
Residential	CJ#3 and CJ#4	6th and 7th floors of HOJ
Residential	480-484 Sixth Street	East of HOJ
Sensitive Receptors in Immediate Vicinity of the Project Site		
Residential	CJ#1 and CJ#2	North of HOJ
Sensitive Receptors 170 Feet or More from Project Site		
Residential	318-320 Harriet Street	South across Bryant Street
Residential	516 Sixth Street	South across Bryant Street
Residential	17-19 Boardman Place	South across Bryant Street
Residential	52 Gilbert Street	South across Bryant Street
Residential	128 Morris Street	Southeast across Bryant Street
Church	345 7th Street	approximately 600 feet north (across I-80 freeway)
Bessie Carmichael Elementary School	45 Cleveland Street	approximately 470 feet north (across I-80 freeway)

Source: Orion Environmental Associates, 2015

[66] Noise measurements collected on-site from 9/16/14 to 9/18/14 indicate that daytime (mid-day) noise levels on the roof of the HOJ building were approximately 72 dBA (Leq) at approximately 240 feet from the freeway centerline, while a short-term measurement (S2), taken at the site at street level (see **Figure 16: Noise Measurement Locations**), indicated that the noise level was 66 dBA (Leq) at approximately 270 feet from the freeway centerline.

The Environmental Protection Element of the *San Francisco General Plan* contains Land Use Compatibility Guidelines for Community Noise for determining the compatibility of various land uses with different noise levels (see **Figure 17: San Francisco Land Use Compatibility Chart for Community Noise**). These guidelines, which are similar to state guidelines set forth by the Governor's Office of Planning and Research, indicate maximum acceptable noise levels for various land uses. For residential land uses, the maximum satisfactory exterior noise level without incorporating noise insulation features into a project is 60 dBA (L_{dn}). Where existing noise levels exceed 65 dBA (L_{dn}), residential development is generally discouraged. Where exterior noise levels exceed 60 dBA (L_{dn}), new residential development must demonstrate, through the preparation of a detailed noise analysis, how the interior noise standard of 45 dBA (L_{dn}) would be met. Interior noise levels in new development can be reduced through the use of noise insulating windows and by using sound insulation materials in walls and ceilings.

IMPACTS

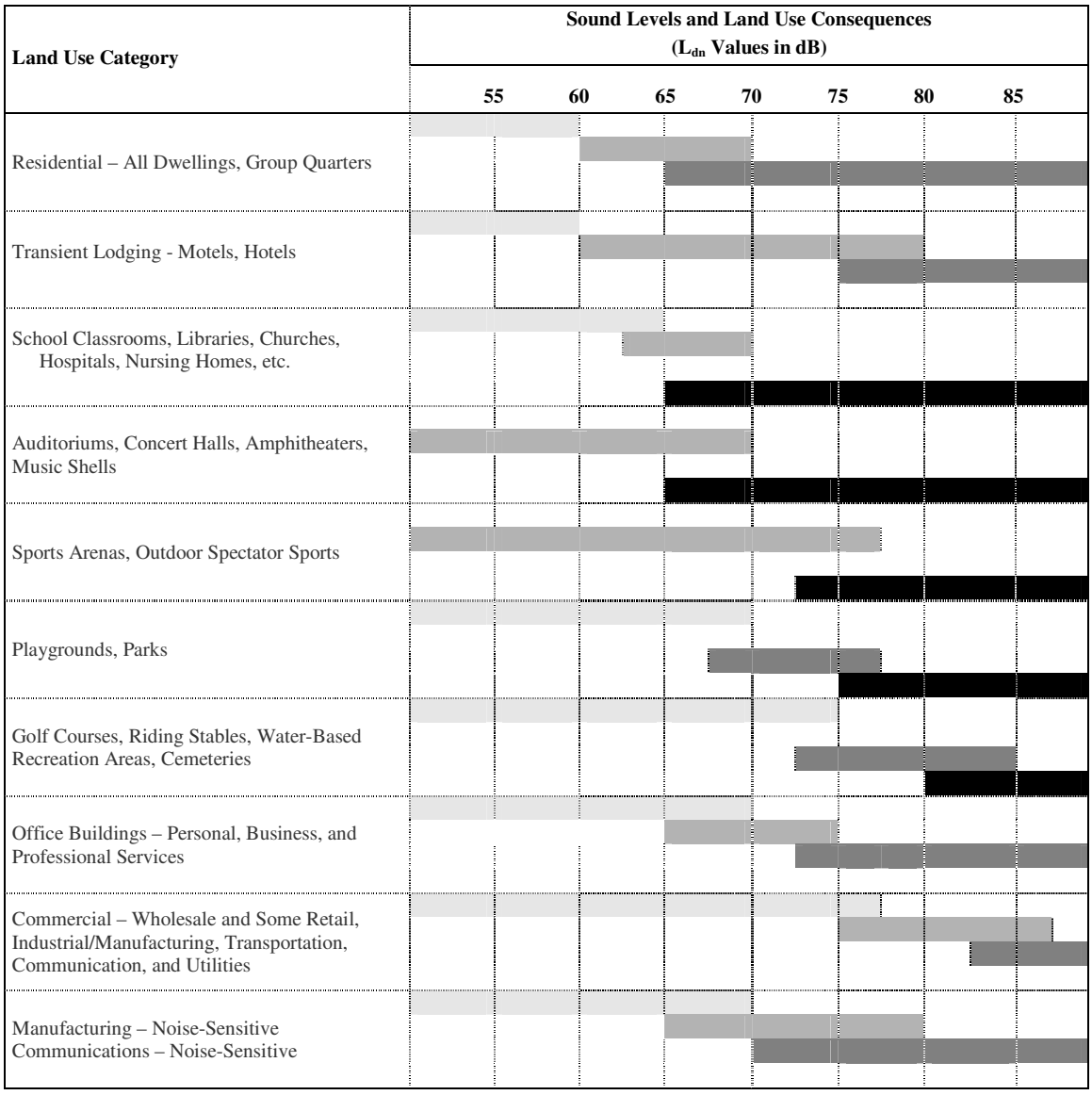
Impact NO-1: The proposed project would not result in a substantial permanent increase in ambient noise or vibration levels nor would it permanently expose persons to noise levels in excess of standards in the San Francisco General Plan and Noise Ordinance (Article 29 of the Police Code) ***(Less than Significant)***

Noise

The western portion of the project site is developed with the Hall of Justice (HOJ) building (850 Bryant Street, eight stories high) including CJ#3 and CJ#4 on the 6th and 7th floors of the HOJ building. The CJ#1/CJ#2 building (425 Seventh Street, five stories high) is located north of the HOJ site. Off-street parking areas are located on the north side of the CJ#1/CJ#2 building under the I-80 freeway structure, and east of the HOJ building.

The project building site is fully developed, with five existing buildings that range from one to three stories tall and two paved vacant lots, and areas of surface parking and driveways serving some of these buildings. These buildings are currently occupied with commercial uses (450 Sixth Street, one story tall, and 444 Sixth Street, one story tall), 14 SRO residences with ground floor retail space (480-484 Sixth Street, three stories tall), office uses (800-804 Bryant Street, three stories tall), and a McDonald's restaurant (820 Bryant Street, one story tall). Project implementation would remove the three one-story commercial buildings and replace them with the proposed five-story rehabilitation and detention facility (RDF). The three-story SRO residential building and the three-story office building would be retained. While not part of the proposed project, the SRO residences could eventually be converted to less noise-sensitive office uses.

Figure 17: San Francisco Land Use Compatibility Chart for Community Noise



Satisfactory, with no special noise insulation requirements.

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

New construction or development should generally not be undertaken.

Source: San Francisco Planning Department, 1996. *San Francisco General Plan*, adopted on June 27, 1996. Available online at: http://www.sf-planning.org/ftp/General_Plan/I6_Environmental_Protection.htm#ENV_TRA_11. Accessed March 12, 2015.

The ambient noise environment at the project site and its vicinity is dominated by traffic-related noise from the I-80 freeway facility. Existing on-site uses contribute minimally to the ambient noise levels at the project site because all on-site activities occur within the interiors of on-site buildings except for off-street parking. Also, there is an emergency generator on the roof of the CJ#1/CJ#2 building (BAAQMD Site 17675) and a boiler on the roof of the HOJ building (BAAQMD Site 934). Since these two buildings are the tallest in the project site vicinity, noise generated by this rooftop equipment does not influence the ambient noise environment in surrounding areas where buildings are lower, at one to three stories tall. Although many buildings in the site vicinity have rooftop ventilation equipment, there are no other rooftop emergency generators in the site vicinity.[67]

Since project implementation would result in an overall decrease in traffic generated at the project site, traffic on local streets associated with operation of the proposed RDF would also proportionately decrease (see **Table 3** on p. 66, in Section E.4, Transportation and Circulation). Project implementation, however, could result in minor changes in the distribution of traffic in the site vicinity. Operation of the proposed project could increase ambient noise levels in the project vicinity, primarily as a result of operating proposed rooftop heating and ventilation systems as well as the emergency generator. This equipment is discussed below. All other project-related activities would occur within the proposed building's interior, and they would not increase ambient noise levels in the project vicinity.

Equipment Noise (Fixed Sources)

The proposed project would include new fixed noise sources that would produce operational noise on the project site. Operation of this equipment would be subject to the City's Noise Ordinance (Article 29 of the San Francisco Police Code), amended in November 2008. Under Section 2909, stationary sources are not permitted to result in noise levels that exceed the existing ambient noise level by more than 10 dBA on public property and 5 dBA on residential property. Section 2909 (d) states that no fixed noise source may cause the noise level measured inside any sleeping or living room in a dwelling unit on residential property to exceed 45 dBA between 10 p.m. and 7 a.m. or 55 dBA between 7 a.m. and 10 p.m. with windows open, except where building ventilation is achieved through mechanical systems that allow windows to remain closed.

[67] Bay Area Air Quality Management District (BAAQMD), *Stationary Source Screening Analysis Tool, San Francisco, May 2012*. Available online at http://www.baaqmd.gov/Home/Divisions/Planning%20and%20Research/CEQA%20GUIDELINES/Tools%20and%20Methodology.aspx. Accessed February 24, 2015. Other stationary sources identified by the BAAQMD in the project vicinity relate to toxic air contaminants related to automotive uses or the police department, and are not major sources of stationary equipment noise.

The proposed HVAC equipment and the emergency generator[68] would be located on the central portion of the roof, and the mechanical equipment area would be set back approximately 55 feet from both the west and east edges of the roof of the new building. Acoustical shielding is proposed to be provided around this equipment area as necessary for noise control. There is an existing SRO residential building at 480-484 Sixth Street that is located 20 to 24 feet from the proposed RDF building. The existing SRO residential building is three stories tall (approximately 35 feet), while equipment on the roof of the proposed building would be located above a height of approximately 95 feet.[69]

The proposed 2,000 KW emergency generator is proposed to be equipped with hospital-grade mufflers. Typically, generators of up to 3,250 KW in sound enclosures can generate noise levels of approximately 79 dB at 50 feet (Leq). While the precise location of the generator has not been determined, it is expected that the generator would be located at least 100 feet from the adjacent SRO residential building (considering the 60-foot height difference and 35 to 40 feet of building separation/setbacks) and the proposed RDF building itself as well as the proposed mechanical equipment acoustical enclosure would likely block the line-of-sight between the generator and adjacent residential building. Therefore, maximum emergency generator noise is conservatively estimated to be 53 to 58 dB (Leq) at adjacent residences (reference noise level of 73 dB (Leq) at 100 feet[70] minus 15 to 20 dB for the building and acoustical equipment enclosure blocking any direct line-of-sight). Such levels would be well below the ambient daytime noise levels in the vicinity of this residential building, which is when this generator would be tested (about one hour per week). Daytime noise levels were measured at 70 dBA (Leq) at the front of this residential building's eastern façade (facing Sixth Street) and 66 dBA (Leq) at the rear of this residential building. HVAC systems typically generate noise levels that are much lower than emergency generators. Therefore, fixed noise sources would not increase ambient noise levels by more than 1 dB at the adjacent SRO residential building even if this equipment is placed on the southern portion of the roof of the proposed RDF. Potential increases would be even less if this equipment were located on the northern portion of the roof, increasing the equipment setback from the adjacent SRO residential building. When compared to the City's Noise Ordinance limit of a 10-dB increase on public property and 5-dB increase on residential property, such an increase would be **less than significant**. No mitigation is necessary.

In addition to the proposed emergency generator, there are two other emergency generators on (or in the immediate vicinity of) the project site: one located over 200 feet to the west on the roof of the HOJ building and the other located over 300 feet to the west on the roof of the CJ#1/CJ#2

[68] Although emergency generators are intended only to be used in periods of power outages, testing of the emergency generator for approximately one hour per week (50 hours per year) would be required.

[69] While the adjacent SRO building is currently in residential use, it may eventually be converted to office and retail use, which would be less sensitive to noise. This analysis evaluates impacts on residential use of this building, which is the worst-case (maximum) scenario for noise impacts.

[70] Kohler Power Systems, *Industrial Power, Total System Integration.*

building. Due to the distances between these noise sources and the proposed project's emergency generator (300 to 500 feet), noise from these three generators would not combine to generate higher noise levels at the closest residential receptors than noise levels estimated for the proposed emergency generator (exterior noise level of 73 dBA L_{eq}).

With respect to the Noise Ordinance's interior limits at residential properties specified in Section 2909 (d), the proposed project's minimal noise increases associated with operation of fixed noise sources on the rooftop of the proposed RDF is not expected to cause the interior noise levels to exceed the 45-dBA and 55-dBA limits at the adjacent SRO residential building, assuming existing interior noise levels at the adjacent residential building currently comply with this 45-dBA interior limit (with closed windows). Nevertheless, required compliance with the Noise Ordinance limits would ensure that the proposed project's noise impacts from fixed sources would be **less than significant**. No mitigation is necessary.

Traffic Noise (Mobile Sources)

As stated above, the project site is located in an area where background traffic noise levels associated with the freeway and adjacent streets dominate the existing noise environment, and the existing on-site and off-site noise-sensitive receptors are currently exposed to these elevated noise levels. According to the San Francisco Planning Department's Background Noise Levels Map[71], noise levels immediately adjacent to all streets along the project site frontages (Sixth, Seventh, and Bryant Streets) exceed 70 dBA (L_{dn}). Project implementation would result in an overall decrease in vehicle trips generated at the project site. Minor changes in the distribution of traffic in the site vicinity could also occur with proposed closure of Harriet Street and Ahern Way to through traffic and addition of service/loading and secure jail transport/sally port facilities on these streets. However, given the high traffic volumes on streets in the project vicinity, such minor traffic redistribution effects would not result in a noticeable increase in transportation-related noise.[72]

Noise Summary and Conclusions

Since the proposed project would result in a net decrease in traffic overall, any minor redistribution changes in noise levels on roadways in the project vicinity would not be substantial enough to generate noticeable increases over existing traffic noise levels (existing traffic noise levels along

[71] San Francisco Planning Department, *San Francisco General Plan, Environmental Protection Element, Map 1: Background Noise Levels – 2009.* Available online at http://www.sf-planning.org/ftp/general_plan/images/I6.environmental/ENV_Map1_Background_Noise%20Levels.pdf. Accessed February 22, 2015.

[72] In general, project-related traffic volume increases would need to double existing traffic volumes on the local roadway network to cause a noticeable (3 dBA or greater) increase over existing traffic noise levels and result in a significant traffic noise impact (California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol,* September 2013, p. 2-11.) Available online at http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf. Accessed March 4, 2015.

roads in the project vicinity are already high, over 70 dBA L_{dn}). Fixed noise sources would not expose on-site or off-site noise-sensitive receptors to noise levels in excess of standards established in the Noise Ordinance. When considered in combination with the existing ambient noise environment, operational noise generated by the proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above those that currently exist without the proposed project. Therefore, the proposed project's operational noise impacts on existing on-site and off-site noise-sensitive receptors would be **less than significant** and no mitigation is necessary.

Groundborne Vibration and Noise

Ground-borne vibration is not a common environmental issue and even operation of large vehicles (e.g., trucks and buses) do not generally result in perceptible vibration to nearby sensitive receptors. The proposed project would not introduce new vibration sources. Therefore, long-term vibration impacts associated with project implementation would be **less than significant** and no mitigation is needed.

Impact NO-2: Project demolition and construction would temporarily and periodically increase ambient noise and vibration in the project vicinity compared to existing conditions. ***(Less than Significant with Mitigation)***

Construction Noise

Construction noise is regulated by Sections 2907 and 2908 of the City's Noise Ordinance (Article 29 of the *San Francisco Police Code*, revised November 25, 2008). Section 2907 (a) requires that noise levels from individual pieces of powered construction equipment, other than impact tools and equipment, not exceed 80 dBA at a distance of 100 feet from the source between 7 a.m. and 8 p.m. Section 2907 (b) requires that the intakes and exhausts of impact tools and equipment be equipped with mufflers, and that pavement breakers and jackhammers be equipped with acoustically-attenuating shields or shrouds to the satisfaction of the Director of Public Works or Building Inspection, as feasible, to best accomplish maximum noise attenuation. Section 2908 prohibits construction work between 8 p.m. and 7 a.m. if the noise would exceed the ambient noise level by 5 dBA at the project property line, unless a special permit is authorized by the Director of Public Works. The proposed project would comply with the regulations set forth in the Noise Ordinance.

Demolition, excavation, and construction activities for the proposed RDF would temporarily increase ambient noise levels. Construction activities would require the use of heavy trucks, excavating and grading equipment, material loaders, drill rigs, cranes, concrete breakers, and other mobile and stationary construction equipment, all of which produce noise as part of their operations. Construction noise would be temporary and intermittent, and is anticipated throughout the various construction phases, estimated to last approximately 30 months. The magnitude of the

construction noise would fluctuate at any given off-site noise-sensitive receptor depending on the construction phase, the type of construction activity, the sound level generated by the various pieces of construction equipment in operation, the duration of the noise, the distance between the noise source and the off-site noise-sensitive receptor, and the presence or absence of noise barriers between the noise source and the off-site noise-sensitive receptor. Temporary noise increases could be considered an annoyance by receptors and would generally be limited to the noisiest phases of construction such as demolition, excavation, foundation work, and exterior structural work, which would last approximately 12 to 18 months. Interior improvements and finishing would involve fewer large pieces of heavy-duty construction equipment, and noise associated with interior finishing work would be largely contained by the structure's façade.

Typical construction equipment (without noise controls or features such as mufflers, silencers, shields, shrouds, ducts and engine enclosures) generates noise ranging from about 70 to 92 dBA at a distance of 100 feet from the source (see **Table 9: Typical Noise Levels of Construction Equipment [in dBA]**). Pile driving, which is the most disruptive activity in terms of construction noise, would not be required; drilled piles would be used to support the building's shoring system.

Additional noise-generating construction activities typically include the use of heavy construction equipment for demolition, earthmoving activities, and materials handling; stationary equipment for on-site power generation; and impact tools and other equipment for demolition, site preparation, and shoring activities. A conventional soldier pile and lagging system or interlocking sheet piles would be used for shoring, and piles would be pre-drilled rather than driven to minimize noise and vibration effects on the adjacent historic building. Most of the typical types of construction equipment that could be used at the project building site would be used primarily during the early stages of construction. As shown in **Table 9**, noise levels (without controls) generated by most heavy construction equipment and stationary equipment at a distance of 100 feet from the activity would generally not exceed the ordinance limit of 80 dBA at 100 feet. Exceptions would be trucks and derricks, but with implementation of noise controls, noise generated by this equipment would be reduced to 69 dBA at 100 feet. Section 2907 (b) of the City's Noise Ordinance requires use of best practices to achieve maximum noise attenuation on impact equipment, such as rock drills and jackhammers. With noise controls, such equipment would generate noise levels no greater than 74 dBA at a distance of 100 feet from the activity. Thus, construction equipment noise levels would not exceed the ordinance limit of 80 dBA at 100 feet from the source with implementation of noise controls on some equipment.

As discussed above on p. 95 under "Existing Conditions," on-site and off-site noise-sensitive receptors are present in an area with elevated ambient noise levels. Project-related construction activities would temporarily and intermittently contribute to ambient noise levels over the 30 months of construction, with more construction noise generated in the initial 12 to 18 months of project construction and relatively lower levels of construction noise in the subsequent 12 to

Table 9: Typical Noise Levels of Construction Equipment (in dBA)

Equipment	Noise Level at 50 Feet		Noise Level at 100 Feet		Noise Ordinance Maximum Noise Level at 100 feet[b]
	Without Controls	With Controls[a]	Without Controls	With Controls[a]	
Earthmoving					
Front Loaders	79	75	73	69	80
Backhoes	85	75	79	69	80
Dozers	80	75	74	69	80
Tractors	80	75	74	69	80
Graders	85	75	79	69	80
Trucks	91[c]	75	85	69	80
Materials Handling					
Concrete Mixers	85	75	79	69	80
Concrete Pumps	82	75	76	69	80
Cranes	83	75	77	69	80
Derricks	88	75	82	69	80
Stationary					
Pumps	76	75	70	69	80
Generators	78	75	72	69	80
Compressors	81	75	75	69	80
Impact					
Rock Drills	98	80	92	74	[d]
Jack Hammers	88	75	82	69	[d]
Pneumatic Tools	86	80	80	74	[d]
Other					
Saws	78	75	72	69	80
Vibrators	76	75	70	69	80

Notes:

[a] "With Controls" means that estimated levels can be obtained by selecting quieter procedures or machines by implementing noise-control features that do not require major redesign or extreme cost (e.g., improved mufflers, equipment redesign, use of silencers, shields, shrouds, ducts, and engine enclosures).

[b] Construction noise at a distance of 100 feet from individual pieces of powered construction equipment, other than impact tools and equipment, are not to exceed 80 dBA per Sections 2907 and 2908 of the City's Noise Ordinance between 7 a.m. and 8 p.m.

[c] This noise level represents the maximum noise level (Lmax) associated with a single passing truck.

[d] Section 2907 (b) of the City's Noise Ordinance requires use of best practices to achieve maximum noise attenuation to the satisfaction of the Director of Public Works or Building Inspection.

Source: U.S. Environmental Protection Agency, 1971

18 months. Construction activities at the project building site would be noticeable to adjacent court operations (HOJ building), inmates on the 6th and 7th floors of the HOJ building, offices (800-804 Bryant Street), and residential receptors (480-484 Sixth Street) due to their proximity (20 to 100 feet away from the project building site). On-site court operations and inmates, at 100 feet from the western project building site boundary, would be subject to maximum noise levels of 69 to 74 dBA (with controls), as indicated in **Table 9**.

Various industrial and commercial uses located to the east across Sixth Street (off site) would be subject to similar noise levels. On-site residences and offices are located as close as 20 to 25 feet from the southern project building site boundary, and they could be subject to maximum noise levels of 75 to 80 dBA (Lmax) at 25 feet. Such noise levels could be reduced by approximately

25 dBA with closed windows, resulting in interior maximum noise levels of 44 to 49 dBA at the HOJ building to the west and various industrial and commercial uses to the east, as well as 50 to 55 dBA at the adjacent offices and residences to the south. Construction-related noise levels inside the CJ#1/CJ#2 building would be less than minimum ambient levels (measured at 53 dBA during the day) because this building is located farther away (about 340 feet), behind the HOJ building, and noise attenuation features are already incorporated into the building because of its proximity to the freeway (fixed windows and dual wall design, which provides approximately 30 dBA attenuation).

Given the proximity of construction activities to adjacent on- and off-site receptors and their potential exposure to elevated noise levels during construction, the proposed project's general contractor shall be required to implement **Mitigation Measure M-NO-2: General Construction Noise Control Measures**.

Mitigation Measure M-NO-2: General Construction Noise Control Measures

To ensure that project noise from construction activities is minimized to the maximum extent feasible, the project's construction contractors shall undertake the following:

- The project's general contractor shall be required to ensure that equipment and trucks used for project construction utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).
- The project's general contractor shall be required to locate stationary noise sources (such as compressors) as far from adjacent or nearby sensitive receptors as possible, to muffle such noise sources, and to construct barriers around such sources and/or the construction site, which could reduce construction noise by as much as 5 dBA. To further reduce noise, the contractor shall locate stationary equipment in pit areas or excavated areas, if feasible.
- The project's general contractor shall be required to use impact tools (e.g., jack hammers, pavement breakers, and rock drills) that are hydraulically- or electrically-powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically-powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used, along with external noise jackets on the tools, which could reduce noise levels by as much as 10 dBA.
- The following noise control requirements in specifications provided to construction contractors. Such requirements could include, but not be limited to, performing all work in a manner that minimizes noise disruption to the courts, offices, and various commercial and industrial uses to the extent feasible; use of equipment with effective mufflers; undertaking the most noisy activities during times of least disturbance to surrounding residents and occupants, as feasible; and selecting haul routes that avoid residential buildings inasmuch as such routes are otherwise feasible.
- Prior to the issuance of building permits, along with the submission of construction documents, the project's general contractor shall submit to the Planning Department and Department of Building Inspection (DBI) a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include (1) a

procedure and phone numbers for notifying DBI, the Department of Public Health, and the Police Department (during regular construction hours and off-hours); (2) a sign posted on-site describing noise complaint procedures and a complaint hotline number that shall be answered at all times during construction; (3) designation of an on-site construction complaint and enforcement manager for the project; and (4) notification of Hall of Justice courts and offices on the east side of the building as well as offices and residences within 100 feet of the project construction area at least 30 days in advance of extreme noise-generating activities (defined as activities generating noise levels of 90 dBA or greater) about the estimated duration of the activity.

Therefore, although construction noise may be perceived by some as an occasional annoyance, with implementation of **Mitigation Measure M-NO-2**, the proposed project would not expose existing sensitive receptors to construction noise levels that are in excess of standards established in the Noise Ordinance. Therefore, this impact would be **less than significant with mitigation**.

Groundborne Vibration and Noise

Groundborne noise refers to a condition where noise is experienced inside a building or structure as a result of vibrations produced outside of the building and transmitted as ground vibration between the source and receiver. Groundborne noise can be problematic in situations where the primary airborne noise path is blocked, such as in the case of a subway tunnel passing in close proximity to homes or other noise-sensitive structures. While the proposed project would involve excavation to a maximum depth of 17 feet, noise- and vibration-generating construction activities associated with construction of the partial basement level would not involve tunneling or underground construction, but instead would use techniques that generate airborne noise and surface vibration. Therefore, impacts related to groundborne noise from construction activities are expected to be **less than significant** and no mitigation is necessary.

The proposed project would not involve the types of construction activities that could produce excessive groundborne vibration, i.e., pile driving for a foundation or the use of explosives for building demolition. However, construction equipment used for demolition, site preparation, and shoring activities, such as jackhammers, pavement breakers, and drills, could generate varying degrees of temporary groundborne vibration, with the highest levels expected in the first 9 months of construction during the demolition, excavation, and below-grade construction phases. The proposed project would also require the use of heavy trucks for material deliveries and for off-site hauling of demolition debris throughout the day and throughout the 30-month construction period. All construction activities would be conducted between 7 a.m. and 8 p.m. in compliance with Section 2908 of the City's Noise Ordinance.

Based on significance thresholds recommended by the FTA,[73] if groundborne vibration generated by project-related demolition and construction activities were to exceed 0.5 in/sec PPV, it could cause cosmetic damage to a structure. If any structure is older (i.e., potentially historic), such as the SRO residential building (480-484 Sixth Street) or the HOJ building (850 Bryant Street), it could be more fragile and cosmetic damage could occur at lower vibration levels in excess of 0.2 in/sec PPV if vibration exceeds this level. Typical vibration levels associated with the operation of various types of construction equipment at 25 feet, some of which are similar to those proposed to be used for this project, are listed in **Table 10: Vibration Levels for Construction Equipment**.

Table 10: Vibration Levels for Construction Equipment

Equipment	Peak Particle Velocity (PPV) (in/sec)	
	At 20 Feet[1]	At 25 Feet[1]
Caisson Drilling, Large Bulldozer	0.124	0.089
Loaded Trucks	0.106	0.076
Jackhammer	0.049	0.035

Note:
[1] Vibration amplitudes for construction equipment assume normal propagation conditions.
Source: FTA, 2006

The SRO residential building would be located as close as 20 feet from the project building site. Based on vibration levels presented in **Table 10**, vibration levels would not exceed either the 0.2 in/sec PPV significance threshold for fragile structures or 0.5 in/sec for typical structures. The distance of the proposed RDF excavation, shoring, and foundation work from the HOJ building would be greater than that between the proposed RDF and the SRO residential building; thus, the vibration levels at the HOJ would not exceed the thresholds for fragile or typical structures. Therefore, vibration is expected to be **less than significant** and no mitigation measures are needed. However, given the proximity of the SRO residential building and proposed excavation, **Mitigation Measures M-CP-2a and M-CP-2b**, included in Section E.3, Cultural and Paleontological Resources, pp. 45-46, would ensure that construction-related groundborne vibration effects are maintained at less-than-significant levels.

Impact NO-3: The proposed project's occupants would be substantially affected by existing noise levels. ***(Less than Significant with Mitigation)***

The proposed RDF would be located in an area where background noise levels (at or above the freeway elevation) were found to be 79 dBA (L_{dn})[74] near the northern façade (closest to the

[73] FTA, *Transit Noise and Vibration Impact Assessment, DTA-VA-90-1003-06*, May 2006, p. 12-9. Available online at http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf. Accessed February 27, 2015.

[74] The measured noise level was 78.6 dBA (Ldn) at 134 feet from the freeway centerline and it was adjusted to reflect the noise level at the median setback of 118 feet from the freeway centerline, which corresponds to the proposed RDF's northern façade.

freeway) and 75 dBA (L_{dn})[75] near the southern façade (mid-block); the street level of the proposed RDF would be subject to noise levels that are approximately 5 to 6 dBA lower. The San Francisco land use compatibility guidelines for residential uses (**Figure 17** on p. 97) discourage new residential construction in areas where noise levels exceed 65 dBA (L_{dn}). The guidelines indicate that if new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features must be included in the design in order to achieve the interior noise standard of 45 dBA (L_{dn}).

For purposes of this analysis, inmates could reside in the proposed podular housing units for the duration of their sentence (which could be years), and therefore, the threshold for residential uses is applied to the cells within the proposed RDF. When compared to the land use compatibility guidelines, proposed development of jail facilities would be discouraged and a detailed analysis of noise reduction requirements would be required, a potentially significant noise impact. For purposes of CEQA, noise measurements were conducted as part of this study in an unoccupied cell facing the freeway in the CJ#1/CJ#2 building to determine the feasibility of achieving acceptable interior noise levels of 45 dBA (L_{dn}). The CJ#1/CJ#2 building's proximity to the freeway (40 to 55 feet from the edge of the freeway) is similar to the proposed RDF's proximity to the freeway (40 to 65 feet from the edge). Therefore, it is expected that development of a new building with a design that is similar to the CJ#1/CJ#2 building could achieve similar reductions in freeway noise.

The exterior noise measurement (#1) taken on the roof of the CJ#1/CJ#2 building indicated noise levels of approximately 73 dBA (L_{eq}) at 11:20 a.m., while interior noise levels at approximately the same proximity to the freeway and the same time of day was 53 dBA (L_{eq}). Although these measurements only reflect a 20-dBA reduction, noise reductions from the building's design were observed to be greater than reflected in the measurement (more likely 30 dBA with fixed windows and dual wall design). The predominant source of noise within the cell was observed to be the ventilation system, not freeway noise. No freeway noise was audible even though passing freeway traffic was visible. Because the interior ventilation system always operates to maintain positive pressure between cell interiors and adjoining communal space within pods,[76] the measurement does not reflect the maximum reductions actually provided by the building's design; cells are protected from freeway noise by two exterior walls with a considerable air space between the two walls. Therefore, for the proposed RDF, it would be necessary to incorporate noise attenuation measures in the design of each pod's ventilation system in addition to incorporating the dual exterior wall design to reduce interior noise levels within each cell to acceptable levels (45 dBA, L_{dn}). With

[75] The measured noise level was 78.6 dBA (Ldn) at 134 feet from the freeway centerline and it was adjusted to reflect the noise levels at the median setback of 296 feet from the freeway centerline, which corresponds to the proposed RDF's southernmost façade.

[76] If the measured 53 dBA (Leq) from the ventilation system occurs 24 hours per day from continuous operation of the system, it would result in a 24-hour noise level of 59 dBA (Ldn), which includes a 10-dBA penalty during the nighttime hours.

implementation of **Mitigation Measure M-NO-3**, which requires design and construction in accordance with the recommendations developed in a site-specific detailed noise analysis, potential noise impacts on project inmates from freeway noise would be reduced to a **less-than-significant** level.

In addition to the podular housing units, there would be a variety of other activities and functions within the proposed RDF including offices, interior exercise areas, and classrooms. The San Francisco land use compatibility guidelines for school classrooms and office uses (**Figure 17**) discourage such uses where noise levels exceed 65 and 73 dBA (L_{dn}), respectively. However, with implementation of **Mitigation Measure M-NO-3**, acceptable interior noise levels for offices and classrooms (25 dB reductions would provide interior noise levels of 50 to 54 dBA, L_{dn}) could be achieved with implementation of noise attenuation measures such as fixed, dual-paned windows.

> **Mitigation Measure M-NO-3: Incorporate Noise Attenuation Measures to Achieve Acceptable Interior Noise Levels**
>
> Noise attenuation measures shall be incorporated into the building design to ensure that interior noise levels within the podular housing units do not exceed 45 dBA (L_{dn}) and are maintained at 50 dBA (L_{dn}) or below within the building's classrooms and offices. Noise attenuation measures that could be incorporated into the building design to ensure that these performance standards can be met include the following:
>
> - Install fixed, double-paned windows,
> - Provide air space between exterior wall and interior walls,
> - Design ventilation systems (including vents) to achieve interior noise levels of 45 dBA (L_{dn}), and
> - Increase insulation of exterior walls.

With implementation of **Mitigation Measure M-NO-3**, the proposed project would not expose the future inmates or workers at the proposed RDF to interior noise levels that are in excess of standards established in the *General Plan*. Therefore, this impact would be **less than significant with mitigation**.

Impact C-NO-1: Project operational noise from fixed noise sources and from traffic increases generated by the proposed project, when combined with other past, present, and reasonably foreseeable future projects in the site's vicinity and noise from reasonably foreseeable traffic growth forecast to the year 2040, would not contribute considerably to a significant cumulative permanent increase in ambient noise levels in the site's vicinity above levels existing without the project or cumulative traffic noise increases. ***(Less than Significant)***

As discussed under **Impact C-LU-1** on pp. 34-35, cumulative development in the project vicinity would include development proposed under the *Western SoMa Community Plan*, the *Central SoMa Plan,* and several mixed-use, residential, and office developments. These reasonably foreseeable future projects are expected to be developed within an approximately ¼-mile radius of the project

site, but identified development projects would be located more than 500 feet from the project building site. Taken together, these reasonably foreseeable future projects would result in cumulative noise increases from fixed noise sources in the project vicinity and traffic increases on the local roadway network.

Fixed Noise Sources

Each reasonably foreseeable future project in the vicinity of the project building site would generate operational noise and could contribute to an overall increase in ambient noise levels in the project vicinity. As with the proposed project, the stationary or fixed noise sources included in each of these future projects analyzed in the cumulative scenario, such as HVAC equipment, emergency power generators, and other mechanical equipment, would be subject to the Noise Ordinance, which requires that fixed noise sources not produce a noise level more than 5 dBA above the ambient noise level at each property boundary. With well over 500 feet between any of the reasonably foreseeable future projects and the project building site, attenuating at a rate of up to 6 dBA per doubling of distance, ambient noise levels at and adjacent to the project building site would not be significantly affected by stationary equipment on the sites of the future projects. Thus, due to the requirements of the Noise Ordinance and the distances between these future projects, there would be no potential to combine to result in significant cumulative long-term noise impacts related to fixed noise sources. As discussed in **Impact NO-1** on pp. 100-102, project-related fixed noise sources would be sited in a mechanical penthouse that would provide sufficient acoustical shielding to achieve compliance with the noise level limits of the Noise Ordinance. Therefore, the cumulative impact of operational noise related to fixed noise sources would not cause noise-sensitive receptors to be substantially affected by ambient noise levels, and this cumulative impact would not be significant.

Mobile Sources

As noted above, traffic noise increases of 3 dBA are barely perceptible to people.[77] Therefore, permanent increases in ambient noise levels of less than 3 dBA are typically considered to be less than significant because they are generally barely or not perceptible. Existing and future (2040) traffic volumes were estimated for the major streets in the project vicinity, based on traffic volumes developed as part of the project's traffic impact analysis (see **Table 11: Cumulative Traffic Noise Increases**). Future (2040) cumulative traffic-related noise levels would increase by less than 3 dB or less, compared to existing conditions, and thus would not be perceptible. Since the proposed project would result in a traffic decrease, the proposed project's contribution to future cumulative traffic increases would be less than cumulatively considerable. As indicated in **Table 11**, future

[77] California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol,* September 2013, p. 2-44. Available online at http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf. Accessed March 4, 2015.

cumulative noise increases along road segments in the project vicinity would be 2.4 dBA or less. Such traffic noise increases would be less than significant because they would be barely or not perceptible to most people in the project vicinity.

Table 11: Cumulative Traffic Noise Increases

Segment	Noise Level (CNEL or L_{dn})[a] at 25 feet from centerline, in dBA[b]		
	Existing	Future (2040)	Change from Existing
Sixth Street (North of Harrison)	68.5	69.1	0.6
Sixth Street (South of Harrison)	68.5	68.9	0.4
Sixth Street (North of Bryant)	68.6	69.1	0.4
Sixth Street (South of Bryant)	68.8	69.7	0.9
Seventh Street (North of Harrison)	67.5	68.2	0.8
Seventh Street (South of Harrison)	68.7	69.6	0.9
Seventh Street (North of Bryant)	66.5	68.4	1.9
Seventh Street (South of Bryant)	66.1	67.4	1.3
Harrison Street (West of Seventh)	65.6	66.1	0.4
Harrison Street (East of Seventh)	67.1	67.8	0.7
Harrison Street (West of Sixth)	65.4	65.4	0.0
Harrison Street (East of Sixth)	67.8	68.1	0.3
Bryant Street (West of Seventh)	64.7	66.8	2.1
Bryant Street (East of Seventh)	64.0	65.1	1.0
Bryant Street (West of Sixth)	64.4	66.8	2.4
Bryant Street (East of Sixth)	63.8	66.2	2.4

Notes: Traffic noise modeling was completed using the Federal Highway Administration RD-77-108 model. Assumptions include: 25 mph travel speed on all streets; vehicle mix of 96% autos/3% medium trucks/1% heavy trucks; day-night split: 77% day (7 a.m. to 7 p.m.), 12.7% evening (7 p.m. to 10 p.m.), and 9.6% night (10 p.m. to 7 a.m.) for autos; 87.4% day (7 a.m. to 7 p.m.), 5.1% evening (7 p.m. to 10 p.m.), and 7.5% night (10 p.m. to 7 a.m.) for medium trucks; and 89.1% day (7 a.m. to 7 p.m.), 2.8% evening (7 p.m. to 10 p.m.), and 8.1% night (10 p.m. to 7 a.m.) for heavy trucks. Background noise levels due to traffic on other roadways, such as the I-80 freeway, and non-traffic related activities are not reflected in these noise levels. Noise levels in this table are intended to indicate incremental noise changes due to future growth and project development. Since they do not include background noise levels, they do not necessarily reflect actual noise levels along these roadway segments. Changes between scenarios analyzed may not show change due to rounding in the noise modeling.

[a] CNEL, Community Noise Equivalent Level, is a 24-hour noise descriptor which adds a 5-dBA "penalty" during the evening hours (7:00 p.m. to 10:00 p.m.) and a 10-dBA penalty during the night hours (10:00 p.m. to 7:00 a.m.) because community receptors are more sensitive to unwanted noise intrusion during the evening and at night. Ldn is a 24-hour noise descriptor that is similar to CNEL, adding only 10-dBA penalty on during the night hours (10:00 p.m. to 7:00 a.m.). For traffic noise, CNEL and Ldn are virtually the same.

[b] Existing and cumulative noise levels were estimated using existing and cumulative turning movements presented in Section E.4, Transportation, and p.m. peak hour volumes were adjusted to daily volumes using a factor of 10 (i.e., p.m. peak hour volumes are assumed to be 10% of daily trip totals).

Source: Orion Environmental Associates, 2015

In conclusion, project operational noise from fixed and mobile noise sources, in combination with operational noise from past, present, and reasonably foreseeable future projects in the project vicinity and cumulative traffic growth to 2040 (inclusive of the reasonably foreseeable future projects), would not contribute considerably to the long-term exposure of nearby noise-sensitive receptors to noise levels in excess of applicable noise standards and/or result in substantial permanent increase in the ambient noise levels in the project vicinity. This cumulative impact would be less than significant and no mitigation is necessary.

Impact C-NO-2: Construction of the proposed project, in combination with other past, present, and reasonably foreseeable future projects in the site's vicinity, would not result in a cumulatively considerable contribution to significant temporary or periodic increases in ambient noise or vibration levels in the project vicinity above levels existing without the proposed project. ***(Less than Significant)***

Construction noise is a localized impact that decreases as distance from the source increases and rapidly attenuates when line-of-sight is blocked by buildings or other intervening features. Of the cumulative developments listed under **Impact C-LU-1** on pp. 34-35 that are within ¼ mile of the project site, all are located over 1,000 feet from the project site except three (345, 363, and 377 Sixth Street), which are located over 500 feet from the site. These three development projects would not contribute to cumulative construction noise in the project vicinity because of their distance from the project building site and the presence of intervening structures. Most notably, the elevated I-80 freeway structure is located between the project building site and a number of these future projects, including the closest ones at 345, 363, and 377 Sixth Street. Given these factors, construction noise from the proposed project is not expected to combine with construction noise from any of these other reasonably foreseeable future projects to cumulatively affect noise-sensitive receptors in the vicinity of the project building site. Construction-related trucks generated by the proposed project, however, could overlap with construction-related truck traffic generated by other cumulative development. While such overlap could result in temporary, cumulative increases in construction-related truck traffic on local truck routes, the project site's proximity to freeway ramps would minimize project-related construction truck traffic on local streets in the vicinity of the project site. In addition, construction trucks associated with all construction projects would be required to travel on designated truck routes, minimizing potential temporary traffic noise impacts on noise-sensitive receptors. Therefore, the contribution of the proposed project to cumulative construction-related truck noise increases along truck routes from concurrent construction activities would not be considerable; this impact would be less than significant and no mitigation is necessary.

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
6.	**AIR QUALITY—Would the project:**					
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐	☐
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐	☐
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐	☐
d)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐	☐
e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐	☐

SETTING

Overview

The Bay Area Air Quality Management District (BAAQMD) is the regional agency with jurisdiction over the nine-county San Francisco Bay Area Air Basin (SFBAAB), which includes San Francisco, Alameda, Contra Costa, Marin, San Mateo, Santa Clara and Napa counties and portions of Sonoma and Solano counties. The BAAQMD is responsible for attaining and maintaining air quality in the SFBAAB within federal and state air quality standards, as established by the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA), respectively. Specifically, the BAAQMD has the responsibility to monitor ambient air pollutant levels throughout the SFBAAB and to develop and implement strategies to attain the applicable federal and state standards. The CAA and the CCAA require plans to be developed for areas that do not meet air quality standards, generally. The most recent air quality plan, the *2010 Clean Air Plan*, was adopted by the BAAQMD on September 15, 2010. The *2010 Clean Air Plan* updates the *Bay Area 2005 Ozone Strategy* in accordance with the requirements of the CCAA to implement all feasible measures to reduce ozone; provide a control strategy to reduce ozone, particulate matter, air toxics, and greenhouse gases (GHGs) in a single, integrated plan; and establish emission control measures to be adopted or implemented. The *2010 Clean Air Plan* contains the following primary goals:

- Attain air quality standards;
- Reduce population exposure and protect public health in the San Francisco Bay Area; and

- Reduce GHG emissions and protect the climate.

The *2010 Clean Air Plan* represents the most current applicable air quality plan for the SFBAAB. Consistency with this plan is the basis for determining whether the proposed project would conflict with or obstruct implementation of air quality plans.

Criteria Air Pollutants

In accordance with the state and federal CAAs, air pollutant standards are identified for the following six criteria air pollutants: ozone, carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. These air pollutants are termed criteria air pollutants because they are regulated by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. In general, the SFBAAB experiences low concentrations of most pollutants when compared to federal or state standards. The SFBAAB is designated as either in attainment[78] or unclassified for most criteria pollutants with the exception of ozone, $PM_{2.5}$, and PM_{10}, for which these pollutants are designated as non-attainment for either the state or federal standards. By its very nature, regional air pollution is largely a cumulative impact in that no single project is sufficient in size to, by itself, result in non-attainment of air quality standards. Instead, a project's individual emissions contribute to existing cumulative air quality impacts. If a project's contribution to cumulative air quality impacts is considerable, then the project's impact on air quality would be considered significant.[79]

Land use projects may contribute to regional criteria air pollutants during the construction and operational phases of a project. **Table 12: Criteria Air Pollutant Significance Thresholds** identifies air quality significance thresholds. This table is followed by a discussion of each threshold. Projects that would result in criteria air pollutant emissions below these significance thresholds would not violate an air quality standard, contribute substantially to an air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants within the SFBAAB.

[78] "Attainment" status refers to those regions that are meeting federal and/or state standards for a specified criteria pollutant. "Non-attainment" refers to regions that do not meet federal and/or state standards for a specified criteria pollutant. "Unclassified" refers to regions where there is not enough data to determine the region's attainment status for a specified criteria air pollutant.

[79] Bay Area Air Quality Management District (BAAQMD), *California Environmental Quality Act Air Quality Guidelines*, May 2011 (hereinafter "*CEQA Air Quality Guidelines*"), p. 2-1.

Table 12: Criteria Air Pollutant Significance Thresholds

Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Annual Average Emissions (tons/year)
ROG[a]	54	54	10
NOx	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	

Note:
[a] ROG = Reactive Organic Gases
Source: BAAQMD, 2011

Ozone Precursors

As discussed previously, the SFBAAB is currently designated as non-attainment for ozone and particulate matter. Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and oxides of nitrogen (NO_x). The potential for a project to result in a cumulatively considerable net increase in criteria air pollutants, which may contribute to an existing or projected air quality violation, are based on the state and federal Clean Air Acts emissions limits for stationary sources. To ensure that new stationary sources do not cause or contribute to a violation of an air quality standard, BAAQMD Regulation 2, Rule 2 requires that any new source that emits criteria air pollutants above a specified emissions limit must offset those emissions. For ozone precursors ROG and NO_x, the offset emissions level is an annual average of 10 tons per year (or 54 pounds [lbs] per day).[80] These levels represent emissions by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants.

Although this regulation applies to new or modified stationary sources, land use development projects result in ROG and NO_x emissions as a result of increases in vehicle trips, architectural coating and construction activities. Therefore, the above thresholds can be applied to the construction and operational phases of land use projects, and those projects that result in emissions below these thresholds would not be considered to contribute to an existing or projected air quality violation or result in a considerable net increase in ROG and NO_x emissions. Due to the temporary nature of construction activities, only the average daily thresholds are applicable to construction phase emissions.

[80] BAAQMD, *Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance,* October 2009 (hereinafter "*Revised Draft Options and Justification Report*"), p. 17.

Particulate Matter (PM_{10} and $PM_{2.5}$)[81]

The BAAQMD has not established an offset limit for $PM_{2.5}$. However, the emissions limit in the federal New Source Review (NSR) for stationary sources in nonattainment areas is an appropriate significance threshold. For PM_{10} and $PM_{2.5}$, the emissions limit under NSR is 15 tons per year (82 lbs per day) and 10 tons per year (54 lbs per day), respectively. These emissions limits represent levels at which a source is not expected to have an impact on air quality.[82] Similar to ozone precursor thresholds identified above, land use development projects typically result in particulate matter emissions as a result of increases in vehicle trips, space heating and natural gas combustion, landscape maintenance, and construction activities. Therefore, the above thresholds can be applied to the construction and operational phases of a land use project. Again, because construction activities are temporary in nature, only the average daily thresholds are applicable to construction-phase emissions.

Fugitive Dust

Fugitive dust emissions are typically generated during construction phases. Studies have shown that the application of best management practices (BMPs) at construction sites significantly control fugitive dust[83] and individual measures have been shown to reduce fugitive dust by anywhere from 30 percent to 90 percent.[84] The BAAQMD has identified a number of BMPs to control fugitive dust emissions from construction activities.[85] The City's Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008) requires a number of measures to control fugitive dust and the BMPs employed in compliance with the City's Construction Dust Control Ordinance are an effective strategy for controlling construction-related fugitive dust.

Other Criteria Pollutants

Regional concentrations of CO in the Bay Area have not exceeded the stat standards in the past 11 years and SO_2 concentrations have never exceeded the standards. The primary source of CO emissions from development projects is vehicle traffic. Construction-related SO_2 emissions represent a negligible portion of the total basin-wide emissions, and construction-related CO emissions represent less than 5 percent of the Bay Area total basin-wide CO emissions. As discussed previously, the Bay Area is in attainment for both CO and SO_2. Furthermore, the

[81] PM_{10} is often termed "coarse" particulate matter and is made of particulates that are 10 microns or less in diameter. $PM_{2.5}$, termed "fine" particulate matter, is composed of particles that are 2.5 microns or less in diameter.
[82] BAAQMD, *Revised Draft Options and Justification Report,* p. 16.
[83] Western Regional Air Partnership, *WRAP Fugitive Dust Handbook*, September 7, 2006, p. 3-16. Available online at http://www.wrapair.org/forums/dejf/fdh/content/FDHandbook_Rev_06.pdf. Accessed February 26, 2015.
[84] BAAQMD, *Revised Draft Options and Justification Report*, p. 27.
[85] BAAQMD, *CEQA Air Quality Guidelines*, pp. 8-3 to 8-5.

BAAQMD has demonstrated, based on modeling, that in order to exceed the California ambient air quality standard of 9.0 parts per million (ppm) (8-hour average) or 20.0 ppm (1-hour average) for CO, project traffic in addition to existing traffic would need to exceed 44,000 vehicles per hour at affected intersections (or 24,000 vehicles per hour where vertical and/or horizontal mixing is limited). Therefore, given the Bay Area's attainment status and the limited CO and SO_2 emissions that could result from a development project, development projects would not result in a cumulatively considerable net increase in CO or SO_2, and quantitative analysis is not required.

Local Health Risks and Hazards

In addition to criteria air pollutants, individual projects may emit toxic air contaminants (TACs). TACs collectively refer to a diverse group of air pollutants that are capable of causing chronic (i.e., of long duration) and acute (i.e., severe but short term duration) adverse effects to human health, including carcinogenic effects. Human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

Unlike criteria air pollutants, TACs do not have ambient air quality standards but are regulated by the BAAQMD using a risk-based approach to determine which sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated, and considered together with information regarding the toxic potency of the substances, to provide quantitative estimates of health risks.[86]

Air pollution does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects than others. Land uses such as residences, schools, children's daycare centers, hospitals, and nursing and convalescent homes are considered to be the most sensitive to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress or, as in the case of residential receptors, their exposure time is greater than that for other land uses. Therefore, these groups are referred to as sensitive receptors. Exposure assessment guidance typically assumes that residences would be exposed to air pollution 24 hours per day, 350 days per year, for 70 years. Therefore, assessments of air pollutant exposure to residents typically result in the greatest adverse health outcomes of all population groups.

[86] In general, a health risk assessment is required if the BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggest a potential public health risk. The applicant is then subject to a health risk assessment for the source in question. Such an assessment generally evaluates chronic, long-term effects, estimating the increased risk of cancer as a result of exposure to one or more TACs.

Exposures to fine particulate matter ($PM_{2.5}$) are strongly associated with mortality, respiratory diseases and lung development in children, and other endpoints such as hospitalization for cardiopulmonary disease.[87] In addition to $PM_{2.5}$, diesel particulate matter (DPM) is also of concern. The California Air Resources Board (ARB) identified DPM as a TAC in 1998, primarily based on evidence demonstrating cancer effects in humans.[88] The estimated cancer risk from exposure to diesel exhaust is much higher than the risk associated with any other TAC routinely measured in the region.

In an effort to identify areas of San Francisco most adversely affected by sources of TACs, San Francisco has partnered with the BAAQMD to conduct a citywide health risk assessment based on an inventory and assessment of air pollution and exposures from mobile, stationary, and area sources within San Francisco. Areas with poor air quality, termed the "Air Pollutant Exposure Zone," were identified based on health-protective criteria that considers estimated cancer risk, exposures to fine particulate matter, proximity to freeways, and locations with particularly vulnerable populations. The project site is located within the Air Pollutant Exposure Zone. Each Air Pollutant Exposure Zone criterion is discussed below.

Excess Cancer Risk

The above 100 per one million persons (100 excess cancer risk) criterion is based on the United States Environmental Protection Agency (USEPA) guidance for conducting air toxic analyses and making risk management decisions at the facility and community-scale level.[89] As described by the BAAQMD, the USEPA considers a cancer risk of 100 per million to be within the "acceptable" range of cancer risk. Furthermore, in the 1989 preamble to the benzene National Emissions Standards for Hazardous Air Pollutants (NESHAP) rulemaking,[90] the USEPA states that it "…strives to provide maximum feasible protection against risks to health from hazardous air pollutants by (1) protecting the greatest number of persons possible to an individual lifetime risk level no higher than approximately one in one million and (2) limiting to no higher than approximately one in ten thousand [100 in one million] the estimated risk that a person living near a plant would have if he or she were exposed to the maximum pollutant concentrations for 70 years." The 100 per one million excess cancer cases is also consistent with the ambient cancer risk in the most pristine portions of the Bay Area based on BAAQMD regional modeling.[91]

[87] San Francisco Department of Public Health, *Assessment and Mitigation of Air Pollutant Health Effects from Intra-Urban Roadways: Guidance for Land Use Planning and Environmental Review*, May 2008.
[88] California Air Resources Board (ARB), Fact Sheet, "The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines," October 1998.
[89] BAAQMD, *Revised Draft Options and Justification Report,* p. 67.
[90] 54 Federal Register 38044, September 14, 1989.
[91] BAAQMD, *Revised Draft Options and Justification Report*, p. 67.

Fine Particulate Matter

In April 2011, the USEPA published *Policy Assessment for the Particulate Matter Review of the National Ambient Air Quality Standards*. In this document, USEPA staff concludes that the then current federal annual $PM_{2.5}$ standard of 15 $\mu g/m^3$ should be revised to a level within the range of 13 to 11 $\mu g/m^3$, with evidence strongly supporting a standard within the range of 12 to 11 $\mu g/m^3$. Air Pollutant Exposure Zones for San Francisco are based on the health protective $PM_{2.5}$ standard of 11 $\mu g/m^3$, as supported by the USEPA's Particulate Matter Policy Assessment, although lowered to 10 $\mu g/m^3$ to account for uncertainty in accurately predicting air pollutant concentrations using emissions modeling programs.

Proximity to Freeways

According to the California Air Resources Board, studies have shown an association between the proximity of sensitive land uses to freeways and a variety of respiratory symptoms, asthma exacerbation, and decreases in lung function in children. Siting sensitive uses in close proximity to freeways increases both exposure to air pollution and the potential for adverse health effects. As evidence shows that sensitive uses in an area within a 500-foot buffer of any freeway are at an increased health risk from air pollution,[92] lots that are within 500 feet of freeways are included in the Air Pollutant Exposure Zone.

Health Vulnerability Locations

Based on the BAAQMD's evaluation of health vulnerability in the Bay Area, those zip codes in the worst quintile of Bay Area Health vulnerability scores as a result of an air pollution-related causes (94102, 94103, 94105, 94124, and 94130) were afforded additional protection by lowering the standards for identifying lots in the Air Pollutant Exposure Zone to (1) and excess cancer risk greater than 90 per one million persons exposed, and/or (2) $PM_{2.5}$ concentrations in excess of 9 $\mu g/m^3$.[93]

The above citywide health risk modeling was also used as the basis in approving a series of amendments to the San Francisco Building and Health Codes, generally referred to as the Enhanced Ventilation Required for Urban Infill Sensitive Use Developments, or Health Code Article 38 (Ordinance 224-14, effective December 8, 2014) (Article 38). The purpose of Article 38 is to protect the public health and welfare by establishing an Air Pollutant Exposure Zone and imposing an enhanced ventilation requirement for all urban infill sensitive use development within the Air Pollutant Exposure Zone. In addition, projects within the Air Pollutant Exposure Zone require

[92] California Air Resources Board, *Air Quality and Land Use Handbook, A Community Health Perspective*, April 2005. Available online at http://www.arb.ca.gov/ch/landuse.htm. Accessed April 7, 2015.

[93] San Francisco Planning Department and San Francisco Department of Public Health, *2014 Air Pollutant Exposure Zone Map (Memo and Map)*, April 9, 2014. These documents are part of San Francisco Board of Supervisors File No. 14806, Ordinance No. 224-14, Amendment to Health Code Article 38.

special consideration to determine whether the project's activities would add a substantial amount of emissions to areas already adversely affected by poor air quality.

The Air Pollutant Exposure Zone was also used as the basis in approving a series of amendments to the San Francisco Environment and Administrative Codes, generally referred to as the Clean Construction Ordinance, or Environment Code Section 25 (Ordinance 28-15, effective April 19, 2015). The purpose of the Clean Construction Ordinance is to protect the public health, safety and welfare by requiring contractors on City public works projects to reduce diesel and other particulate matter emissions generated by construction activities. For projects located within the Air Pollutant Exposure Zone, like the proposed project, the Ordinance requires equipment to meet or exceed Tier 2 standards for off-road engines and operate with the most effective ARB verified diesel emission control strategy (VDECS).

IMPACTS

Project-related air quality impacts fall into two categories: short-term impacts from construction and long-term impacts from project operation. The following addresses construction-related air quality impacts resulting from the proposed project.

Construction Air Quality Impacts

Impact AQ-1: The proposed project's construction activities would generate fugitive dust and criteria air pollutants, but would not violate an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. ***(Less than Significant)***

Construction activities (short-term) typically result in emissions of ozone precursors and particulate matter in the form of dust (fugitive dust) and exhaust (e.g., vehicle tailpipe emissions). Emissions of ozone precursors and particulate matter are primarily a result of the combustion of fuel from on-road and off-road vehicles. However, ROGs are also emitted from activities that involve painting, other types of architectural coatings, or asphalt paving. Implementation of the proposed project would require demolition of three existing buildings on the project building site. After demolition is complete, the proposed project would include the construction of an approximately 200,000 gsf rehabilitation and detention facility (RDF) and subterranean tunnel, the construction of which would require excavation and off-site transport of approximately 18,000 cubic yards of soil. During the project's approximately 30-month construction period, construction activities would have the potential to result in emissions of ozone precursors and particulate matter, as discussed below.

Fugitive Dust

Project-related demolition, excavation, grading and other construction activities may cause wind-blown dust that could contribute particulate matter into the local atmosphere. Although there are

federal standards for air pollutants and implementation of state and regional air quality control plans, air pollutants continue to have impacts on human health throughout the country. California has found that particulate matter exposure can cause health effects at lower levels than national standards. The current health burden of particulate matter demands that, where possible, public agencies take feasible available actions to reduce sources of particulate matter exposure.

According to the ARB, reducing particulate matter $PM_{2.5}$ concentrations to state and federal standards of 12 $\mu g/m^3$ from 1998-2000 levels in the San Francisco Bay Area would prevent between 200 and 1,300 premature deaths.[94]

Dust can be an irritant causing watering eyes or irritation to the lungs, nose and throat. Demolition, excavation, grading and other construction activities can cause wind-blown dust that adds particulate matter to the local atmosphere. Depending on exposure, adverse health effects can occur due to this particulate matter in general and also due to specific contaminants such as lead or asbestos that may be constituents of soil.

In response, the San Francisco Board of Supervisors approved a series of amendments to the San Francisco Building and Health Codes generally referred hereto as the Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008) with the intent of reducing the quantity of dust generated during site preparation, demolition, and construction work in order to protect the health of the general public and of onsite workers, minimize public nuisance complaints, and to avoid orders to stop work by the Department of Building Inspection (DBI).

The Ordinance requires that all site preparation work, demolition, or other construction activities within San Francisco that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specified dust control measures whether or not the activity requires a permit from DBI. The Director of DBI may waive this requirement for activities on sites less than one-half acre that are unlikely to result in any visible wind-blown dust. The proposed project would not be exempt since it exceeds these criteria with a project building site of almost 1 acre (40,276 sf), and about 18,000 cubic yards of excavated material would be removed.

In compliance with the Construction Dust Control Ordinance, the project sponsor and the contractor responsible for construction activities at the project site would be required to use the following practices to control construction dust on the site or other practices that would result in equivalent dust control that are acceptable to the Director. Dust suppression activities may include watering all active construction areas sufficiently to prevent dust from becoming airborne; increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. During excavation and dirt-moving activities, contractors must wet sweep or vacuum the streets, sidewalks,

[94] ARB, *Methodology for Estimating Premature Deaths Associated with Long-term Exposure to Fine Airborne Particulate Matter in California*, Staff Report, Table 4c, October 24, 2008.

paths and intersections where work is in progress at the end of the workday. Inactive stockpiles (where no disturbance occurs for more than seven days) greater than 10 cubic yards or 500 square feet of excavated material, backfill material, import material, gravel, sand, road base, and soil must be covered with a 10 mil (0.01 inch) polyethylene plastic (or equivalent) tarp, braced down, or use other equivalent soil stabilization techniques. San Francisco Ordinance 175-91 restricts the use of potable water for soil compaction and dust control activities undertaken in conjunction with any construction or demolition project occurring within the boundaries of San Francisco, unless permission is obtained from the San Francisco Public Utilities Commission (SFPUC). Non-potable water must be used for soil compaction and dust control activities during project construction and demolition. The SFPUC operates a recycled water-truck fill station at the Southeast Water Pollution Control Plant that provides recycled water for these activities at no charge.

For projects over one half-acre, such as the proposed project, the Dust Control Ordinance requires that the project sponsor submit a Dust Control Plan for approval by the San Francisco Department of Public Health. DBI will not issue a building permit without written notification from the Director of Public Health that the applicant has a site-specific Dust Control Plan, unless the Director waives the requirement. Interior-only tenant improvement projects that are over one-half acre in size that will not produce exterior visible dust are exempt from the site-specific Dust Control Plan requirement.

The site-specific Dust Control Plan would require the project sponsor to: submit a map to the Director of Public Health showing all sensitive receptors within 1,000 feet of the site; wet down areas of soil at least three times per day; provide an analysis of wind direction and install upwind and downwind particulate dust monitors; record particulate monitoring results; hire an independent, third-party to conduct inspections and keep a record of those inspections; establish shut-down conditions based on wind, soil migration, etc.; establish a hotline for surrounding community members who may be potentially affected by project-related dust; limit the area subject to construction activities at any one time; install dust curtains and windbreaks on the property lines, as necessary; limit the amount of soil in hauling trucks to the size of the truck bed and securing with a tarpaulin; enforce a 15 mph speed limit for vehicles entering and exiting construction areas; sweep affected streets with water sweepers at the end of the day; install and utilize wheel washers to clean truck tires; terminate construction activities when winds exceed 25 miles per hour; apply soil stabilizers to inactive areas; and sweep off adjacent streets to reduce particulate emissions. The project sponsor would be required to designate an individual to monitor compliance with these dust control requirements. Compliance with the regulations and procedures set forth by the San Francisco Dust Control Ordinance would ensure that potential dust-related air quality impacts would be reduced to a less-than-significant level and no mitigation is necessary.

Criteria Air Pollutants

As discussed above, construction activities would result in emissions of criteria air pollutants from the use of off- and on-road vehicles and equipment. To assist lead agencies in determining whether short-term construction-related air pollutant emissions require further analysis as to whether the project may exceed the criteria air pollutant significance thresholds shown in **Table 12**, p. 114, the BAAQMD, in its *California Environmental Quality Act Air Quality Guidelines* (May 2011) (*CEQA Air Quality Guidelines*), developed screening criteria. If a proposed project meets the screening criteria, then construction of the proposed project would result in less-than-significant criteria air pollutant impacts. A project that exceeds the screening criteria may require a detailed air quality assessment to determine whether criteria air pollutant emissions would exceed significance thresholds. The *CEQA Air Quality Guidelines* note that the screening levels are generally representative of new development on greenfield[95] sites without any form of mitigation measures taken into consideration. In addition, the screening criteria do not account for project design features, attributes, or local development requirements that could also result in lower emissions.

During the project's approximately 30-month construction period, project construction would require demolition, excavation, and a number of off-site construction truck trips to haul away approximately 18,000 cubic yards of soil and about one-fourth of the demolition materials.[96] As identified in the BAAQMD's *CEQA Air Quality Guidelines*, the construction criteria air pollutant screening size for a wide range of commercial, office, and hospital uses is 277,000 sf,[97] which is the most similar type of construction to the proposed RDF; the proposed RDF would be below this screening size. Generally, quantification of construction-related criteria air pollutant emissions is not required. However, excavation and export of approximately 18,000 cubic yards of soil exceeds the 10,000-cubic-yard import and export screening criterion for construction. Therefore, a quantitative analysis was conducted.

Construction-related criteria air pollutants generated by the proposed project were quantified using the California Emissions Estimator Model (CalEEMod).[98] The model was developed, including default data (e.g., emission factors, meteorology, etc.), in collaboration with California air districts' staff. Default assumptions were used where project-specific information was unknown. Construction of the proposed project would occur over approximately 30 months. Emissions were converted from tons/year to pounds (lbs)/day using the estimated construction duration of 640

[95] A greenfield site refers to agricultural or forest land or an undeveloped site earmarked for commercial, residential, or industrial projects.

[96] About 75 percent of the demolition materials would not be hauled off-site because these materials are proposed to be reused on-site.

[97] BAAQMD, *CEQA Air Quality Guidelines*, Table 3-1 - Criteria Air Pollutants and Precursors and GHG Screening Level Sizes, pp. 3-2 to 3-3.

[98] CalEEMod model outputs are provided in Appendix F of this PMND.

working days. As shown in **Table 13: Estimated Average Daily Construction Emissions**, unmitigated project construction emissions would be below the thresholds of significance for criteria air pollutants, and would result in a less-than-significant construction criteria air pollutant impact and no mitigation is necessary.

Table 13: Estimated Average Daily Construction Emissions

Unmitigated Emissions	Projected Daily Emissions (Pounds per Day)[1]			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Project Average Daily Emissions – 2017	1.27	21.18	0.28	0.28
Project Average Daily Emissions – 2018	2.48	22.43	0.46	0.46
Project Average Daily Emissions – 2018	19.42	15.00	0.30	0.29
Significance Threshold	54	54	82	54

Note:
[1] Emission factors were generated by CalEEMod model for San Francisco County (see Appendix F). PM_{10} and $PM_{2.5}$ estimates only represent exhaust particulate emissions (not fugitive). The unmitigated emissions assume compliance with the City's Construction Dust Control Ordinance and Clean Construction Ordinance (Environment Code Section 25 or Ordinance 28-15, effective April 19, 2015), which includes use of U.S. EPA Tier 2 engines and ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS).

Source: Orion Environmental Associates, 2015

Impact AQ-2: The proposed project's construction activities would generate toxic air contaminants, including diesel particulate matter, which would expose sensitive receptors to substantial pollutant concentrations. ***(Less than Significant)***

The project site is located within an Air Pollutant Exposure Zone, as described above. Sensitive receptors are listed in **Table 14: Sensitive Receptors on or in the Vicinity of the Project Site**.

Table 14: Sensitive Receptors on or in the Vicinity of the Project Site

Type of Sensitive Receptor	Address	Direction from Site
Sensitive Receptors on the HOJ Site		
Residential	CJ#3 and CJ#4	West of proposed RDF
Sensitive Receptors on the Project Building Site		
Residential (SRO Building)	480-484 Sixth Street	Southeast of proposed RDF
Sensitive Receptors in the immediate vicinity of the Project Building Site		
Residential	CJ#1 and CJ#2	West of proposed RDF
Sensitive Receptors 170 Feet or More from Project Site		
Residential	318-320 Harriet Street	South across Bryant Street
Residential	516 Sixth Street	South across Bryant Street
Residential	17-19 Boardman Place	South across Bryant Street
Residential	52 Gilbert Street	South across Bryant Street
Residential	128 Morris Street	Southeast across Bryant Street
Bessie Carmichael Elementary School	45 Cleveland Street	approximately 470 feet north (across I-80 freeway)

Source: Orion Environmental Associates, 2015

On-site sensitive receptors include the SRO building located at 480-484 Sixth Street (southeast of the proposed RDF)[99] and inmates housed in the CJ#3/CJ#3 on the 6th and 7th floors of the HOJ building (west of the proposed RDF). Off-site sensitive receptors in the project vicinity include female inmates housed in the CJ#1/CJ#2 building (west of the proposed RDF), residences to the south of the site (located 170 feet or more from the project site) and Bessie Carmichael Elementary School (located about 470 feet north of the project site).

Off-road equipment (which includes construction-related equipment) is a large contributor to DPM emissions in California, although since 2007, the ARB has found the emissions to be substantially lower than previously expected.[100] Newer and more refined emission inventories have substantially lowered the estimates of DPM emissions from off-road equipment such that off-road equipment is now considered the fourth largest source of DPM emissions in California.[101] For example, revised PM emissions (of which DPM is a major component) for the SFBAAB for the year 2010 have decreased by 83 percent from previous 2010 emissions estimates.[102] Approximately half of the reduction can be attributed to the economic recession and approximately half can be attributed to updated assumptions independent of the economic recession (e.g., updated methodologies used to better assess construction emissions).[103]

Additionally, a number of federal and state regulations are requiring cleaner off-road equipment. Specifically, both the USEPA and California have set emissions standards for new off-road equipment engines, ranging from Tier 1 to Tier 4. Tier 1 emission standards were phased in between 1996 and 2000 and Tier 4 Interim and Final emission standards for all new engines will be phased in between 2008 and 2015. To meet the Tier 4 emission standards, engine manufacturers will be required to produce new engines with advanced emission-control technologies. Although the full benefits of these regulations will not be realized for several years, the USEPA estimates that by implementing the federal Tier 4 standards, NO_x and PM emissions will be reduced by more than 90 percent.[104] Furthermore, California regulations limit maximum idling times to five minutes, which further reduces public exposure to NO_x and PM emissions.[105]

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[99] The three-story SRO building is currently in residential use but could eventually be converted to office uses.

[100] ARB, *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments to the Regulation for In-Use Off-Road Diesel-Fueled Fleets and the Off-Road Large Spark-Ignition Fleet Requirements*, October 2010, pp. 1 -2 and p. 13 (Figure 4)

[101] Ibid, p. 13 (Figure 4).

[102] ARB, "In-Use Off-Road Equipment, 2011 Inventory Model." Available online at http://www.arb.ca .gov/msei/categories.htm#inuse_or_category. Query accessed April 2, 2012.

[103] ARB, *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments to the Regulation for In-Use Off-Road Diesel-Fueled Fleets and the Off-Road Large Spark-Ignition Fleet Requirements*, October 2010, p. 2.

[104] United States Environmental Protection Agency, "Clean Air Nonroad Diesel Rule: Fact Sheet," May 2004.

[105] California Code of Regulations, Title 13, Division 3, §2485.

In addition, construction activities do not lend themselves to analysis of long-term health risks because of their temporary and variable nature. As explained in the BAAQMD's *CEQA Air Quality Guidelines*:

> "Due to the variable nature of construction activity, the generation of TAC emissions in most cases would be temporary, especially considering the short amount of time such equipment is typically within an influential distance that would result in the exposure of sensitive receptors to substantial concentrations. Concentrations of mobile-source diesel PM emissions are typically reduced by 70 percent at a distance of approximately 500 feet (ARB 2005). In addition, current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. This results in difficulties with producing accurate estimates of health risk."[106]

Therefore, project-level analyses of construction activities have a tendency to produce overestimated assessments of long-term health risks. Within Air Pollutant Exposure Zones, as discussed above on pp. 117-119, additional construction activity may adversely affect populations that are already at a higher risk for adverse long-term health effects from existing sources of air pollution.

The proposed project would require construction activities for the approximate 30-month construction period. Project construction activities would result in short-term emissions of DPM and other TACs. The project site is located in an area that already experiences poor air quality and project construction activities would generate additional air pollution, affecting nearby sensitive receptors and resulting in a significant impact. As described on p. 119, a series of amendments to the San Francisco Environment and Administrative Codes, generally referred to as the Clean Construction Ordinance, were recently adopted. For projects located within the Air Pollutant Exposure Zone, like the proposed project, the Ordinance requires equipment to meet or exceed Tier 2 standards for off-road engines and operate with the most effective ARB-verified diesel emission control strategy (VDECS). As a result of required compliance with the City's Clean Construction Ordinance, the proposed project would have **less than significant** construction-related air quality impacts. No mitigation measures are necessary.

Operational Air Quality Impacts

Land use projects typically result in emissions of criteria air pollutants and TACs primarily from an increase in motor vehicle trips. However, land use projects may also result in criteria air pollutants and TACs from combustion of natural gas, landscape maintenance, use of consumer products, and architectural coatings. The following addresses air quality impacts resulting from operation of the proposed project.

[106] BAAQMD, *CEQA Air Quality Guidelines*, p. 8-6.

Impact AQ-3: During project operations, the proposed project would result in emissions of criteria air pollutants, but not at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. ***(Less than Significant)***

As discussed above in **Impact AQ-1**, the BAAQMD, in its *CEQA Air Quality Guidelines* (May 2011), has developed screening criteria to determine whether a project requires an analysis of project-generated criteria air pollutants. If all the screening criteria are met by a proposed project, then the lead agency or applicant does not need to perform a detailed air quality assessment.

The proposed project includes the development of an approximately 200,000-gsf, 5-story RDF and subterranean tunnel connecting to the existing HOJ. While the proposed project would replace the existing CJ#3 and CJ#4, it would reduce their capacity by 30 percent, and this reduction, along with demolition of existing uses on the project building site, would result in a net reduction in approximately 47 weekday p.m. peak hour vehicle trips. Although the proposed project would not increase criteria air pollutant emissions associated with vehicle traffic (mobile sources), it would generate on-site area sources (i.e., natural gas combustion for space and water heating, and combustion of other fuels by building and grounds maintenance equipment), energy usage, and testing of a backup diesel generator. Operational-related criteria air pollutants generated by the proposed project were also quantified using CalEEMod (see Appendix F of this PMND). Default assumptions were used where project-specific information was unknown.

The daily and annual emissions associated with operation of the proposed project are shown in T**able 15: Estimated Daily and Annual Regional Emissions (2020)**. **Table 15** also includes the thresholds of significance the City utilizes.

As shown in the table, the proposed project would not exceed any of the significance thresholds for criteria air pollutants, and would result in a **less-than-significant** impact with respect to criteria air pollutants.

Impact AQ-4: The proposed project's operations would generate toxic air contaminants, including diesel particulate matter, exposing sensitive receptors to substantial air pollutant concentrations. ***(Less than Significant with Mitigation)***

The project site is within an Air Pollutant Exposure Zone, as described above. Sensitive receptors on the project site and in its vicinity are listed in **Table 14** on p. 123. On-site sensitive receptors include the SRO building located at 480-484 Sixth Street (southeast of project RDF)[107]. Off-site sensitive receptors include the female inmates housed in the CJ#1/CJ#2 building (west of the proposed RDF), residences to the south of the project site (located 170 feet or more from the project

[107] The three-story SRO building is currently in residential use but could eventually be converted to office and ground-floor retail uses.

Table 15: Estimated Daily and Annual Regional Emissions (2020)

	Daily Projected Emissions (Pounds per Day)			
	ROG	**NO_X**	**PM_{10}**	**$PM_{2.5}$**
Project Area-Source Emissions	5.55	0.00	0.00	0.00
Project Mobile-Source (Vehicle) Emissions[1]	-	-	-	-
Project Energy Emissions	0.60	5.43	0.41	0.41
Emergency Diesel-Fueled Generator	0.08	4.44	0.08	0.08
Total	6.23	9.87	0.49	0.49
Significance Threshold	**54**	**54**	**82**	**54**
	Annual Projected Emissions (Tons per Year)			
	ROG	**NO_X**	**PM_{10}**	**$PM_{2.5}$**
Project Area-Source Emissions	1.01	0.00	0.00	0.00
Project Mobile-Source (Vehicle) Emissions[1]	-	-	-	-
Project Energy Emissions	0.11	0.99	0.08	0.08
Emergency Diesel-Fueled Generator	0.01	0.81	0.01	0.01
Total	1.13	1.80	0.09	0.09
Significance Threshold	**10**	**10**	**15**	**10**

Note:

[1] Although the traffic impact analysis for this project estimates a reduction in trip generation for the proposed project, no reduction in mobile source emissions has been included in this analysis in order to reflect a more conservative (worst-case) analysis. Emergency generator emissions assume operation of 50 hours per year for testing.

Source: Orion Environmental Associates, 2015

site across Bryant Street) and Bessie Carmichael Elementary School (located about 470 feet north of the project site on the other side of the I-80 freeway).

Sources of Toxic Air Contaminants

Vehicle Trips: Individual projects result in emissions of toxic air contaminants primarily as a result of an increase in vehicle trips. The BAAQMD considers roads with less than 10,000 vehicles per day "minor, low-impact" sources that do not pose a significant health impact even in combination with other nearby sources and recommends that these sources be excluded from the environmental analysis. The proposed project would result in a net reduction in daily vehicle trips and thus would not result in 10,000 vehicles per day on local roads. Therefore, an assessment of project-generated TACs resulting from vehicle trips is not required. Traffic from the proposed project would not generate a substantial amount of TAC emissions that could affect nearby sensitive receptors.

On-site Diesel Generator: The proposed project would include a backup emergency generator. Emergency generators are regulated by the BAAQMD through its New Source Review (Regulation 2, Rule 5) permitting process. The project sponsor would be required to obtain applicable permits to operate an emergency generator from the BAAQMD. Although emergency generators are

intended to be used only in periods of power outages, monthly testing of the generator would be required. The BAAQMD limits testing to no more than 50 hours per year. Additionally, as part of the permitting process, the BAAQMD would limit the excess cancer risk from any facility to no more than ten per one million population and would require any source that would result in an excess cancer risk greater than one per one million population to install Best Available Control Technology for Toxics (TBACT). However, because the project site is located in an area that already experiences poor air quality, the proposed emergency back-up generator has the potential to expose sensitive receptors to substantial concentrations of diesel emissions, a known TAC, resulting in a significant air quality impact. Implementation of **Mitigation Measure M-AQ-4: Best Available Control Technology for Diesel Generators** would reduce the magnitude of this impact to a less-than-significant level by reducing emissions by 89 to 94 percent compared to equipment with engines that do not meet any emission standards and without a VDECS. Therefore, although the proposed project would add a new source of TACs within an area that already experiences poor air quality, implementation of **Mitigation Measure M-AQ-4** would reduce this impact to a less-than-significant level.

> **Mitigation Measure M-AQ-4: Best Available Control Technology for Diesel Generators**
> The project sponsor shall ensure that the backup diesel generator meet or exceed one of the following emission standards for particulate matter: (1) Tier 4 certified engine, or (2) Tier 2 or Tier 3 certified engine that is equipped with a California Air Resources Board (ARB) Level 3 Verified Diesel Emissions Control Strategy (VDECS). A non-verified diesel emission control strategy may be used if the filter has the same particulate matter reduction as the identical ARB verified model and if the Bay Area Air Quality Management District (BAAQMD) approves of its use. The project sponsor shall submit documentation of compliance with the BAAQMD New Source Review permitting process (Regulation 2, Rule 2, and Regulation 2, Rule 5) and the emission standard requirement of this mitigation measure to the Planning Department for review and approval prior to issuance of a permit for a backup diesel generator from any City agency.

Siting Sensitive Land Uses

The proposed project would include development of podular housing units, which is considered a sensitive land use for purposes of air quality evaluation. For sensitive use projects within the Air Pollutant Exposure Zone as defined by Article 38, such as the proposed project, Article 38 requires that the project sponsor submit an Enhanced Ventilation Proposal for approval by the Department of Public Health (DPH) that achieves protection from $PM_{2.5}$ equivalent to that associated with a Minimum Efficiency Reporting Value 13 MERV filtration. DBI will not issue a building permit without written notification from the Director of Public Health that the applicant has an approved Enhanced Ventilation Proposal.

In compliance with Article 38 of the Health Code, the project sponsor has submitted an initial application to DPH.[108] The regulations and procedures set forth in Article 38 would ensure that exposure to sensitive receptors would not be significant. Therefore impacts related to siting new sensitive land uses would be **less than significant** through compliance with Article 38.

Impact AQ-5: The proposed project would not conflict with, or obstruct implementation of, the 2010 Clean Air Plan. ***(Less than Significant)***

The most recently adopted air quality plan for the SFBAAB is the *2010 Clean Air Plan* (2010 CAP). The 2010 CAP is a road map that demonstrates how the San Francisco Bay Area will achieve compliance with the state ozone standards as expeditiously as practicable and how the region will reduce the transport of ozone and ozone precursors to neighboring air basins. In determining consistency with the 2010 CAP, this analysis considers whether the project would: (1) support the primary goals of the 2010 CAP; (2) include applicable control measures from the 2010 CAP; and (3) avoid disrupting or hindering implementation of control measures identified in the 2010 CAP.

To meet the primary goals, the 2010 CAP recommends specific control measures and actions. These control measures are grouped into various categories and include stationary and area source measures, mobile source measures, transportation control measures, land use measures, and energy and climate measures. The 2010 CAP recognizes that to a great extent, community design dictates individual travel mode and that a key long-term control strategy to reduce emissions of criteria pollutants, air toxics, and GHGs from motor vehicles is to channel future Bay Area growth into vibrant urban communities where goods and services are close at hand, and people have a range of viable transportation options. To this end, the 2010 CAP includes 55 control measures aimed at reducing air pollution in the SFBAAB.

The measures most applicable to the proposed project are transportation control measures and energy and climate control measures. The proposed project's impacts with respect to GHGs are discussed in Section E.8, Greenhouse Gas Emissions, which demonstrates that the proposed project would comply with the applicable provisions of the City's Greenhouse Gas Reduction Strategy.

The proposed project would replace the existing rehabilitation and detention facilities (CJ#3 and CJ#4) located on 6th and 7th floors of the existing HOJ with a new 5-story, 200,000 gsf RDF in immediate proximity to the existing HOJ instead of expanding detention facilities at a more distant location, thereby avoiding increases in automobile trips and vehicle miles traveled. By replacing CJ#3 and CJ#4, the proposed project would be more energy efficient, thereby reducing energy-related criteria pollutant emissions associated with operation of the existing facility. Also, the project building site is located in proximity to viable transportation options, which would ensure

[108] Application to the San Francisco Department of Public Health for Article 38 Compliance Assessment, dated April 1, 2015. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.0198E.

that visitors and workers could bicycle, walk, or ride transit to and from the project building site instead of taking trips via private automobile. In addition, the proposed project's 30 percent reduction in beds would reduce trip generation potential and therefore, would not increase mobile source air pollutant emissions. Furthermore, the proposed project would not conflict with plans, policies, and regulations adopted for the purpose of avoiding or mitigating air quality impacts, such as the *San Francisco Sustainability Plan* and the 2010 CAP, as discussed in Section C, Compatibility with Existing Zoning and Plans.

Examples of projects that could cause the disruption or delay of 2010 CAP control measures are projects that would preclude the extension of a transit line or bike path, or projects that propose excessive parking beyond parking requirements. The proposed RDF would retain proximity and connection to the courts in the existing HOJ, reduce trip generation potential, and also be located near a concentration of local and regional transit service. It would not preclude the extension of a transit line or a bike path or any other transit improvement. As such, the proposed project would avoid disrupting or hindering implementation of control measures identified in the 2010 CAP.

For the reasons described above, the proposed project would not interfere with implementation of the 2010 CAP, and because the proposed project would be consistent with the applicable air quality plan that shows how the region will improve ambient air quality and achieve the state and federal ambient air quality standards, this impact would be **less than significant** and no mitigation is needed.

Impact AQ-6: The proposed project would not create objectionable odors that would affect a substantial number of people. ***(Less than Significant)***

Typical odor sources of concern include wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing facilities, fiberglass manufacturing facilities, auto body shops, rendering plants, and coffee roasting facilities. During construction, diesel exhaust from construction equipment would generate some odors, although construction-related odors would be temporary and would not persist upon project completion. Observation indicates that the project site is not substantially affected by sources of odors.[109] Additionally, the proposed RDF would not include the types of uses that generate objectionable odors. Therefore, the proposed project would not create significant sources of new odors and odor impacts would be **less than significant**.

Cumulative Impacts

Impact C-AQ-1: The proposed project, in combination with past, present, and reasonably foreseeable future development in the project area, would contribute to cumulative air quality impacts. ***(Less than Significant with Mitigation)***

[109] Orion Environmental Associates, site visit conducted on September 15, 2014.

As discussed above on p. 113, regional air pollution is by its very nature largely a cumulative impact. Emissions from past, present, and future projects contribute to the region's adverse air quality on a cumulative basis. No single project by itself would be sufficient in size to result in regional nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative adverse air quality impacts.[110] The project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants. Therefore, because the proposed project's construction (**Impact AQ-1**) and operational (**Impact AQ-3**) emissions would not exceed the project-level thresholds for criteria air pollutants, the proposed project would not be considered to result in a cumulatively considerable contribution to regional air quality impacts.

As discussed above, the project site is located in an area that already experiences poor air quality. The proposed project would replace CJ#3 and CJ#4 in the existing HOJ and relocate inmates to the proposed RDF. Since the proposed project would result in a 30 percent reduction in the combined capacity of existing CJ#3 and CJ#4, the proposed project would result in a reduction in the number of trips generated by the proposed RDF within an area already adversely affected by air quality. Therefore, the proposed project's traffic reduction would result in a beneficial contribution to cumulative health risk impacts on nearby sensitive receptors (no impact). Compliance with the Clean Construction Ordinance would reduce construction period emissions, and implementation of **Mitigation Measure M-AQ-4**, p. 128, which requires best available control technology to limit emissions from the project's emergency back-up generator, would reduce operational emissions. Furthermore, compliance with Article 38 would ensure that new sensitive receptors would not be exposed to cumulatively significant levels of air pollution. Implementation of these mitigation measures and adherence to the Clean Construction Ordinance and Article 38 would reduce the project's contribution to cumulative air quality impacts to a less-than-significant level.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
7. GREENHOUSE GAS EMISSIONS— Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐	☐
b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐	☐

[110] BAAQMD, *CEQA Air Quality Guidelines*, p. 2-1.

Greenhouse gas (GHG) emissions and global climate change represent cumulative impacts. GHG emissions cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature; instead, the combination of GHG emissions from past, present, and future projects have contributed and will contribute to global climate change and its associated environmental impacts.

The Bay Area Air Quality Management District (BAAQMD) has prepared guidelines and methodologies for analyzing GHGs. These guidelines are consistent with CEQA Guidelines Sections 15064.4 and 15183.5, which address the analysis and determination of significant impacts from a proposed project's GHG emissions. CEQA Guidelines Section 15064.4 allows lead agencies to rely on a qualitative analysis to describe GHG emissions resulting from a project. CEQA Guidelines Section 15183.5 allows for public agencies to analyze and mitigate GHG emissions as part of a larger plan for the reduction of greenhouse gases and describes the required contents of such a plan. Accordingly, San Francisco has prepared *Strategies to Address Greenhouse Gas Emissions* (GHG Reduction Strategy),[111] which presents a comprehensive assessment of policies, programs, and ordinances that collectively represent San Francisco's Qualified GHG Reduction Strategy in compliance with CEQA Guidelines. The actions outlined in the strategy have resulted in a 14.5 percent reduction in GHG emissions in 2010 compared to 1990 levels, exceeding the year 2020 reduction goals outlined in the BAAQMD's *2010 Clean Air Plan,* Executive Order S-3- 05,[112] and Assembly Bill 32 (AB 32) (also known as the Global Warming Solutions Act).[113, 114]

Given that the City's local greenhouse gas reduction targets are more aggressive than the State and Region's 2020 GHG reduction targets and are consistent with the long-term 2050 reduction targets, the City's Greenhouse Gas Reduction Strategy is consistent with the goals of EO S-3-05, AB 32, and the Bay Area 2010 Clean Air Plan. Therefore, proposed projects that are consistent with the City's Greenhouse Gas Reduction Strategy would be consistent with the goals of EO S-3-05, AB 32, and the Bay Area 2010 Clean Air Plan, would not conflict with these plans, and would therefore not exceed San Francisco's applicable GHG threshold of significance.

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[111] San Francisco Planning Department, *Strategies to Address Greenhouse Gas Emissions in San Francisco*, 2010. The final document is available online at http://sfmea.sfplanning.org/GHG_ Reduction_Strategy.pdf. Accessed December 23, 2014.

[112] Executive Order S-3-05, sets forth a series of target dates by which statewide emissions of GHGs need to be progressively reduced, as follows: by 2010, reduce GHG emissions to 2000 levels (approximately 457 million MTCO2E); by 2020, reduce emissions to 1990 levels (estimated at 427 million MTCO2E); and by 2050 reduce emissions to 80 percent below 1990 levels (approximately 85 million MTCO2E).

[113] San Francisco Department of Environment (DOE), *San Francisco Climate Action Strategy, 2013 Update*. Available online at http://www.sfenvironment.org/sites/default/files/engagement_files/ sfe_cc_ClimateActionStrategyUpdate2013.pdf. Accessed December 23, 2014.

[114] The *Clean Air Plan*, Executive Order S-3-05, and Assembly Bill 32 goals, among others, are to reduce GHGs in the year 2020 to 1990 levels.

The following analysis of the proposed project's impact on climate change focuses on the project's contribution to cumulatively significant GHG emissions. Given the analysis is in a cumulative context, this section does not include an individual project-specific impact statement.

Impact C-GG-1: The proposed project would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions. (*Less than Significant*)

Individual projects contribute to the cumulative effects of climate change by directly or indirectly emitting GHGs during construction and operational phases. Direct operational emissions include GHG emissions from new vehicle trips and area sources (natural gas combustion). Indirect emissions include emissions from electricity providers, energy required to pump, treat, and convey water, and emissions associated with waste removal, disposal, and landfill operations.

The proposed project, which calls for the demolition of three of the five existing buildings on the project building site and the construction of a new 5-story, 200,000-gsf RDF and a subterranean tunnel connecting the proposed RDF to the existing HOJ, would result in an incremental decrease in activity on site. Therefore, implementation of the proposed project would result in a reduction in vehicle trips (mobile sources) and commercial and office space contributing to annual long-term decreases in GHGs. Furthermore, future operation of the proposed RDF would be subject to more stringent resource-efficiency controls, likely resulting in an incremental decrease in energy use, water use and wastewater treatment, and solid waste disposal. However, demolition and construction activities would result in temporary increases in GHG emissions.

The proposed project would be subject to and required to comply with several regulations adopted to reduce GHG emissions as identified in the GHG Reduction Strategy. The regulations that are applicable to the proposed project include, but are not limited to, the Commuter Benefits Ordinance, Emergency Ride Home Program, Healthy Air and Clean Transportation Ordinance, Biodiesel for Municipal Fleets Executive Directive, Clean Construction Ordinance, Street Tree Planting Requirements for New Construction, Mandatory Recycling and Composting Ordinance, SF Green Building Requirements for Indoor Water Use Reduction, Energy Performance, Renewable Energy, and Stormwater Management.

These regulations, as outlined in San Francisco's *Strategies to Address Greenhouse Gas Emissions*, have proven effective as San Francisco's GHG emissions have measurably reduced when compared to 1990 emissions levels, demonstrating that the City has met and exceeded EO S-3-05, AB 32, and the Bay Area 2010 Clean Air Plan GHG reduction goals for the year 2020. The proposed project was determined to be consistent with San Francisco's GHG Reduction

Strategy.[115] Other existing regulations, such as those implemented through AB 32, will continue to reduce a proposed project's contribution to climate change. Therefore, the proposed project's GHG emissions would not conflict with state, regional, and local GHG reduction plans and regulations, and thus the proposed project's contribution to GHG emissions would not be cumulatively considerable or generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment. As such, the proposed project would result in a less-than-significant impact with respect to GHG emissions. No mitigation measures are necessary.

In addition to complying with the City's regulations, the 2008 Green Building Ordinance requires that all City Departments prepare an annual department-specific climate action plan. The San Francisco Department of Public Works (DPW) and the Sheriff's Department have completed Climate Action Plans.

DPW builds and maintains the City's streets; plants and prunes over 40,000 trees; and designs, constructs, and maintains City buildings and public spaces. DPW owns 681 vehicles and equipment including cars, sport utility vehicles, light duty pickups, heavy duty pickups, trucks, light duty vans, heavy duty vans, heavy equipment, and small off-road equipment. The latest Climate Action Plan for DPW was completed in March 2014.[116] It includes operational greenhouse gas emissions reduction goals that encompass the energy used to power its vehicle fleet and facilities, and the energy used for the consumption of water (i.e., water pumps), the elimination of wastewater, and the production and handling of solid waste. These goals have been set in support of the City's overall efforts to reduce operational greenhouse gas emissions (as measured in units of carbon dioxide equivalents [CO_2e]) to 20 percent below 1990 levels by 2012, 25 percent from 2005 levels by 2017, 40 percent by 2025 and 80 percent by 2050. DPW's operational CO_2e reduction goals are measured against their 2008 baseline CO_2e emissions level (5,952.57 metric tons). The goals are as follows: a reduction to 5,357.2 metric tons by 2012 (10 percent); 5,178.62.2 metric tons by 2013 (13 percent); 5,000.05 by 2014 (16 percent); 4,464.33 by 2017 (25 percent), and 1,190.496 by 2050 (80 percent). Approximately 94 percent of DPW's CO_2e emissions in 2011-2012 were generated by the use of liquid fuel. In addition to continuing to design, maintain, and construct projects that meet Leadership in Energy and Environmental Design (LEED) Gold standards, DPW will focus on strategies to reduce the use of gasoline-powered vehicles and to transition the vehicle fleet to alternative fuel sources. Among its other practices that support Citywide efforts to reduce CO_2e emissions are carbon sequestration through the enhancement, and continued maintenance, of the urban forest; continuing efforts to achieve zero waste by 2020; and

[115] *Compliance Checklist Table for Greenhouse Gas Analysis: Table 2. Municipal Projects*, September 23, 2014. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

[116] San Francisco Department of Public Works, Climate Action Plan, Updated March 2014. Available online at http://www.sfenvironment.org/sites/default/files/fliers/files/sfe_cc_2014_dpw_cap_fy1213.pdf. Accessed January 13, 2015.

continuing the introduction of sustainable business practices, including the use of sustainable construction materials and methods.

The Sheriff's Department provides civil and criminal law enforcement services. The department operates five county jails as well as a number of other facilities such as the Sheriff's Training Facility at 120 14th Street and the Woman's Resource Center at 935 Bryant Street. The Sheriff's Department owns approximately 131 vehicles and equipment including cars, sport utility vehicles, buses, light duty pickups, heavy duty pickups, large trucks, light duty vans, heavy duty vans, and heavy equipment. The latest Climate Action Plan for the Sheriff's Department was completed in April 2014.[117] Similar to other City departments, the department's contributions to the City's overall efforts to reduce operational greenhouse gas emissions are focused on energy used to power its vehicle fleet and facilities, and the energy used to manage water, wastewater, and solid waste services. For 2012-2013 the Sheriff's Department reported a CO_2e emissions reduction of 6 percent (or 203 metric tons) from 2011-2012. This reduction was generated as a result of various facility improvements to improve energy efficiency and reduce water consumption. Due to the law enforcement status of a portion of the department's vehicle fleet, the City's Healthy Air and Clean Transportation Ordinance, which promotes reductions in vehicle usage, mandates annual reductions to the vehicle fleet size, and promotes the transition of vehicle fleets from gasoline to alternative fuels, is not fully applicable. However, the Sheriff's Department will continue its practice of purchasing green vehicles and turning in the oldest cars in the fleet in order to incrementally reduce CO_2e emissions, and will continue outreach efforts in support of the City's Transit First Policy. Among its other practices that support citywide efforts to reduce CO_2e emissions are the incorporation of composting into CJ#5 in San Bruno as part of the department-wide effort of achieving zero waste by 2020 and development of a Green Product Purchasing Policy.

Topics:		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
8.	**WIND AND SHADOW—Would the project:**					
a)	Alter wind in a manner that substantially affects public areas?	☐	☐	☒	☐	☐
b)	Create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas?	☐	☐	☒	☐	☐

[117] San Francisco Sheriff's Department, Climate Action Plan, April 8, 2014. Available online at http://www.sfenvironment.org/sites/default/files/fliers/files/sfe_cc_2014_sfsd_cap_fy1213.pdf. Accessed January 13, 2015.

Wind

This subsection discusses the proposed project's impacts on ground-level wind currents adjacent to and near the project building site and is based on a screening-level wind assessment prepared by Rowan, Williams, Davies & Irwin, Inc. (RWDI).[118]

Impact WS-1: The proposed project would not alter wind in a manner that substantially affects public areas. (*Less than Significant*)

Background

The difference in atmospheric pressure between two points on the earth causes air masses to move from the area of higher pressure to the area of lower pressure. This movement of air masses results in wind currents. The direction and speed of wind currents can be altered by natural features of the land or by buildings and structures. Groups of buildings clustered together tend to act as obstacles that reduce wind speeds; the heights, massing, and orientations or profiles of the buildings are some of the factors that can affect wind speeds.

When a building is much taller than those around it, rather than a similar height, it can intercept and redirect winds downward that might otherwise flow overhead. The winds can be directed down the vertical face of the building to ground level, and these redirected winds can be relatively strong and relatively turbulent. The massing of a building can affect wind speeds. In general, slab-shaped buildings have the greatest potential to accelerate ground-level winds, while buildings that have unusual shapes or are more geometrically complex tend to have lesser effects. The orientation or profile of a building is another factor that can affect wind speeds. When the wide face of a building, as opposed to its narrow face, is oriented toward the prevailing wind direction, the building has more surface area to intercept and redirect winds down to ground level, thus increasing the probability of strong and turbulent winds at ground level. Sheltering effects on existing and/or proposed structures occur when an existing and/or proposed structure is located/sited in the immediate path of the prevailing winds. The degree of the effect is generally attributable to height differences, proximity, and building form.

The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Winds up to 4 miles per hour (mph) have no noticeable effect on pedestrian comfort. With winds from 4 to 8 mph, wind is felt on the face. Winds from 8 to 13 mph will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. Winds from 13 to 19 mph will raise loose paper, dust, and dry soil, and will disarrange hair. With winds from 19 to 26 mph, the force of the wind will be felt on the body. With 26- to 34-mph winds, umbrellas are

[118] Rowan, Williams, Davies & Irwin, Inc. (RWDI), *Rehabilitation and Detention Facility Replacement Jail Screening Level Wind Analysis*, February 25, 2015, (hereinafter "*Wind Memo*"). See Appendix G of this PMND.

used with difficulty, hair is blown straight, walking steadily is difficult, and wind noise is unpleasant. Winds over 34 mph increase difficulty with balance, and gusts can be hazardous and can blow people over.

Wind impacts are generally caused by large building masses extending substantially above their surroundings, and by buildings oriented so that a large wall catches a prevailing wind, particularly if such a wall includes little or no articulation. In addition, the introduction of new structures can create shelters from prevailing winds, which could be considered a beneficial effect. Oftentimes design features that provide sheltering effects are introduced to inform decisions related to the siting of outdoor open spaces and building access points. Average wind speeds in San Francisco are the highest in the summer and lowest in winter; however, the strongest peak winds occur in winter. Throughout the year the highest wind speeds occur in mid-afternoon and the lowest in the early morning. Westerly to northwesterly winds are the most frequent and strongest winds during all seasons. Of the primary wind directions, four have the greatest frequency of occurrence and also make up the majority of the strong winds that occur: the northwest, west-northwest, west, and west-southwest.

Assessment

The project building site currently contains two vacant lots, areas of surface parking, and five existing buildings: a one-story, 6,000-gross-square-foot [gsf] office building (444 Sixth Street); a one-story, 5,100-gsf commercial building (450 Sixth Street); a three-story, 7,150-gsf residential building with ground-floor retail (480 - 484 Sixth Street); a three-story, 16,500-gsf office building (800-804 Bryant Street and 498 Sixth Street); and a one-story, 2,000-gsf McDonald's restaurant (820 Bryant Street). Implementation of the proposed project would result in the demolition of three existing buildings (444 Sixth Street, 450 Sixth Street, and 820 Bryant Street). In their place a new 95-foot-tall (plus an additional 15-foot-tall mechanical penthouse) Rehabilitation and Detention Facility (RDF) would be constructed directly east of the existing eight-story, 117-foot-tall Hall of Justice (105-foot-tall building, plus an additional 12-foot-tall mechanical penthouse), located to the west of the project building site, across Harriet Street.

The scale of development in the vicinity of the project building site varies from one-story buildings to four- and five-story buildings interspersed with surface parking lots. To the west of and adjacent to the project building site (and in the direction of the prevailing winds, which come from the west-southwest through to northwest)[119], the existing Hall of Justice (at 117 feet tall) is the tallest building. To the northwest of and adjacent to the project building site, Interstate-80, the elevated freeway approximately 35 feet above grade, is also upwind. Further west (beyond the Hall of Justice) and north (beyond the elevated freeway platforms) the upwind vicinity is characterized primarily by one- to four-story structures. Dense, tall buildings exist to the distant west along Van

[119] RWDI, *Wind Memo*, p. 7.

Ness Avenue, to the northwest along Market Street, and to the north and northeast in the San Francisco downtown.[120] The block east of the project building site is occupied by one- and two-story buildings. The block south is occupied by one- to four-story buildings.

At the proposed height of 95 feet, the proposed RDF would be tall enough that it could affect ground-level wind currents adjacent to and near the project building site. The primary areas of concern are the proposed entrances and sidewalks where visitors and staff would congregate to access the proposed RDF. Wind conditions with and without the proposed RDF were assessed at the proposed public entry on Sixth Street; at the service and jail transport entries, which would be located at the proposed RDF's southwest and northeast corners, respectively; and along public sidewalks in the vicinity of the project building site.[121]

Since the proposed RDF would not be taller than the existing 117-foot-tall Hall of Justice, and due to the proposed RDF's sheltering effect from the prevailing wind directions (from the west-southwest through to northwest), wind conditions near the public entry and along the western sidewalk on Sixth Street would be acceptable.[122] For the same reason, wind conditions on the sidewalks adjacent to the existing buildings that would remain on the project building site block (the western sidewalk on Sixth Street and the northern sidewalk on Bryant Street) would also be acceptable. As compared to existing conditions, ground-level wind speeds at these locations could potentially decrease because of their location relative to the proposed RDF and the sheltering effect that it would provide from the prevailing winds.[123]

At the service and jail transport entries, located along the east side of Harriet Street and the south side of Ahern Way, respectively, the proposed RDF is expected to generate increased wind speeds on the Ahern Way and Harriet Street sidewalks adjacent to the proposed RDF. The increased wind speeds would occur because the prevailing winds would be deflected down and accelerate around the proposed RDF's southwest and northeast corners.[124] Additionally, the tall metal walls that would enclose the service entry along the east side of Harriet Street and the sally port at the northwest corner of the proposed RDF would most likely contribute to the increased wind speeds along the Ahern Way and Harriet Street sidewalks because they would catch the winds

[120] RWDI, *Wind Memo*, p. 3.
[121] RWDI, *Wind Memo*, p. 7.
[122] The wind comfort criteria indicate that wind speeds should not exceed, more than 10% of the time, 11 mph in substantial pedestrian use areas, and 7 mph in public seating areas. The wind hazard criterion requires that buildings not cause equivalent wind speeds to reach or exceed the hazard level of 26 mph as averaged from a single full hour of the year. The wind hazard criterion is based on winds that are measured for one hour and averaged corresponding to a one-minute average of 36 mph, to distinguish between the wind comfort conditions and hazardous winds. The Planning Code defines these wind speeds in terms of equivalent wind speeds, which are average wind speed (mean velocity), adjusted to include the level of gustiness and turbulence.
[123] Ibid.
[124] RWDI, *Wind Memo*, pp. 6-7.

downwashing off the northern and western façades of the proposed RDF. The service and jail transport areas and the sidewalks adjacent to them would have limited public use because they are intended primarily for vehicular ingress and egress. The increased wind speeds at these locations may exceed the wind comfort criteria from time to time, but are expected to meet the wind hazard criterion. If feasible, the expected increase in wind speeds in these locations could be limited to a degree by replacing the proposed solid metal walls with perforated screen walls (approximately 20 to 30 percent porous), which would be more effective than solid walls for wind control, and by moving the jail transport entry toward the east to be closer to Sixth Street.[125] A potential shift from solid metal walls to perforated screen walls for the service entry and sally port enclosures may not be feasible for the proposed RDF due to California Building Code requirements for adult detention facilities.

As a result of the sheltering effect from prevailing winds provided by the proposed RDF, ground-level wind speeds along the western sidewalk of Sixth Street and northern sidewalk of Bryant Street adjacent to the proposed RDF and the other existing building on the project building site would be expected to comply with the wind comfort criteria and would not be expected to result in an exceedance of the wind hazard criterion. In contrast, the deflection and downwashing of the prevailing winds by the proposed RDF would result in an increase in ground-level wind speeds along the Ahern Way and Harriet Street sidewalks and along the eastern sidewalk of Sixth Street. The increased wind speeds at these locations may exceed the wind comfort criteria intermittently but would not be expected to be substantial enough to exceed the wind hazard criterion.[126]

In conclusion, given its size and location, the proposed RDF would not be expected to substantially affect ground-level winds at its proposed Sixth Street public entry or along the western sidewalk of Sixth Street and the north sidewalk of Bryant Street. In addition, the proposed RDF would not be expected to cause hazardous winds to occur along the Ahern Way and Harriet Street sidewalks, the eastern sidewalk of Sixth Street, or at other public areas. Thus, the proposed project would result in a **less-than-significant impact** related to wind hazards.

Impact C-WS-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a cumulative wind impact. (*Less than Significant*)

Based on the discussion above, the proposed project, along with other potential and future development in the vicinity, would not result in a significant wind impact in the project vicinity. Thus, the proposed project, in combination with cumulative projects considered in this analysis, would not be expected to contribute considerably to adverse wind effects under cumulative conditions, and cumulative wind impacts would be less than significant.

[125] RWDI, *Wind Memo*, p. 7.
[126] RWDI, *Wind Memo*, pp. 7-8.

Shadow

This subsection discusses the proposed project's shadow impacts on outdoor recreation facilities and other public areas.

Impact WS-2: The proposed project would not create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas. (*Less than Significant*)

In 1984, San Francisco voters approved an initiative known as "Proposition K, The Sunlight Ordinance," which was codified in 1985 as Planning Code Section 295. Section 295 prohibits the approval of "any structure that would cast any shade or shadow upon any property under the jurisdiction of, or designated for acquisition by, the Recreation and Park Commission" unless the Planning Commission, with review and comment by the Recreation and Park Commission, has found that the shadows cast by a proposed project would not have an adverse impact on the use of the property. Section 295 does not apply to structures that do not exceed 40 feet in height. The period analyzed is from the first hour after sunrise until the last hour before sunset. The Planning Department generated a shadow fan[127] and determined that the proposed 95-foot-tall RDF (110 foot-tall building including the 15-foot-tall mechanical penthouse) could cast net new shadow on Victoria Manalo Draves Park, a property under the jurisdiction of the Recreation and Park Commission (see **Figure 18: Preliminary Shadow Fan**.)

The 2.52-acre rectangular Victoria Manalo Draves Park is a neighborhood-serving park located on Assessor's Block 3754/Lot 016 in a densely developed area of the South of Market neighborhood. It is located north of the project building site on the north side of Harrison Street and across from the elevated I-80 freeway platforms, which are approximately 35 feet above street grade. The park is bounded by Folsom Street to the northwest, Columbia Square Street to the northeast, Harrison Street to the southeast, and Sherman Street to the southwest. The park is surrounded by a 5- to 10-foot-tall fence and guardrails, with access provided at three points - one at the corner of Folsom and Columbia Square streets, another at the corner of Cleveland and Sherman streets, and the third on Columbia Square Street. The park is open from sunrise to sunset, every day of the year. The southern portion of the park closest to Harrison Street includes a softball field with the diamond and limited bench seating in player dugouts located in the southwest corner of the park. The northern portion of the park includes a restroom, two picnic areas, an oval-shaped grass field, two playground areas, a community garden, a full-length basketball court, and a grassy knoll. This park is used for passive and active recreation with peak usage on weekends.

[127] A shadow fan is a diagram that shows the maximum potential reach of project shadow, without accounting for intervening buildings that could block the shadow, over the course of an entire year (from one hour after sunrise until one hour before sunset on each day of the year) in relation to the locations of nearby open spaces, recreation facilities, and parks.

Title: Proposed Rehabilitation and Detention Facility (110 feet with 15-foot mechanical penthouse)
Source: San Francisco Planning Department

FIGURE 18: PRELIMINARY SHADOW FAN

In order to implement Section 295 and Proposition K, the Planning Commission and Recreation and Park Commission in 1989 jointly adopted a memorandum establishing qualitative criteria for evaluating shadow impacts as well as Absolute Cumulative Limits (ACL) for certain parks. ACLs are "shadow" budgets that establish absolute cumulative limits for additional shadows expressed as a percentage of Theoretically Available Annual Sunlight (TAAS) on a park with no adjacent structures present.[128] To date, ACL standards have been established for fourteen downtown parks. An ACL standard has not been adopted for the Victoria Manalo Draves Park. Where an ACL has not been adopted for a park, the Planning Commission's decision on whether a structure has a significant impact on property under the jurisdiction of the Recreation and Park Commission is based on a review of qualitative and quantitative factors. In accordance with the 1989 Memorandum, large parks (more than 2 acres) such as Victoria Manalo Draves Park, that are shadowed less than 20 percent of the time during the year are allowed an additional 1.0 percent of shadow, if the specific shadow effects meet additional qualitative criteria.

The 1989 Memorandum sets forth qualitative criteria to determine when a shadow would be significant as well as information on how to quantitatively measure shadow impacts. Qualitatively, shadow impacts are evaluated based on (1) existing shadow profiles, (2) important times of day, (3) important seasons in the year, (4) location of the new shadow, (5) size and duration of new shadows, and (6) public good served by buildings casting a new shadow. Quantitatively, new shadows are to be measured by the additional annual amount of shadow-square foot-hours as a percent of TAAS.

Under existing conditions, Victoria Manalo Draves Park is shadowed by existing buildings at various times throughout the day and throughout the year. In general, during the fall, spring and summer, the northern and eastern portions of the park are generally shadowed in the morning, changing to shadows in the northern and western portions in the late afternoon/evening, and generally in full sunlight during midday. During the winter, shadows generally cover the southern portion of the park during winter mornings, the western portion in the late afternoon/evening, and the park is mostly sunny throughout the midday. Victoria Manalo Draves Park receives about 409,342,836 square-foot-hours (sfh) of TAAS. About 27,152,546 sfh (6.63 percent) of the TAAS are used up by shadows from existing buildings.

With implementation of the proposed project, the shadow load on Victoria Manalo Draves Park would increase from about 27,152,546 sfh per year to about 27,259,056 sfh.[129] On an annual basis, the proposed RDF would result in 106,510 sfh of net new project shadow, which is about 0.03 percent of the TAAS on Victoria Manalo Draves Park. Compared to existing conditions, the

[128] TAAS is the amount of sunlight theoretically available on an open space, annually, if there were no shadows from existing or proposed buildings, structures, or vegetation.

[129] PreVision Design, *Shadow Calculations and Shadow Graphics for Rehabilitation and Detention Facility Project*, (hereinafter "*Shadow Study*") May 8, 2015. See Appendix H of this PMND.

total shadow on the park would increase from about 6.63 percent of the TAAS without the proposed project to about 6.66 percent with implementation of the proposed project.

The proposed RDF would cast net new shadow on Victoria Manalo Draves Park at certain times of day throughout the year. Net new project shadow would begin and end early in the morning (by 8:15 a.m. at the latest) during the spring (between February 3 and April 25) and fall (August 17 and November 7). In terms of area (square footage), the maximum net new project shadow would occur on March 8 and October 4 (see **Figure 19: Maximum Net New Project Shadow (March 8/October 4)**. At approximately 8:08 a.m. on March 8 and October 4, the net new project shadow would cover an area of about 10,954 sf, affecting the southeast end of the park, which includes the softball field and a portion of the diamond and dugout seating. On those days, the net new project shadow would reach its maximum daily duration of about 35 minutes. No net new project shadow would fall on Victoria Manalo Draves Park during the summer and winter.

Net new project shadow on Victoria Manalo Draves Park that could occur on the four representative days of the year (the spring equinox, the summer solstice, the autumn equinox, and the winter solstice) is also considered (see **Figure 20: Net New Project Shadow on Representative Days [One Hour after Sunrise]**).[130] On March 23, the net new project shadow on Victoria Manalo Draves Park would occur from approximately 7:56 a.m. until approximately 8:15 a.m. and would fall on the southeast end of park. During this time of day this part of the park is not used; however, dog walkers have been observed using the outfield. After 8:15 a.m., the proposed RDF would not cast any net new shadow on any portion of the park. The shadow patterns that would occur on September 20 would be the same as the shadow patterns that would occur on March 23. On June 21 and December 20, the proposed RDF would not cast any net new shadow on Victoria Manalo Draves Park.

Under existing conditions, Victoria Manalo Draves Park is already shadowed at certain times of day throughout the year by existing or proposed buildings, structures, or vegetation. As described above, on an annual basis, net new project shadow is about 0.03 percent of the TAAS with the shadow on Victoria Manalo Draves Park increasing from about 6.63 percent without the proposed project to about 6.66 percent with the proposed project. An increase of 0.03 percent would be within the potentially permissible amount allowed on a park over 2 acres in size that is shaded less than 20 percent of the time, i.e. 1.0 percent. Furthermore, the net new project shadow would not substantially affect use of the softball field because it would be transitory in nature, the early morning shadow does not coincide with typical weekend start times for organized sports or weekday start times for Bessie Carmichael Elementary school or summer camps, and the softball

[130] The times of day and the days of the year discussed in this Preliminary Mitigated Negative Declaration are representative samples of each season. They are not the only times of day or days of the year when existing or net new project shadow would reach Victoria Manalo Draves Park.

RPD Parks
1 VMD Park (Baseball Field)
2 Gene Friend Rec Center

Proposed project
Existing (current) shading
New shading by proposed project
Shadow profiles of cumulative projects

Cumulative Projects
1 280 7th Street
2 190 Russ Street
3 345 6th Street
4 363 6th Street

NORTH

SOURCE: Prevision Design

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Case No. 2014.0198E

FIGURE 19: MAXIMUM NET NEW PROJECT SHADOW (MARCH 8/OCTOBER 4)

SOURCE: Prevision Design

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Case No. 2014.0198E

FIGURE 20: NET NEW PROJECT SHADOW ON REPRESENTATIVE DAYS [ONE HOUR AFTER SUNRISE]

field can continue to be used for active recreation even if shadowed during the early morning. For these reasons, the proposed project would not create new shadow in a manner that substantially affects Victoria Manalo Draves Park.

The Bessie Carmichael Elementary School is located west of Victoria Manalo Draves Park across Sherman Street between Cleveland and Harrison streets and includes play structures and multi-purpose hard courts. The Bessie Carmichael Elementary School participates in the Office of the Mayor's Shared Schoolyard Project, which allows local residents access to the playgrounds and other school-owned recreational facilities during non-school hours.[131] During the weekdays this school playground is used exclusively by the Bessie Carmichael Elementary School students; however, it is accessible to the public on weekends from 9 am to 4 pm. The playground is surrounded on three sides by the two-story school building. The proposed RDF would not cast any net new shadow on this school playground. Therefore, the proposed project would have no shadow impact on this school playground.

The proposed project would cast net new shadow on nearby sidewalks at certain times of the day throughout the year. In general, the net new project shadow would fall on sidewalks to the west of the project site in the morning, to the north during the middle of the day, and to the east in the late afternoon and early evening. The affected sidewalks include, but are not limited to, those along Sixth, Bryant, Harriet, and Harrison streets. Many of the sidewalks in the project vicinity are already shadowed for much of the day due to the densely developed multi-story buildings, and net new project shadow would be transitory in nature and would not substantially affect the use of the sidewalks. The proposed project would not increase the amount of shadow on nearby sidewalks above levels that are common and generally expected in densely developed urban environments. Overall, the proposed project would not create new shadow in a manner that substantially affects nearby sidewalks.

As shown on the Planning Department's shadow fan, the proposed project's shadow would not extend further north than Folsom Street or further east then Fifth Street at any time during the year. There are no privately owned public open spaces (POPOS) that are within reach of the proposed project's shadow, because POPOS are concentrated in the downtown core, north of Folsom Street and east of Fifth Street.[132] The proposed project would have no shadow impact on POPOS.

[131] This project opens up the yards of selected schools in each San Francisco Supervisorial District where it will serve the community's need for more open space. Available online at http://www.sfmayor.org/index.aspx?page=198. Accessed March 2, 2015.

[132] San Francisco Urban Planning + Research Association, *Secrets of San Francisco: A Guide to Privately Owned Public Open Spaces*, January 1, 2009. Available online at http://www.spur.org/publications/spur-report/2009-01-01/secrets-san-francisco. Accessed February 27, 2015.

For these reasons, the proposed project would not create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas. This impact would be **less than significant**, and no mitigation measures are necessary.

Impact C-WS-2: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a cumulative shadow impact. (*Less than Significant*)

The proposed project, along with other approved and reasonably foreseeable future projects near the project site, would result in net new shadow on Victoria Manalo Draves Park. Reasonably foreseeable future projects in the vicinity of Victoria Manalo Draves Park are located at 190 Russ Street (north of the park across Folsom Street); 280 Seventh Street (northwest of the park across Folsom Street on the west side of Seventh Street); and 345 Sixth Street and 363 Sixth Street (all east of the park across Sixth Street between Harrison and Folsom streets). Other reasonably foreseeable future projects that were considered in the cumulative shadow analysis include 350 Eighth Street and 598 Brannan Street. However, based on the distance of these project sites from Victoria Manalo Draves Park and the proposed building heights, it was determined that shadow from the proposed buildings would not reach the park.[133] As part of the environmental screening that would be undertaken for each of these reasonably foreseeable future projects, shadow impacts would be assessed, and future projects would need to comply with the design requirements of Planning Code Sections 295 and other controls to avoid substantial net new shading of public open space.

The proposed projects at 345 Sixth Street and 363 Sixth Street (arrayed along the east side of Sixth Street) and at 280 Seventh Street would not cast net new shadow on Victoria Manalo Draves Park due to the orientation of the proposed buildings and the height of existing buildings between the proposed buildings and the park. The proposed building at 190 Russ Street (approximately 79 feet tall including the 15-foot-tall elevator penthouse) would cast net new shadow on the northern portion of Victoria Manalo Draves Park from late June until late August. The maximum duration of the net new shadow would occur on June 21 and would last approximately 50 minutes (between 6:45 pm and one hour before sunset). The net new shadow cast by this project would occur only on the northern side of the park, shading portions of the basketball court, main entrance, and grassy areas; however, none of these areas would be shaded by the proposed RDF. In addition, the shadow impact analysis of height limit increases proposed for parcels in Eastern SoMa, as designated in the Eastern Neighborhoods Community Planning process, included an analysis of height limit increases on parcels near Victoria Manalo Draves Park.[134] The analysis focused on three height

[133] *Shadow Study*.

[134] San Francisco Planning Department, Eastern Neighborhoods Rezoning and Area Plans Final EIR, August 7, 2008, pp. 392-398. Available online at http://www.sf-planning.org/Modules/ShowDocument.aspx?documentid=4005. Accessed May 8, 2015.

limit increase options (Options A through C).[135] Under the worst case scenario for each, the Eastern Neighborhoods Rezoning and Area Plans Final EIR determined that significant and unavoidable shadow impacts on Victoria Manalo Draves Park would only occur under Option C, would occur during the summer solstice (when the proposed project does not cast any shadow on the park), and would be limited to the north portion of the park (beyond the extent of the proposed project's shadow on the park).

When compared to the shadows that would be cast by nearby cumulative development projects, including potential shadows from height limit increases on parcels in Eastern SoMA, the proposed RDF would cast net new shadow on a different area of Victoria Manalo Draves Park and on different sidewalks at different times of day and different times of the year. As discussed under **Impact WS-2**, Victoria Manalo Draves Park is already shadowed at certain times of day throughout the year. Net new shadow cast on Victoria Manalo Draves Park by cumulative development would not affect the use of the softball field because the net new shadow would not reach that portion of the park. However, net new shadow on the northern portion of Victoria Manalo Draves Park generated by cumulative development could exceed levels that are common and generally expected in a densely developed urban environment.[136]

As described above, net new project shadow that would be cast by the proposed RDF would fall on the southeastern corner of Victoria Manalo Draves Park and would not combine with net new project shadow from cumulative development, which would be located on the northern portion of the park beyond the extent of the shadow from the proposed RDF. Thus, the proposed project would not have a cumulatively considerable contribution to any significant cumulative shadow impacts on Victoria Manalo Draves Park.

The sidewalks in the project vicinity are already shadowed for much of the day by densely developed, multi-story buildings. Although implementation of the proposed project and nearby cumulative development projects would add net new shadow to the sidewalks in the project vicinity, these shadows would be transitory in nature, would not substantially affect the use of the sidewalks, and would not increase shadows above levels that are common and generally expected in a densely developed urban environment.

Given the distance from the nearby cumulative development projects to the downtown core, it is unlikely that any of the nearby cumulative development projects would cast net new shadow on POPOS. In the event that there is a cumulative shadow impact on POPOS, the proposed project

[135] Under Options A and B, height limits would not change, except that the height limit on one parcel near the southern corner of the park would increase from 50 to 55 feet. Under Option C, in addition to this five-foot height increase at the southern corner, the height limits on both sides of Folsom Street would rise from 40 to 85 feet.

[136] San Francisco Planning Department, Eastern Neighborhoods Rezoning and Area Plans Final EIR, August 7, 2008, pp. 397-398. Available online at http://www.sf-planning.org/Modules/ShowDocument.aspx?documentid=4005. Accessed May 8, 2015.

would not make a cumulatively considerable contribution to this impact. As discussed under **Impact WS-2**, shadow from the proposed project would not reach any POPOS.

For these reasons, the proposed project would not combine with past, present, and reasonably foreseeable future projects in the project vicinity to create a significant cumulative shadow impact.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
9. RECREATION—Would the project:					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	☐	☐	☒	☐	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐	☐
c) Physically degrade existing recreational resources?	☐	☐	☒	☐	☐

Impact RE-1: The proposed project would not increase use of existing neighborhood parks and/or other recreational facilities such that substantial physical deterioration or physical degradation of existing recreational resources would occur or be accelerated, nor would it include or result in the need for the expansion or construction of additional recreational facilities. ***(Less than Significant)***

The proposed project includes the construction of a 200,000-gsf RDF to house inmates and provide a variety of support programs including space to engage in recreation and exercise. Recreational space for inmates would be provided at each of the inmate pods located on floors 2 through 5 (see **Figures 9** through **11** on pp. 15-17). As described under Section E.2: Population and Housing, p. 36, the proposed project would result in a net increase of 47 full-time equivalent (FTE) employees, from 248 employees under existing conditions to 295 employees with the proposed project. However, the proposed project also includes demolition of three existing buildings on the project building site, which would result in the displacement of approximately 43 employees. Therefore, when job growth and displacement are considered together there would be an overall net increase of four employees on site. While the jail inmates would reside in the proposed RDF, the proposed project would not include typical residential uses on-site.

The San Francisco Recreation and Park Department operates the 2.52-acre Victoria Manalo Draves Park located on Harrison Street between Columbia Square and Sherman streets, as well as the 1.02-acre Gene Friend Recreation Center located on Folsom Street between Harriet and Sixth streets. Both of these recreational facilities are located within two blocks northwest (or ¼-mile

radius) of the project site (to the north on the opposite side of the elevated Interstate-80 Freeway) and are accessible by walking, bicycling, or transit. The Victoria Manalo Draves Park includes a softball field, a basketball court, two playgrounds, a picnic area, a community garden, and grass fields. The Gene Friend Recreation Center includes a full indoor gymnasium, activity room, weight room, lockers, auditorium, outdoor basketball court, playground with sand pit, and lawn area.

The San Francisco Unified School District's (SFUSD's) Bessie Carmichael School (Pre K-5) located at 375 Seventh Street is adjacent to Victoria Manalo Draves Park and is two blocks northwest of the project site. This SFUSD property includes one playground on Sherman Street between Cleveland and Harrison streets. The Bessie Carmichael Elementary School participates in the Office of the Mayor's Shared Schoolyard Project, which allows local residents access to the playgrounds and other school-owned recreational facilities during non-school hours.[137] This playground is accessed by the public via Sherman Street between Cleveland and Harrison streets from 9 A.M. to 4 P.M. on weekends. Other park and open space properties such as the Howard-Langton Mini Park (three blocks northwest of the project site) and Mission Creek Park in Mission Bay (three blocks south of the project site) are located more than a ¼-mile from the project site.

The proposed project would not create demand for off-site recreational facilities, as the inmate population of the HOJ does not have access to nearby recreation facilities.

With a net increase of four employees (all of whom are assumed to be new to San Francisco), the proposed project would generate new households who would in turn generate an incremental increase in the demand for parks and open spaces in various San Francisco neighborhoods. As described in Section E.2: Population and Housing, the new residential households generated by the proposed project would comprise a small fraction of the expected increase in the residential households of San Francisco between 2015 and 2040 (less than 0.004 percent). Therefore, the resulting impacts on parks, open spaces, and other recreation facilities from residential demand generated by project-related employment growth would be minimal. The demand for recreational facilities would continue to be accommodated by existing parks and open spaces in the vicinity of the project site, including the Victoria Manalo Draves Park and the Gene Friend Recreation Center, as well as other nearby facilities. As a result, the proposed project would not contribute to the physical deterioration or degradation of existing neighborhood and regional parks or other recreational facilities. Additionally, with a minimal increase in the overall demand for parks and open spaces, the construction of new recreational facilities or the expansion of existing recreational facilities, which would, in turn, have an adverse physical effect on the environment, would not be necessary.

[137] This project opens up the yards of selected schools in each San Francisco Supervisorial District where it will serve the community's need for more open space. Available online at http://www.sfmayor.org/index.aspx?page=198. Accessed December 1, 2014.

In conclusion, project-related impacts on park and recreational facilities would be **less than significant**, and no mitigation measures are necessary.

Impact C-RE-1: The proposed project, in combination with other past, present, or reasonably foreseeable projects, would not result in a cumulatively considerable contribution to significant cumulative impacts on recreational resources leading to their physical deterioration or physical degradation nor would it contribute to a cumulative demand for recreational facilities that would result in the construction or expansion of recreational facilities causing physical effects on the environment. ***(Less than Significant)***

As previously described, the use of neighborhood and/or regional parks or other recreational resources in the project area and/or citywide would not increase with development of the proposed RDF. Additionally, the expected decrease in the average daily population, i.e., the number of staff, visitors, etc. on the project site, would not result in the need for new and/or expanded neighborhood parks which would result in physical effects on the environment. The reasonably foreseeable future projects within an approximately ¼-mile radius of the project site would result in the development of approximately 2,883 residential units and approximately 6,354 new jobs (*Western SoMa Community Plan, Rezoning of Adjacent Parcels, and 350 Eighth Street Project EIR*); up to 5,400 residential units and up to 13,300 new jobs (*Central SoMa Plan*); 29 dwelling units and 4,000 gsf of retail space (280 Seventh Street); 89 SRO units and 3,090 gsf of retail space (345 Sixth Street); 103 dwelling units (363 Sixth Street); 116 dwelling units and 4,820 gsf of retail space (377 Sixth Street); approximately 700,460 gsf of office space (598 Brannan Street); 9 residential units (190 Russ Street); and approximately 317,160 gsf of office space (510-520 Townsend Street). Each of the projects identified above would be required to comply with Planning Code open space requirements. In addition, the *Central SoMa Plan* includes provisions for the development of new parks and open space in this area of the City. The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in a cumulatively considerable impact on recreational facilities.

The cumulative projects, in combination with the proposed project, would not increase use of existing neighborhood and/or regional parks or other recreational facilities such that substantial physical deterioration or physical degradation of existing recreational facilities would occur. Neither would they require the construction or expansion of recreational facilities that would, in turn, have an adverse physical effect on the environment. Overall, the proposed project, alone or in combination with nearby residential and commercial projects, would not contribute to, or result in, cumulatively considerable impacts on recreational resources, and no mitigation measures are necessary.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
10. UTILITIES AND SERVICE SYSTEMS—Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐	☐
d) Have sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements?	☐	☐	☒	☐	☐
e) Result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒	☐

Impact UT-1: Implementation of the proposed project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, would not exceed the capacity of the wastewater treatment provider that would serve the project, and would not require the construction of new or expansion of existing wastewater treatment or stormwater drainage facilities. (*Less than Significant*)

Project-related wastewater and stormwater would flow to the City's combined stormwater/sewer system and would be treated to standards contained in the City's National Pollutant Discharge Elimination System (NPDES) Permit for the Southeast Water Pollution Control Plant prior to discharge into San Francisco Bay. The NPDES standards are set and regulated by the San Francisco Bay Area Regional Water Quality Control Board (RWQCB). Therefore, the proposed project would not conflict with RWQCB requirements.

Implementation of the proposed project would result in an approximately 30 percent reduction to the inmate population. The proposed RDF would be constructed with a capacity of up to 640 beds,

265 fewer beds than the combined capacity in the existing CJ#3 and CJ#4, which the proposed project would replace. Although employment related to the proposed RDF is expected to increase by up to 47 employees, the demolition of existing on-site commercial buildings (and the associated job displacement) would result in an overall increase of approximately four employees. Therefore, implementation of the proposed project would result in an incremental decrease in wastewater flows from the project site even when the net increase in the number of employees on site is considered. In addition, the proposed project would incorporate water-efficient fixtures, as required by Title 24 of the California Code of Regulations and the San Francisco Green Building Ordinance. Compliance with these regulations would reduce wastewater flows and the amount of potable water used for building functions. The San Francisco Public Utilities Commission's (SFPUC's) infrastructure capacity plans account for projected population and employment growth. The incorporation of water-efficient fixtures into new development is also accounted for by the SFPUC, because widespread adoption can lead to more efficient use of existing capacity. For these reasons, any changes to wastewater flows that could result from demand generated by inmates, staff, visitors, and other users associated with the proposed project would not require the construction of new or expansion of existing wastewater treatment facilities.

Implementation of the proposed project would not result in an increase in impervious surfaces. Compliance with the City's Stormwater Management Ordinance (Ordinance No. 83-10) requires the proposed project to maintain, reduce, or eliminate the existing volume and rate of stormwater runoff discharged from the project site. To achieve this objective, the proposed project would implement and install appropriate stormwater management systems that retain runoff on site, promote stormwater reuse, and limit (or eliminate altogether) site discharges from entering the City's combined stormwater/sewer system. This, in turn, would limit the incremental demand on both the collection system and wastewater facilities resulting from stormwater discharges and would minimize the potential for upsizing or constructing new facilities. For these reasons, the proposed project would not substantially increase the demand for wastewater or stormwater treatment.

As discussed above, implementation of the proposed project would not exceed wastewater treatment requirements of the applicable RWQCB, would not exceed the capacity of the wastewater treatment provider that would serve the project, and would not require the construction of new or expansion of existing wastewater treatment or stormwater drainage facilities. Therefore, the proposed project would result in a **less-than-significant impact** related to wastewater and stormwater treatment. No mitigation measures are necessary.

Impact UT-2: The SFPUC has sufficient water supply available to serve the proposed project from existing entitlements and resources and would not require new or expanded water supply resources or entitlements. (*Less than Significant*)

The SFPUC provides an average of approximately 265 million gallons of water per day to approximately 2.5 million people in San Francisco, Santa Clara, Alameda, San Mateo, and Tuolumne counties.[138] Implementation of the proposed project, which consists of construction of a new 200,000-gsf RDF, would incrementally increase the demand for water in San Francisco.

Under Senate Bill 610 and Senate Bill 221.45, all large-scale projects in California subject to CEQA are required to obtain an assessment from a regional or local jurisdiction water agency to determine if a long-term water supply is available to satisfy project-generated water demand. Under Senate Bill 610, a Water Supply Assessment (WSA) is required if a proposed project is subject to CEQA in an Environmental Impact Report or Negative Declaration and falls within any of the following categories: (1) a residential development of more than 500 dwelling units; (2) a shopping center or business employing more than 1,000 persons or having more than 500,000 sf of floor space; (3) a commercial office building employing more than 1,000 persons or having more than 250,000 sf of floor space; (4) a hotel or motel with more than 500 rooms; (5) an industrial or manufacturing establishment housing more than 1,000 persons or having more than 650,000 sf or 40 acres; (6) a mixed-use project containing any of the foregoing; or (7) any other project that would have water demand at least equal to a 500-dwelling-unit project. The proposed project would not exceed any of these thresholds and therefore is not required to prepare a WSA.

In June 2011, the SFPUC adopted a resolution finding that the SFPUC's *2010 Urban Water Management Plan* (2010 UWMP) adequately fulfills the requirements of the water assessment for urban water suppliers. The 2010 UWMP uses year 2035 growth projections prepared by the Planning Department and ABAG to estimate future water demand. The proposed project is within the demand projections of the 2010 UWMP and would not exceed the water supply projections.

The total amount of water demand would not be expected to increase at the project site primarily due to a 30 percent reduction in the inmate population on the project site and a negligible increase in on-site employment (four new employees). The proposed RDF would be designed to incorporate water-efficient fixtures as required by Title 24 of the California Code of Regulations and the City's Green Building Ordinance. Because the water demand could be accommodated by existing and planned water supply anticipated under the 2010 UWMP, the proposed project would not result in a substantial increase in water use that could not be served from existing water supply entitlements and resources. In addition, the proposed project would include water conservation devices such as low-flow showerheads and low-flush toilets. For these reasons, there would be sufficient water supply available to serve the proposed project from existing water supply entitlements and

[138] San Francisco Public Utilities Commission, *2010 Urban Water Management Plan for the City and County of San Francisco*, adopted June 2011 (hereinafter "*2010 UWMP*"), pp. 7, 14, 22-25. Available online at http://www.sfwater.org/Modules/ShowDocument.aspx?documentID=1055. Accessed December 23, 2014.

resources, and new or expanded resources or entitlements would not be required. The proposed project would result in a **less-than-significant** impact and no mitigation measures are necessary.

Impact UT-3: The proposed project would be served by a landfill with sufficient permitted capacity. (*Less than Significant*)

San Francisco uses a three-cart collection program: residents and businesses sort solid waste into recyclables, compostable items such as food scraps and yard trimmings, and garbage. The City's Mandatory Recycling and Composting Ordinance (Ordinance 100-09) requires everyone in San Francisco to separate their refuse into recyclables, compostables, and trash. Recology (formerly Norcal Waste Systems, Inc.) provides solid waste collection, recycling, and disposal services for residential and commercial garbage, recycling, and composting in San Francisco through its subsidiaries – San Francisco Recycling and Disposal, Golden Gate Disposal and Recycling, and Sunset Scavenger. Materials collected are hauled to the Recology transfer station/recycling center at 501 Tunnel Avenue, near the southeastern city limit, for sorting and subsequent transportation to other facilities. Recyclable materials are taken to Recology's Pier 96 facility, where they are separated into commodities (e.g., aluminum, glass, and paper) and transported to other users for reprocessing. Compostables (e.g., food waste, plant trimmings, soiled paper) are transferred to a Recology composting facility in Solano County, where they are converted to soil amendment and compost. The remaining material that cannot otherwise be reprocessed ("trash") is transported to Altamont Landfill east of Livermore in Alameda County.

The Altamont Landfill has a permitted maximum daily disposal capacity of 11,500 tons per day, a maximum permitted capacity of 62 million cubic yards, a remaining permitted capacity of 46 million cubic yards (or 74 percent of its permitted capacity), and has an estimated closure date of January 1, 2025.[139] In 2013 approximately 1.45 million tons of waste was transported to Altamont Landfill.[140] In 2013, San Francisco generated approximately 476,424 tons of solid waste and sent approximately 372,205 tons to the Altamont Landfill, about 26 percent of the total volume of waste received at that facility.[141]

In 1988, San Francisco contracted for the disposal of 15 million tons of solid waste at the Altamont Landfill. The City contract with the Altamont Landfill expires in 2015. Through August 1, 2009, the City had used approximately 12.5 million tons of this contract capacity. The City projects that

[139] California Department of Resources Recycling and Recovery (CalRecycle), Facility/Site Summary Details: Altamont Landfill & Resource Recovery (01-AA-0009). Available online at http://www.calrecycle.ca.gov/SWFacilities/Directory/01-AA-0009/Detail/. Accessed January 13, 2015.

[140] CalRecycle, 2013 Landfill Summary Tonnage Report. Available online at http://www.calrecycle .ca.gov/SWFacilities/Landfills/tonnages. Accessed January 13, 2015.

[141] CalRecycle, Jurisdiction Diversion/Disposal Rate Detail. Available online at http://www.calrecycle. ca.gov/LGCentral/Reports/Viewer.aspx?P=OriginJurisdictionIDs%3d438%26ReportYear%3d2013%26 ReportName%3dReportEDRSJurisDisposalByFacility. Accessed January 13, 2015.

the remaining contract capacity will be reached no sooner than 2016.[142] In 2009, the City announced that it could award its landfill disposal contract to a Recology subsidiary for shipment of solid waste by truck and rail to the Recology Ostrom Road Landfill in Yuba County. This facility has an expected closure date of 2066 with a total design capacity of over 41 million cubic yards.[143] Recycling, composting, and waste reduction are expected to increasingly divert waste from the landfill, per California and local requirements. The City was required by the State's Integrated Waste Management Act (AB 939) to divert 50 percent of its waste stream from landfill disposal by 2000. The City met this threshold in 2003 and has since increased it to 69 percent in 2005 and 70 percent in 2006. San Francisco exceeded its goal to divert 75 percent of its waste by 2010 and will implement new strategies to meet its zero waste goal by 2020.[144] The ultimate determination with respect to future landfill contracting will be made by the Board of Supervisors on the basis of solid waste planning efforts being undertaken by the City's Department of the Environment.[145] In 2012, the target disposal rate for San Francisco residents and employees was 6.6 pounds/resident/day and 10.6 pounds/employee/day. Both of these targeted disposal rates were met in 2012 (the most recent year reported), with San Francisco generating about 2.9 pounds/resident/day and about 4.2 pounds/per employee/per day.[146]

Regardless of whether San Francisco renews its contract with the Altamont Landfill, switches to the Ostrom Road Landfill, or selects another facility, the proposed project would be subject to the City's Mandatory Recycling and Composting Ordinance, which requires the separation of refuse into recyclables, compostables, and trash, thereby minimizing solid waste disposal and maximizing recycling and composting. Although the proposed project could incrementally increase total waste generation from the City by increasing employment and visitation at the RDF, the increasing rate of diversion through recycling and other methods would result in a decreasing share of total waste

[142] San Francisco Planning Department, Agreement for Disposal of San Francisco Municipal Solid Waste at Recology Hay Road Landfill in Solano County, Case No. 2014.0653E, Preliminary Negative Declaration, March 4, 2015. Available online at http://sfmea.sfplanning.org/2014.0653E_PND.pdf. Accessed April 6, 2015.

[143] San Francisco is currently participating as a responsible agency in the environmental review process that Yuba County has begun for the Recology Ostrom Road Green Rail and Permit Amendment Project and to conduct CEQA review of San Francisco's proposal to enter into one or more new agreements with Recology. On March 28, 2013, Yuba County and San Francisco entered into a Cooperative Agreement to designate Yuba County as the lead agency for this project and to outline their cooperative efforts concerning environmental review.

[144] San Francisco Department of the Environment, Zero Waste Program, "San Francisco Sets North American Record for Recycling and Composting with 80 Percent Diversion Rate." Available online at http://www.sfenvironment.org/news/press-release/mayor-lee-announces-san-francisco-reaches-80-percent-landfill-waste-diversion-leads-all-cities-in-north-america. Accessed January 13, 2015.

[145] San Francisco Department of the Environment, Zero Waste Policy. Available online at http://www.sfenvironment.org/zero-waste/policy. Accessed January 13, 2015.

[146] CalRecycle, Jurisdiction Diversion/Disposal Rate Detail. Available online at http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/JurisdictionDiversionDetail.aspx?JurisdictionID=438&Year=2012. Accessed January 13, 2015. These data do not provide separate averages for residential and non-residential generation, but merely different metrics for averaging overall citywide waste generation.

that requires deposition into the landfill. Given this, and given the existing and potential future long-term capacity available at the applicable landfill(s), the solid waste generated by the proposed project during operation would not result in the landfill exceeding its permitted capacity, and the proposed project would result in a less-than-significant solid waste generation impact.

As described in the Section A, Project Description, p. 20, construction activities would result in an estimated 18,000 cubic yards of excess soils from the excavation activities at the location of proposed RDF building and the subterranean tunnel connecting the proposed RDF to the HOJ. Excavated soil would be would be taken to an appropriate facility for recycling, reuse, or disposal. The proposed project would be subject to the City's Construction and Demolition Debris Recovery Ordinance, which requires all construction and demolition debris to be transported to a registered facility that can divert a minimum of 65 percent of the material from landfills. The Altamont Landfill and Corinda Los Trancos Landfill are registered facilities available to accept waste from San Francisco that could accept excess soils generated during construction. The Corinda Los Trancos Landfill has a permitted maximum daily disposal capacity of 3,598 tons of waste per day, a maximum permitted capacity of 69 million cubic yards, a remaining capacity of approximately 26.9 million cubic yards (or 39 percent of its permitted capacity), and has an estimated closure date of January 1, 2018. In 2013, San Francisco sent approximately 34,393 tons to the Corinda Los Trancos Landfill.[147] Because the proposed project would be consistent with City ordinances and because the local landfills would have sufficient capacity to accept the remaining construction waste, the proposed project would be served by landfills with sufficient permitted capacity to accommodate the project's solid waste disposal needs. The proposed project would result in a **less-than-significant** impact, and no mitigation measures are necessary.

Impact UT-5: Construction and operation of the proposed project would follow all applicable statutes and regulations related to solid waste. (*No Impact*)

The California Integrated Waste Management Act of 1989 (AB 939) requires municipalities to adopt an Integrated Waste Management Plan (IWMP) to establish objectives, policies, and programs relative to waste disposal, management, source reduction, and recycling. Reports filed by the San Francisco Department of the Environment show that the City generated approximately 870,000 tons of waste material in 2000. By 2010, that figured decreased to approximately 455,000 tons. Waste diverted from landfills is defined as recycled or composted. San Francisco has a goal of 75 percent landfill diversion by 2010, and 100 percent by 2020.[148] As of 2012, 80 percent of

[147] CalRecycle, Jurisdiction Diversion/Disposal Rate Detail. Available online at http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=OriginJurisdictionIDs%3d438%26ReportYear%3d2013%26ReportName%3dReportEDRSJurisDisposalByFacility. Accessed January 13, 2015.

[148] San Francisco Department of the Environment, Zero Waste FAQ. Available online at http://www.sfenvironment.org/zerowaste/overview/zero-waste-faq. Accessed January 13, 2015.

San Francisco's solid waste was being diverted from landfills, indicating that San Francisco met the 2010 diversion target.[149]

The San Francisco Construction and Demolition Ordinance (Ordinance No. 27-06) requires a minimum of 65 percent of all construction and demolition debris to be recycled and diverted from landfills. Furthermore, the proposed project would be required to comply with the City's Ordinance 100-09, the Mandatory Recycling and Composting Ordinance, which requires separation of refuse into recyclables, compostables, and trash.

As discussed in Section E.15: Hazards and Hazardous Materials, soils from excavation activities, as well as building materials (e.g., fluorescent lights), could be classified as a California hazardous waste. Accordingly, the proposed project would be required to follow state and federal regulations for the disposal of hazardous wastes, and hazardous wastes would be transported to a permitted disposal or recycling facility.

The proposed project would comply with all applicable local, state, and federal laws and regulations pertaining to solid waste, and there would be **no impact**.

Impact C-UT-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a cumulative impact on utilities and service systems. (*Less than Significant*)

Cumulative development in the project vicinity would result in an intensification of land uses, a cumulative increase in water consumption, and a cumulative increase in wastewater and solid waste generation. The SFPUC has accounted for such growth in its service projections, and the City has implemented various programs to divert 80 percent of its solid waste from landfills. Nearby cumulative development projects would be subject to the same water conservation, wastewater discharge, recycling and composting, and construction demolition and debris ordinances applicable to the proposed project. Compliance with these ordinances would reduce the effects of nearby cumulative development projects to less-than-significant levels. No other development in the project vicinity would contribute substantially to utilities and service systems cumulative effects. For these reasons, the proposed project would not combine with past, present, and reasonably foreseeable future projects in the project vicinity to create a significant cumulative impact on utilities and service systems.

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[149] San Francisco Department of the Environment, Zero Waste Program, "San Francisco Sets North American Record for Recycling and Composting with 80 Percent Diversion Rate." Available online at http://www.sfenvironment.org/news/press-release/mayor-lee-announces-san-francisco-reaches-80-percent-landfill-waste-diversion-leads-all-cities-in-north-america. Accessed January 13, 2015.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
11. PUBLIC SERVICES— Would the project:					
a) Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any public services such as fire protection, police protection, schools, parks, or other services?	☐	☐	☒	☐	☐

The project site is located within an urban area that is fully-served by existing public services, including fire protection, police protection, public schools, parks, and other services. Project-related impacts on parks and other recreational facilities are discussed under Section E.9: Recreation, on pp. 149-151. The proposed project would increase the intensity of development on the site. Three of the five existing buildings on the project building site would be demolished and replaced with the proposed 200,000-gsf, 5-story, 95-foot-tall (plus a 15-foot-tall mechanical penthouse) RDF with one partial basement level.

Impact PS-1: The proposed project would not result in substantial adverse physical impacts associated with the provision of police protection, fire protection, schools, and library services in order to maintain acceptable service ratios, response times, or other performance objectives. ***(Less than Significant)***

Police Protection Services

The Sheriff's Department provides services at the existing HOJ and CJ#1 and CJ#2 and is organized into the Custody Operations, Administration and Programs, and Field Operations divisions. Among its various responsibilities is the operation of six County Jails, the Hospital Ward, the Classification Unit, the Sheriff's Training Facility at 120 14th Street, the Woman's Resource Center at 935 Bryant Street, and the various Jail Programs as well as the provision of services such as mutual aid to outside law enforcement agencies. The Sheriff's Department would continue to provide services in the proposed RDF, similar to the services provided in CJ#3 and CJ#4. The replacement of CJ#3 and CJ#4 with the proposed RDF would ensure the safety of existing and future inmates and would allow for more efficient and modern provision of medical, recreational, and visitation services to inmates. Implementation of the proposed project would improve operations of the County Jail system.

The San Francisco Police Department (SFPD), currently headquartered within the existing HOJ building at 850 Bryant Street, provides police protection in the City and County of San Francisco.

The SFPD divides the City into two divisions, Metro and Golden Gate, each of which is divided into five districts.[150] The project site is located within the Southern Police District, which is made up of South of Market, Embarcadero, and China Basin areas.[151] The Southern Station, formerly located at 850 Bryant Street but recently relocated to Mission Bay, is part of the Metro Division and has jurisdiction over the project site. It is staffed by approximately 154 officers.[152] According to the SFPD Crime Maps, the most reported crimes in a 0.5-mile radius of the project site are assault/battery and burglary. Other frequently reported crimes in the area include noise nuisance, fraud, driving under the influence, vehicle theft, robbery, theft/larceny, vandalism and brandishing of weapons. These crime data statistics are based on reports taken from a 6-month time period from June 15, 2014 through December 12, 2014.[153]

Development of the project site would replace three existing buildings with the proposed five-story RDF. The proposed project would not induce population growth on the project site, in the project area, or citywide through the construction of housing. The proposed project would not generate a demand for new or physically altered police facilities or increased staffing needs, nor would it affect the SFPD's ability to meet its response time goals. Therefore, the proposed project would have a **less-than-significant** impact on police protection services. No mitigation is necessary.

Fire Protection and Emergency Services

The San Francisco Fire Department (SFFD), with headquarters located at 698 Second Street, provides fire suppression services and unified emergency medical services and transport, including basic life support and advanced life support services, in the City and County of San Francisco. The SFFD provides about 80 percent of the ambulance response.[154] Several privately operated ambulance companies are also authorized to provide basic life support and advanced life support services in San Francisco.[155]

The SFFD fire suppression companies have three divisions: the Airport Division (serving the San Francisco International Airport only) and Divisions 2 and 3 (serving the rest of San Francisco).

[150] San Francisco Police Department (SFPD), Operations. Available online at http://sf-police.org/index.aspx?page=23. Accessed December 12, 2014.

[151] SFPD, Police District Maps. Available online at http://sf-police.org/Modules/ShowDocument.aspx?documentid=12225. Accessed December 12, 2014.

[152] The Public Safety Strategies Group, *San Francisco Police Department District Station Boundaries Analysis Final Report,* May 13, 2008, pp. D4. Available online at http://sf-police.org/Modules/ShowDocument.aspx?documentid=14683. Accessed December 12, 2014.

[153] SFPD, *SFPD CrimeMAPS*. Available online at http://www.sf-police.org/index.aspx?page=1618. Accessed December 12, 2014.

[154] San Francisco Fire Department (SFFD), Learn More about the EMS Division. Prior to April 2008 the SFFD was the exclusive provider of EMS services. Available online at http://www.sf-fire.org/index.aspx?page=1017. Accessed December 12, 2014.

[155] San Francisco Department of Emergency Management, EMS System Providers. Available online at http://www.sfdem.org/index.aspx?page=183. Accessed December 12, 2014.

Division 2 is divided into four battalions, and Division 3 is divided into five battalions. The SFFD has 43 active fire stations located throughout the Division 2 and 3 service areas. SFFD resources include 43 engine companies, 19 truck companies, 19 ambulances, 2 heavy rescue squad units, 2 fire boats, and multiple special purpose units. The SFFD employs 1,512 persons, including both uniformed and non-uniformed personnel.[156]

The project site is located within the Division 3 service area, which extends from approximately Market Street on the north to the southern border of the City, including Treasure Island/Yerba Buena Island and the Hunter's Point Naval Shipyard. Division 3 provides fire protection services for a variety of land uses, including an area of the City with a large concentration of industrial land uses. The project site is located within the First Alarm area[157] for Fire Station #1, located at 935 Folsom Street, approximately 0.4 mile north of the project site. Other fire stations in the vicinity include Station #8 at 36 Bluxome Street (about 0.6 mile east) and Station #29 at 299 Vermont Street (about 0.8 mile south).[158]

The proposed project would result in a net increase of up to four employees (Sheriff's staff) and an approximately 30 percent reduction to the inmate population on the project site. In addition, the proposed five-story RDF would be required to comply with all regulations of the San Francisco Fire Code that establish requirements for fire safety and fire prevention, such as the provision of state-mandated smoke alarms, fire extinguishers, appropriate building access, and emergency response notification systems. With implementation of the proposed project, the number of fire suppression and emergency medical service calls received from the project area would not be expected to substantially change in comparison to existing conditions. As a result, the proposed project would not generate new demand for SFFD services. Therefore, the proposed project would have a **less-than-significant** impact on fire protection and emergency medical services. No mitigation is necessary.

Public Schools

The proposed project would not include residential uses and would not introduce new school-age children to the project site. Therefore, the proposed project would not contribute to increases to the City's student population served by the San Francisco Unified School District (SFUSD). As a result, the proposed project would have **no impact** on schools. No mitigation is necessary.

[156] SFFD, Departmental Climate Action Plan Fiscal Year 2012-2013, April 11, 2014, p. 3. Available online at http://www.sf-fire.org/modules/showdocument.aspx?documentid=3640. Accessed January 14, 2015.

[157] The First Alarm area is the geographic area in which a station is responsible for arriving first in the case of an emergency.

[158] SFFD, *SFFD Fire Station Locations*. Available online at http://38.106.4.187/index.aspx?page=176#divisions. Accessed December 23, 2014.

Libraries

The proposed project would not include residential uses and would not introduce new residents to the project site, which drives the demand for library services. Therefore, the proposed project would not contribute to increase demand on existing San Francisco Public Library (SFPL) facilities. As a result, the proposed project would have **no impact** on SFPL facilities. No mitigation would be necessary.

Impact C-PS-1: The proposed project, in combination with other past, present or reasonably foreseeable future projects, would not result in a cumulatively considerable contribution to significant cumulative impacts on public services. ***(Less than Significant)***

Cumulative development in the project vicinity (including the proposed project) would result in an intensification of land uses and a cumulative increase in the demand for fire protection and police protection. However, the proposed project would introduce non-industrial public uses to the project site with the development of the proposed RDF and would not change the demand for schools or libraries. Further, the SFFD, SFPD, SFUSD, SFPL, and other City agencies have accounted for growth in providing public services to the residents of San Francisco. Nearby cumulative development projects would be subject to private development impact fees such as school impact fees for residential and commercial projects or transit impact development fees that are not applicable to the proposed project. Compliance with these requirements would partially offset the demand for those public services generated by reasonably foreseeable development in the project vicinity and would reduce the effects of nearby development projects to less-than-significant levels. Due to the unique nature of the proposed project (the replacement of existing County detention facilities), the proposed project would not combine with past, present, and reasonably foreseeable future projects in the project vicinity to create a cumulative impact. Thus, the proposed project would not result in a cumulatively considerable impact on public services. No mitigation is necessary. Refer to Section E.9: Recreation, on p. 151 for a discussion of cumulative impacts on park services.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
12. BIOLOGICAL RESOURCES— Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒	☐

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☐	☒

The project site is not within an area covered by an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, state, or regional habitat conservation plan. Implementation of the proposed project would not conflict with the provision of any such plan. Therefore, Topic E.12(f) is not applicable to the proposed project.

Impact BI-1: The proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service and would not have a substantial adverse effect on any riparian habitat or other sensitive naturals community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (*No Impact*)

The project building site contains existing buildings, surface parking, and vacant, paved lots, and is located within a built urban environment. The project building site and the vicinity do not include any candidate, sensitive, or special-status species, any riparian habitat, or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Implementation of the

proposed project would not modify any natural habitat and would have **no impact** on any candidate, sensitive, or special-status species, any riparian habitat, or other sensitive natural community. No mitigation measures would be necessary.

Impact BI-2: The proposed project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (*No Impact*)

The project building site includes existing buildings, surface parking, and vacant, paved lots, and is located within a built urban environment. The project building site and the vicinity do not include any federally protected wetlands, as defined by Section 404 of the Clean Water Act. Implementation of the proposed project would have **no impact** on wetlands. No mitigation measures would be necessary.

Impact BI-3: The proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (*Less than Significant*)

San Francisco is located within the Pacific Flyway, a major north-south route of travel for migratory birds along the western portion of the Americas, extending from Alaska to Patagonia, Argentina. Every year, migratory birds travel some or all of this distance in the spring and autumn, following food sources, heading to and from breeding grounds, or traveling to and from overwintering sites. High-rise buildings are potential obstacles that can injure or kill birds in the event of a collision, and bird strikes are a leading cause of worldwide declines in bird populations.

Planning Code Section 139, Standards for Bird-Safe Buildings, establishes building design standards to reduce avian mortality rates associated with bird strikes. This ordinance focuses on location-specific hazards and building feature-related hazards. Location-specific hazards apply to buildings in, or within 300 feet of and having a direct line of sight to, an Urban Bird Refuge, which is defined as an open space "two acres and larger dominated by vegetation, including vegetated landscaping, forest, meadows, grassland, or wetlands, or open water." The project building site is not in or within 300 feet of an Urban Bird Refuge, so the standards related to location-specific hazards are not applicable to the proposed project. Feature-related hazards, which can occur on buildings anywhere in San Francisco, are defined as freestanding glass walls, wind barriers, skywalks, balconies, and greenhouses on rooftops that have unbroken glazed segments of 24 sf or larger. The proposed project would comply with the feature-related standards of Planning Code Section 139 by using bird-safe glazing treatment on 100 percent of any feature-related hazards. Because the proposed project would be subject to and would comply with City-adopted regulations for bird-safe buildings, the proposed project would not interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory

wildlife corridors. This impact would be **less-than-significant**, and no mitigation measures would be necessary.

Impact BI-4: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (*Less than Significant*)

There are three existing trees, as well as other ornamental vegetation, on the interior of the project building site (in the rear yard of the SRO building at 480-484 Sixth Street and the McDonald's parking lot) that would need to be removed as part of the proposed project. There are also ten existing street trees adjacent to the project building site along Sixth Street between Ahern Way and Bryant Street (four), and along Bryant Street between Harriet and Sixth streets (six). On the HOJ site, there are two existing street trees along Harriet Street between Bryant Street and Ahern Way, 16 existing trees along Bryant Street between Harriet and Seventh streets, and four existing street trees along Seventh Street, between Bryant and Harrison streets. These existing street trees would remain. Implementation of the proposed project would include planting up to a total of seven new street trees along Sixth and Bryant streets in compliance with the standards of Planning Code Section 138.1(c)(1) and the Public Works Code, Article 16. As a result, the proposed project would not conflict with any local policies or ordinances that protect biological resources. This impact would be **less than significant**, and no mitigation measures are necessary.

Impact C-BI-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a cumulative impact related to biological resources. (*Less than Significant*)

Reasonably foreseeable future projects in the vicinity of the project site include several high-rise structures (e.g., 598 Brannan Street, 350 Eighth Street, and 377 Sixth Street) that could result in the injury or death of birds in the event of a collision. In addition, nearby cumulative development could result in the removal of existing street trees or other vegetation. Nearby cumulative development would be subject to the same bird-safe building and urban forestry ordinances applicable to the proposed project. Compliance with these ordinances would reduce the effects of nearby cumulative development to less-than-significant levels, as for the proposed project. For these reasons, the proposed project would not combine with past, present, and reasonably foreseeable future projects in the project vicinity to create a significant cumulative impact related to biological resources.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
13. GEOLOGY AND SOILS— Would the project:					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☒	☐	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐	☐
iv) Landslides?	☐	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	☐
c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☐	☒
f) Change substantially the topography or any unique geologic or physical features of the site?	☐	☐	☐	☒	☐

The proposed project would connect to the combined sewer system, which is the wastewater conveyance system for San Francisco, and would not use septic tanks or alternate on-site wastewater disposal systems. Therefore, Topic E.13(e) is not applicable.

The project building site is generally flat, with no unique topographic, geologic, or physical features. Construction of the proposed RDF would not substantially alter the topography of the site. Therefore, there is **no impact** related to Topic E.13(f).

A Geotechnical Investigation Report (Geotechnical Report) was prepared for the proposed project, and the results are summarized below.[159]

Potential seismic impacts related to the proposed project include seismically-induced ground shaking, as well as liquefaction and related ground failures that could damage structures at the project site. Construction-related impacts include potential erosion, excavation instability, and settlement from excavation dewatering. A design-level geotechnical investigation, required as part of the building permit process administered by the San Francisco Department of Building Inspection (DBI), would determine the final features to be included in the proposed project to avoid or withstand seismic and geologic effects.

The project building site is relatively level and is immediately underlain by artificial fill materials, interbedded sands, possible Colma Formation (late Pleistocene), Old Bay Mud (late Pleistocene), and Franciscan Complex bedrock (Jurassic and Cretaceous). Young Bay Mud, which is typically encountered along the Bay shore, was not encountered during the geotechnical investigation of the project site. The geotechnical data report for the proposed project (Appendix A of the Geotechnical Report) describes the geologic materials beneath the project building site as follows (from youngest to oldest):

- Artificial fill at the project site ranges in thickness from 7 to 10 feet, and consists of loose sands. In some locations the fill contains debris consisting of fragments of brick, concrete, asphalt, glass, and traces of organic materials. A one-foot-thick layer of peat was encountered beneath the artificial fill in one boring.
- Approximately 23 to 33 feet of medium dense to very dense sand with silt materials are encountered below the artificial fill materials.
- Approximately 5 to 10 feet of soft to medium stiff clay underlies the sands and is in turn underlain by approximately 22 feet of stiff to very stiff clay.
- Approximately 30 to 50 feet of dense to very dense sands underlie the clay layers.
- Approximately 40 feet of very stiff to hard clays underlie the dense sands to at least 135 feet below ground surface, the maximum depth explored.

San Francisco is underlain by sedimentary and volcanic rocks of the Franciscan Complex. In the vicinity of the project site the Franciscan Complex generally consists of shale, sandstone, and chert. Bedrock was not encountered within a depth of 135 feet below ground surface at the project building site, but available geotechnical data suggests that Franciscan Formation bedrock is expected at a depth of 200 feet or more.

[159] San Francisco Department of Public Works (DPW), Geotechnical Investigation Report - Rehabilitation and Detention Facility, 820 Bryant Street, San Francisco, California, February 23, 2015 (hereinafter "Geotechnical Report"). A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

The depth to groundwater at the project building site is about 8 feet below ground surface.[160] These groundwater levels could be affected by changes in precipitation and temperature, as well as by construction-related dewatering systems in the project vicinity. During preparation of the geotechnical data report (Appendix A of the Geotechnical Report), running water was observed in two soil borings, indicating that the groundwater could be locally confined by peat deposits. Therefore, construction dewatering of the excavated basement and tunnel areas would likely be required.

Impact GE-1: The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, seismic ground shaking, seismically induced ground failure, or landslides. ***(Less than Significant)***

Impacts Related to Fault Rupture

The Alquist-Priolo Earthquake Fault Zoning Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The project building site is not located within an Alquist-Priolo Earthquake Fault Zone as established by the California Geological Survey (CGS), and no known active or potentially active faults cross the project building site or the immediate vicinity.[161] Therefore, the potential for surface fault rupture is low, and this impact would be **less than significant, and no mitigation is necessary**.

Impacts Related to Ground Shaking

Like the rest of the San Francisco Bay Area, the project building site would be subject to ground shaking in the event of an earthquake on one of the regional faults. The intensity of seismic shaking, or strong ground motion, at the project building site would be dependent on the distance between the site and the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the site. Earthquakes occurring on faults closest to the project building site would most likely generate the largest ground motions. The intensity of earthquake-induced ground motions can be described in terms of "peak ground acceleration," which is represented as a fraction of the acceleration of gravity (g).[162]

The United States Geological Survey (USGS) estimates that there is a 63 percent probability of a strong earthquake (Moment magnitude[163] [Mw] 6.7 or higher) occurring in the San Francisco Bay

[160] Geotechnical Report, p. 5.
[161] Geotechnical Report, p. 6.
[162] Acceleration of gravity (g) = 980 centimeters per second squared. 1.0 g of acceleration is a rate of increase in speed equivalent to a car traveling 328 feet from rest in 4.5 seconds.
[163] An earthquake is classified by the amount of energy released, expressed as the magnitude of the earthquake. Traditionally, magnitudes have been quantified using the Richter scale. However,

region during the 30-year period between 2007 and 2036.[164] The faults that would be capable of causing strong ground shaking at the project building site are the San Andreas Fault, located within 8 miles; the Hayward Fault, located within 10 miles; the San Gregorio Fault, located within 11 miles; and the Calaveras and Rodgers Creek faults, both located more than 21 miles away.[165]

The Geotechnical Report concludes that the largest reasonable earthquake that could affect the project building site is a 7.9 Mw earthquake occurring on the San Andreas Fault. This earthquake could result in a peak ground acceleration of 0.71g at the project site. This value represents an extreme shaking level using the Modified Mercalli Intensity scale.[166]

Incorporation of appropriate engineering and design features in accordance with the San Francisco Building Code, subject to review by DBI as part of the building permit approval process, would ensure that (1) the structure would not suffer substantial damage, (2) substantial debris such as building exterior finishes or windows would not separate from the building, (3) building occupants would be able to safely vacate the building following an earthquake, and (4) pedestrians and other bystanders would not be injured. While some damage could occur, building occupants could reoccupy the building after an earthquake, following completion of any necessary repairs.

Further, as described in Section A, Project Description, p. 7, the existing HOJ building has been designated with a Seismic Hazard Rating 3 (SHR3), which indicates that the building is seismically deficient and unlikely to remain operational in the event of a major earthquake.[167] Extensive damage to the existing HOJ building would be debilitating to the functionality of the City's justice system. Because the proposed RDF would be constructed in accordance with the most current Building Code requirements for seismic safety, it would be less likely to sustain severe damage in the event of a major earthquake, and the amount of time needed to implement any repairs to the building would likely be reduced. This would be a substantial improvement over existing

seismologists now use a moment magnitude (Mw) scale because it provides a more accurate measurement of the size of major and great earthquakes.

164 U.S. Geologic Survey (USGS), The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2), by the Working Group on California Earthquake Probabilities, Open File Report 2007-1437, 2008. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

165 Distances obtained from Appendix A (Table 2 on page 8) of the Geotechnical Report.

166 The Modified Mercalli Intensity scale estimates the intensity of shaking from an earthquake at a specific location or over a specific area by considering its effects on people, objects, and buildings. At high intensities, earthquake shaking damages buildings. The severity of the damage depends on the building type, the age of the building, and the quality of the construction. Buildings built to older building codes can be more severely damaged than recently constructed buildings using newer codes.

167 EQA Engineering And Design/AGS Inc., *Seismic Assessment of Various City-Owned Buildings Earthquake Safety Program- Hall of Justice*, October 1992, pp. V-VI. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

conditions. Therefore, impacts related to ground shaking would be **less than significant, and no mitigation is necessary**.

Impacts Related to Liquefaction, Lateral Spreading, and Seismic Settlement

Liquefaction is a phenomenon in which saturated granular sediments temporarily lose their shear strength during periods of earthquake-induced, strong ground shaking. The susceptibility of a site to liquefaction is a function of the depth, density, and water content of the granular sediments and the magnitude of earthquakes likely to affect the site. Saturated, unconsolidated silts, sands, silty sands, and gravels within 50 feet of the ground surface are most susceptible to liquefaction. The primary liquefaction-related phenomena include vertical settlement[168] and lateral spreading.[169]

The project building site is located in an area of liquefaction potential as identified in the Seismic Hazards Zone Map for the City and County of San Francisco,[170] and the Geotechnical Report identified liquefiable materials at the project building site. In its current condition, the project building site could therefore be subject to both liquefaction and earthquake-induced settlement due to the presence of shallow groundwater and the loose sands that make up the artificial fill materials. However, the proposed RDF would not be susceptible to liquefaction or settlement-related damage because the existing liquefiable soil would be removed to a depth of 17 feet and the proposed mat foundation would be supported on a medium dense to very dense sand subgrade that has low liquefaction potential.[171] Adjacent roadways, sidewalks, and utilities that are supported within the artificial fill and underlying sands could experience damage as a result of liquefaction. To address this, the Geotechnical Report recommends flexible connections for all utilities to prevent breakage due to differential settlement.

The potential for lateral displacement is low because the project building site is located in a developed flat area of the South of Market area of San Francisco and there are no nearby exposed slopes or stream banks that could be susceptible to lateral displacement.

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[168] During an earthquake, settlement can occur as a result of the relatively rapid rearrangement, compaction, and settling of subsurface materials (particularly loose, non-compacted, and variable sandy sediments). Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different rates). Areas are susceptible to differential settlement if underlain by compressible sediments, such as poorly engineered artificial fill or bay mud.

[169] Of the liquefaction hazards, lateral spreading generally causes the most damage. This is a phenomenon in which large blocks of intact, non-liquefied soil move downslope on a liquefied substrate that covers a large area.

[170] California Geological Survey, Seismic Hazards Zonation Program, City and County of San Francisco Quadrangle, November 17, 2000. Available online at http://gmw.consrv.ca.gov/shmp/download/pdf/ozn_sf.pdf. Accessed October 31, 2014. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

[171] Geotechnical Report, p. 6.

The project sponsor would be required to prepare a site-specific, design-level geotechnical report pursuant to the State Seismic Hazards Mapping Act, and to address the potential for liquefaction and earthquake-induced settlement, and to develop specific design elements to be included in the proposed project's design to avoid adverse effects related to these phenomena. The report would assess the nature and severity of the hazard(s) on the site and recommend project design, soil improvement requirements, and construction features that would reduce the identified hazard(s). The building plans and design-level geotechnical report would be submitted as part of the building permit application and reviewed by DBI to ensure compliance with all San Francisco Building Code provisions regarding structural safety.

Further, as discussed above and in Section A, Project Description, p. 7, the existing HOJ building has a seismic rating of SHR3, which indicates that the building is seismically deficient and unlikely to remain operational in the event of a major earthquake. This extensive damage would be debilitating to the functionality of the City's justice system. Construction of the new facilities would minimize liquefaction-related damage to the rehabilitation and detention facilities in the event of a major earthquake and would reduce the amount of time needed to implement any repairs. This would be a substantial improvement over existing conditions. Therefore, impacts related to liquefaction, earthquake-induced settlement, and lateral spreading would be **less than significant**, and no mitigation is necessary.

Impacts Related to Seismically Induced Landslides

The project building site is relatively flat and does not include any areas of mapped earthquake-induced landslide susceptibility identified by the California Department of Conservation under the Seismic Hazards Mapping Act of 1990.[172] Therefore, there would be **no impact** related to earthquake-induced landslides, **and no mitigation would be necessary**.

Impact GE-2: The proposed project would not result in substantial soil erosion or the loss of topsoil. ***(Less than Significant)***

Soil movement during excavation for the proposed RDF foundation and basement, underground tunnel, and utilities installation and relocation could create the potential for wind- and water-borne soil erosion. However, the construction contractor would be required to obtain a Construction Site Runoff Control Permit and implement an Erosion and Sediment Control Plan for construction activities, in accordance with Article 4.2 of the San Francisco Public Works Code, Section 146, to address sediment-laden construction-site stormwater runoff, as discussed in Section E.14: Hydrology and Water Quality. The San Francisco Public Utilities Commission (SFPUC) must

[172] California Department of Conservation, Division of Mines and Geology, State of California Seismic Hazard Zones, City and County of San Francisco, Official Map, November 17, 2000. A copy of this document is available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

review and approve the erosion and sediment control plan prior to the plan's implementation, and the SFPUC would inspect the project building site periodically to ensure compliance with the plan. Therefore, impacts related to soil erosion would be **less than significant**, and no mitigation measures are necessary.

The project building site is built out and covered with impervious surfaces, including the existing HOJ building on the HOJ site and the five existing buildings and the parking areas on the project building site. Previous construction of these structures would have involved removal of any top soil (a fertile soil horizon that typically contains a seed base). Therefore, there would be **no impact** related to loss of top soil, and no mitigation would be necessary.

Impact GE-3: The proposed project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project construction or potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse. ***(Less than Significant)***

Ground settlement could result from excavation for construction of the proposed RDF and underground tunnel, and construction dewatering. These potential effects are described below, followed by DBI procedures that are in place to ensure that unstable conditions do not result. Permanent dewatering would not be required because the proposed below-ground structures would be waterproofed and drainage would be provided. The structures would also be designed to resist uplift due to buoyancy. Heave from pile driving would not occur because any piles, if needed, would be pre-drilled.

Impacts Related to Excavation

Construction of the proposed RDF and underground tunnel would require excavation up to a depth of approximately 17 feet below ground surface, and excavation would also be required for utilities installation and relocation. Excavations would be conducted adjacent to the residential building located at 480-484 Sixth Street and the office building located at 800-804 Bryant Street, as well as Sixth, Bryant, and Harriet streets and Ahern Way. Settlement and potentially collapse could occur if the structures and the excavation sidewalls were not adequately supported during construction. Shoring systems such as soldier beams,[173] interlocking sheet piles,[174] or jet grouting[175] would be required to provide the necessary support, and the adjoining structures may need to be underpinned as well. Further, DPW, as developer of the project site, would be required to implement a monitoring program, featuring use of an inclinometer, to monitor for movement at the face of the

[173] A soldier beam system uses piles and lagging to retain soil behind the lagging. Soldier beam refers to the pile.

[174] Interlocking sheet piles are typically installed 10 feet past the bottom of a planned excavation to ensure groundwater cutoff and provide basal stability for the bottom of the excavation. For the depth of the excavation, support can be provided by internal struts or bracing.

[175] A jet grout shoring system includes overlapping grout columns for excavation support. Typically, the jet grout columns are reinforced with steel beams on alternating column locations.

excavations. The monitoring program would include a baseline survey and frequent surveying of the excavation as construction progresses to evaluate the effects of construction and ensure that the soil and existing walls do not become unstable.

Impacts Related to Construction-Related Dewatering

The 17-foot excavation depth would extend up to approximately 9 feet below the anticipated groundwater levels. Therefore, there is the potential for substantial water inflow into the excavated areas during construction. Without an adequate groundwater control program during construction, groundwater could also intrude into the existing HOJ where the underground corridor would connect to the basement. Dewatering would be required to maintain the groundwater level beneath the depth of excavation and could potentially result in settlement of adjacent structures, including buildings, sidewalks, streets, and utilities. To prevent adverse settlement during construction, a site-specific dewatering plan would be necessary. This plan may include the installation of a water-tight shoring system such as interlocked sheet piles or jet grouting to minimize the flow of groundwater into the excavation once the shoring system is installed, therefore reducing the risk of settlement in adjacent areas. The site-specific dewatering plan would be reviewed and approved by the San Francisco Public Utilities Commission and the San Francisco Department of Public Health.

DBI Requirements and Significance Conclusion

DBI would require a detailed geotechnical report to address potential settlement and subsidence impacts of excavation and dewatering and would ensure that these effects are appropriately addressed in accordance with Chapter 33 of the San Francisco Building Code. DBI would also require that the report include a determination as to whether a lateral movement and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets during construction. If a monitoring survey were recommended, DBI would require that a Special Inspector be retained by the project sponsor to perform this monitoring. Groundwater observation wells could be required to monitor potential settlement and subsidence during dewatering. If, in the judgment of the Special Inspector, unacceptable movement were to occur, corrective actions would be used to halt this settlement. Groundwater recharge could be used to halt settlement due to dewatering. Further, the final building plans would be reviewed by DBI, which would determine if additional site-specific reports would be required.

With implementation of the recommendations provided in the detailed geotechnical study, subject to review and approval by DBI, and monitoring by a DBI Special Inspector (if required), impacts related to the potential for settlement and subsidence due to construction on soil that is unstable, or could become unstable as a result of the project, would be **less than significant**. No mitigation is necessary.

Impact GE-4: The proposed project would not create substantial risks to life or property as a result of being located on expansive soil. (Less than Significant)

The presence of expansive soils is not expected because the artificial fill and sands beneath the project area do not contain high proportions of clay particles that can shrink or swell with changes in moisture content and thus would not be expansive. The clay deposits beneath the project site are generally below the groundwater table and are permanently saturated. Therefore, impacts related to expansive soils would be **less than significant, and no mitigation is necessary**.

Impact C-GE-1: The proposed project, in combination with other past, present or reasonably foreseeable future projects in the site vicinity, would not result in a cumulatively considerable contribution to cumulative impacts related to geologic hazards. ***(Less than Significant)***

Geological impacts are generally site-specific and the proposed project would not have the potential to have cumulative effects with other projects. Geological effects as a result of construction of the proposed project are usually restricted to the immediate vicinity, and geologic impacts resulting from the proposed project are limited to seismic effects and the potential for creating an unstable geologic unit. Seismic effects could occur in the project vicinity, including the Financial District and South of Market area. Therefore, these areas are considered the geographic scope for seismic effects. The creation of unstable geologic units is a local effect; therefore, the geographic scope for this cumulative impact is limited to the project area and immediate vicinity.

Seismic Safety

Several projects in the vicinity of the proposed RDF listed under **Impact C-LU-1**, pp. 34-35, would contribute to an increase in the number of persons potentially exposed to seismic risks in the South of Market and greater downtown San Francisco areas, which could result in a potential cumulative impact. However, as noted in **Impact GE-1**, the project site is not subject to fault rupture because there are no known earthquake faults that cross the project site or the immediate vicinity of the project site. The proposed project and any reasonably foreseeable future development within the vicinity of the project site would be subject to very strong or more extreme ground shaking and could experience liquefaction effects in the event of an earthquake on a nearby fault. However, the proposed RDF and all new buildings in San Francisco would be constructed in accordance with the most current Building Code requirements for seismic safety, providing for increased life-safety protection of residents and workers. Implementation of these requirements would ensure that potential cumulative impacts related to seismic safety would be less than significant. Therefore the proposed project would not contribute considerably to a significant cumulative impact.

Unstable Geologic Unit

As discussed in **Impact GE-3**, implementation of the proposed project could result in ground settlement from construction dewatering as well as from excavation for construction of the

proposed RDF, underground tunnel, and potential underground utility relocation and installation. None of the cumulative projects are located immediately adjacent to the project site. Therefore, there would be no cumulative impact related to unstable geologic units.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact	Not Applicable
14. HYDROLOGY AND WATER QUALITY—Would the project:					
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion of siltation on- or off-site?	☐	☐	☒	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☒	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map?	☐	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☒	☐	☐

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact	Not Applicable
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☒	☐	☐	☐
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒	☐

The proposed project does not include the construction of housing. Therefore, Topic E.14(g) is not applicable.

The project site is not located on or near a slope that could be subject to mudflow. Based on the state's official tsunami inundation maps, the project site is not located within a tsunami inundation zone.[176] Therefore, there is **no impact** related to Topic E.14(j).

Impact HY-1: The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality and runoff from the proposed project would not exceed the capacity of a storm drain system or provide a substantial source of stormwater pollutants. ***(Less than Significant)***

As discussed in the impact analyses below, the proposed project would not result in water quality impacts as a result of construction-related stormwater discharges, construction-related dewatering, or post-construction-related stormwater discharges because these discharges would be managed in accordance with existing San Francisco regulations, described below. Once constructed, the proposed project would change the quantity of stormwater and wastewater discharged to the combined sewer but would not have an effect on the frequency or duration of combined sewer discharges as also discussed below.

Description of Combined Sewer System

The proposed project is located in the Eastern Basin of the City's combined sewer system, within the Channel sub-basin. Combined stormwater and wastewater flows from this basin are transported to the Southeast Water Pollution Control Plant (SEWPCP) which treats up to 150 million gallons

[176] California Emergency Management Agency, California Geological Survey, University of Southern California. Tsunami Inundation Map for Emergency Planning, San Francisco North Quadrangle/San Francisco South Quadrangle (SF Bay), June 15, 2009. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

per day (mgd) of wastewater to a secondary level.[177] During dry weather, wastewater flows consist mainly of municipal and industrial sanitary sewage and wastewater, and the annual average wastewater flow during dry weather is 60 mgd.[178] The average dry weather design flow capacity of the SEWPCP is 84.5 mgd; therefore the existing flows are about 71 percent of the treatment capacity and all dry weather wastewater flow is treated to a secondary level at the SEWPCP. The treated wastewater is then discharged to the Bay through the deep water outfall at Pier 80, located immediately to the north of the Islais Creek Channel.

During wet weather (generally October through April), the combined sewer and stormwater system collects large volumes of stormwater runoff in addition to municipal and industrial sanitary sewage and wastewater, and the combined wastewater and stormwater flow is conveyed to treatment facilities before eventual discharge to the Bay. Depending on the amount of rainfall, wet weather flows are treated to varying levels before discharge to the Bay. Up to 150 mgd of wet weather flows receive secondary treatment at the SEWPCP. The SEWPCP can also treat up to an additional 100 mgd to a primary treatment standard plus disinfection. Treated wet weather discharges of up to 250 mgd from the SEWPCP occur through the Pier 80 outfall directly to the Bay or through the Quint Street outfall to Islais Creek Channel on the south bank of Islais Creek. Only wastewater treated to a secondary level is discharged at the Quint Street outfall.

Flows in excess of the treatment capacity are conveyed to storage and transport boxes which provide "flow-through treatment" to remove settleable solids and floatable materials, which is similar to primary treatment. The excess flows are then eventually discharged through 29 combined sewer discharge structures located along the City's bayside waterfront from the Marina Green to Candlestick Point. All discharges from the combined sewer system to the Bay, through either the primary outfalls or the combined sewer discharge structures, are operated in compliance with the federal Clean Water Act and the State's Porter-Cologne Water Quality Control Act through a permit issued by the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) which incorporates the requirements of the federal Combined Sewer Overflow (CSO) Control Policy.

[177] Secondary treatment is the treatment of wastewater or sewage involving removal of organic matter using biological and chemical processes. This is a higher level of treatment than primary treatment, which is removal of floating and settleable solids using physical operations such as screening and sedimentation. Secondary treatment is less intensive than tertiary treatment, in which additional chemical and biological treatment processes are used to remove additional compounds that may be required for discharge or reuse purposes.

[178] San Francisco Water Power Sewer, *San Francisco's Wastewater Treatment Facilities*, June 2014. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

Impacts from Construction-Related Stormwater Runoff

Soil movement for foundation excavation, underground tunnel, and utilities installation and relocation could create the potential for wind- and water-borne soil erosion. In addition, without proper handling methods, stormwater runoff from temporary on-site use and storage of vehicles, fuels, wastes, and other hazardous materials could carry pollutants to the combined sewer system. However, the project sponsor's construction contractor would be required to obtain a Construction Site Runoff Control Permit and implement an Erosion and Sediment Control Plan for construction activities, in accordance with Construction Site Runoff requirements of Article 4.2 of the *San Francisco Public Works Code*, Section 146. This permit is required for any project that includes any land disturbing activities such as building demolition, clearing, grading, grubbing, filling, stockpiling, excavating, and transporting soil. The permit specifically requires easements for drainage facilities; provision of adequate dust controls in conformance with applicable air pollution laws and regulations; and improvement of any existing grading, ground surface, or site drainage to meet the requirements of Article 4.2.

The application for the permit must also include an Erosion and Sediment Control Plan that provides a vicinity map showing the location of the site in relationship to the surrounding area's water courses, water bodies, and other significant geographic features; a site survey; suitable contours for the existing and proposed topography, area drainage, proposed construction and sequencing; proposed drainage channels; proposed erosion and sediment controls; dewatering controls, where applicable; soil stabilization measures, where applicable; maintenance controls; sampling, monitoring, and reporting schedules; and any other information deemed necessary by the SFPUC. A building permit cannot be issued until a Construction Site Runoff Control Permit has been issued.

Under the Construction Site Runoff Control Permit, the project sponsor would be required to conduct daily inspections and maintenance of all erosion and sediment controls and must provide inspection and maintenance information to the SFPUC. The SFPUC would also conduct periodic inspections of the project site to ensure compliance with the plan. The project sponsor would be required to notify the SFPUC at least two days prior to the start of construction, completed installation of erosion and sediment control measures, completion of final grading, and project completion. At the SFPUC's discretion, sampling, metering, and monitoring may also be required. Implementation of the Construction Site Runoff requirements of Article 4.2 of the *San Francisco Public Works Code* would ensure that water quality impacts related to violation of water quality standards or degradation of water quality due to discharge of construction-related stormwater runoff would be **less than significant**. No mitigation measures are necessary.

Impacts from Construction-Related Dewatering

As noted in Section E.13, Geology and Soils, p. 173, the 17-foot excavation depth would extend approximately 9 feet below the anticipated groundwater levels. Therefore, there is the potential for water inflow into the excavations during construction. If the groundwater produced during dewatering contained contaminants or excessive sediment, discharge of the groundwater into the combined sewer system could potentially degrade water quality.

Groundwater produced during construction-related dewatering would be discharged to the City's combined sewer system in accordance with a permit issued by the Wastewater Enterprise Collection System Division of the SFPUC pursuant to Article 4.1 of the *San Francisco Public Works Code*, as supplemented by Order No. 158170, which regulates the quantity and quality of discharges to the combined sewer system. This permit would contain appropriate discharge standards and may require installation of meters to measure the volume of the discharge. Although the groundwater could contain contaminants related to past site activities – as discussed below on pp. 197-205 in Section E.15, Hazards and Hazardous Materials – as well as sediment and suspended solids, the groundwater would be treated as necessary to meet permit requirements prior to discharge. With discharge to the combined sewer system in accordance with regulatory requirements, water quality impacts related to a violation of water quality standards or degradation of water quality due to discharge of groundwater during groundwater dewatering would be **less than significant**. No mitigation measures are necessary.

Impacts Related to Combined Sewer Overflows During Operation

As discussed above, the volume of wet weather flows in the Eastern Drainage Basin varies due to the addition of stormwater during wet weather (generally October through April). When the increased flows exceed the 400 million gallon per day treatment capacity of the eastside wet weather facilities, the excess flows are discharged through 29 combined sewer discharge structures located along the City's bayside waterfront from the Marina Green to Candlestick Point after receiving the equivalent of primary treatment. The combined sewer discharge structures associated with the Channel sub-basin discharge to Lower San Francisco Bay and Mission Creek.

An increase in the volume of combined sewer discharges could be a concern because the RWQCB has designated both Lower San Francisco Bay and Mission Creek as impaired water bodies under Section 303(d) of the Clean Water Act, which indicates water quality standards are not expected to be met after implementation of technology-based effluent limitations, and because combined sewer discharges contain pollutants for which these water bodies are impaired. Two aspects of the project in combination could result in long-term changes in the flows to the City's combined sewer system in the Channel sub-basin, including changes in the amount of wastewater generation and changes

in stormwater runoff volumes and rates. The effects of these factors on the combined sewer system are closely related, and the combined effect on the volume and/or frequency of combined sewer discharges to the Bay is discussed below.

Changes in Wastewater Flows

As described in Section A, Project Description on pp. 5-7, the proposed project would decrease the number of beds from 905 to 640, a reduction of 265 inmates. While the number of employees would increase by about 47 people, demolition of the existing commercial buildings at 444 Sixth Street, 450 Sixth Street, and 820 Bryant Street (a McDonald's restaurant) for development of the proposed RDF would result in the displacement of approximately 43 employees, resulting in a net increase of about 4 employees. However, any increase in wastewater production by these employees would be offset by the reduction in the number of inmates. In addition, as described below on p. 212, in Section E.16, Mineral and Energy Resources, the proposed project would be required to implement the 2014 San Francisco Building Code requirements for the use of water-conserving fixtures, which would reduce the amount of wastewater produced. These factors would result in a corresponding reduction in wastewater generation. Therefore, year-round wastewater discharges to the combined sewer system would be reduced under the proposed project and would be within the existing dry weather capacity of the SEWPCP.

Changes in Stormwater Runoff

The project site is almost entirely covered by impervious surfaces and would continue to be under the proposed project. In accordance with San Francisco's Stormwater Ordinance (Article 4.2 of the *San Francisco Public Works Code,* Section 147) and Stormwater Design Guidelines, the project sponsor would be required to achieve the standards specified in LEED® SS6.1 (Stormwater Design: Quantity Control) to minimize the flow and volume of stormwater into the combined sewer system. For the project site, this standard specifies that the project sponsor must implement a stormwater management plan that results in a 25 percent decrease in the peak rate and total volume of stormwater runoff from the two-year 24-hour design storm, compared to existing conditions.

Accordingly, the project sponsor would be required to incorporate low-impact design techniques into the design and to implement stormwater best management practices (BMPs) to reduce the flow rate and volume of stormwater entering the combined sewer system. The project sponsor could achieve the necessary reduction in stormwater flows primarily by collecting and treating stormwater runoff for on-site reuse. Capturing the rainwater for reuse could also reduce the amount of stormwater pollutants that would otherwise be discharged to the combined sewer system.

The Stormwater Control Plan for the proposed project would describe the rainwater collection system and any other BMPs that would be implemented to achieve the specified reduction in

stormwater flows as well as a plan for post-construction operation and maintenance of the BMPs. Specifically, the plan must include the following elements:

- Site characterization,
- Design and development goals,
- Site plan,
- Site design,
- Source controls,
- Treatment BMPs,
- Comparison of design to established goals, and
- Operations and maintenance plan

The Stormwater Control Plan must be reviewed and stamped by a licensed landscape architect, architect, or engineer. The SFPUC would review the plan and certify compliance with the Stormwater Design Guidelines, and would inspect stormwater BMPs once they are constructed. Any issues noted by the inspection must be corrected before the Certificate of Occupancy can be issued for the building. Following occupancy, the owner would be responsible for completing an annual self-certification inspection, and must submit completed checklists and maintenance logs for the year to the SFPUC. In addition, the SFPUC would inspect all stormwater BMPs every third year and any issues identified by either inspection must be resolved before the SFPUC could renew the certificate of compliance.

With implementation of stormwater control measures as required by San Francisco's Stormwater Ordinance (Article 4.2 of the *San Francisco Public Works Code,* Section 147) and Stormwater Design Guidelines, implementation of the proposed project would contribute to a decrease in the rate and volume of stormwater flows from the project site relative to existing conditions.

Net Impact on Combined Sewer Discharges

As discussed above, both wastewater and stormwater flows to the combined sewer system would be reduced under the proposed project compared to existing conditions. Therefore, implementation of the proposed project would result in less-than-significant water quality impacts related to violation of water quality standards or degradation of water quality associated with changes in combined sewer discharges into the Bay.

Exceedance of Storm System Capacity and Additional Sources of Polluted Runoff

Stormwater runoff in an urban location, such as the project building site, is a known source of pollution. Runoff from the project building site may contain polynuclear aromatic hydrocarbons[179] (PAHs) from vehicle emissions; heavy metals, such as copper from brake pad wear and zinc from tire wear; dioxins as products of combustion; and mercury resulting from atmospheric deposition. All of these materials, and others, may be deposited on paved surfaces and rooftops as fine airborne particles, thus yielding stormwater runoff pollution that is unrelated to use of the proposed RDF. In addition, during operations the proposed project could contribute specific pollutants including sediments, nutrients, oil and grease, organics, and trash that can be washed into the combined sewer system. These pollutants can all affect water quality.

However, as discussed above, in accordance with the San Francisco's Stormwater Ordinance and the Stormwater Design Guidelines, the peak rate and volume of stormwater discharged from the site would be reduced by 25 percent relative to existing conditions. Further, reuse of rainwater as a stormwater control BMP could also reduce the amount of stormwater pollutants discharged to the combined sewer system. Therefore, the proposed project would not contribute runoff water that would exceed the capacity of an existing or planned stormwater drainage system or provide substantial additional sources of polluted runoff, and impacts related to these topics would be **less than significant**. No mitigation is necessary.

Impact HY-2: The proposed project would not substantially deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table. ***(Less than Significant)***

The proposed project is located within the Downtown San Francisco Groundwater Basin. Implementation of the proposed project would not result in depletion of groundwater resources in this basin because, other than temporary pumping of groundwater during construction-related dewatering, the proposed project would not involve the use or extraction of groundwater. Rather, potable water for the proposed project would be provided by the SFPUC regional water system. Construction-related dewatering would not deplete groundwater supplies because it would only be conducted on a short-term basis and the Downtown San Francisco Groundwater Basin is not used as a potable water supply and there are no plans for development of this basin for groundwater production.

[179] Polynuclear aromatic hydrocarbons (PAHs) are group of chemicals that are formed during the incomplete burning of coal, oil, gas, wood, garbage, or other organic substances, such as tobacco and charbroiled meat. PAHs usually occur naturally, but they can be manufactured. A few PAHs are used in medicines and to make dyes, plastics, and pesticides. Others are contained in asphalt used in road construction. They can also be found in substances such as crude oil, coal, coal tar pitch, creosote, and roofing tar. They are found throughout the environment in the air, water, and soil. They can occur in the air, as vapors or attached to dust or ash particles, or as solids in soil or sediment.

Project implementation would not interfere with groundwater recharge because the project site is almost completely covered with impervious surfaces under existing conditions and would continue to be under the proposed project. Given that groundwater is not used as a potable water supply, there are no plans for development of the basin for groundwater production, and there would be no net increase in impervious surfaces, impacts related to the depletion of groundwater resources and interference with groundwater recharge would be **less than significant**. No mitigation is necessary.

Impact HY-3: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion, siltation, or flooding on- or off-site. ***(Less than Significant)***

The project site does not include any existing streams or water course that could be altered or diverted, and there are no surface impoundments, wetlands, natural catch basins, or settling ponds within the project site. Therefore, there would be **no impact** related to alteration of drainage patterns by altering the course of a stream in a manner that would cause erosion or flooding on or off-site.

Currently, surface water runoff from the project site is conveyed to the combined sewer system. Although the project site is located in an area of sewer-related flooding identified by the SFPUC (see **Impact HY-5**), the proposed project would implement stormwater control BMPs such as rainwater capture and reuse on-site to comply with stormwater volume and flow rate reductions required by San Francisco's Stormwater Design Guidelines as discussed in **Impact HY-1**. Compliance with the Stormwater Design Guidelines would reduce the quantity and rate of stormwater runoff to the City's combined sewer system, decreasing the potential for on- and off-site erosion and flooding, and would result in a **less-than-significant** impact. No mitigation is necessary.

Impact HY-4: Operation of the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving flooding. (*Less than Significant with Mitigation*)

Some low lying areas along San Francisco's Bay shoreline are subject to flooding during periods of extreme high tides, storm surge and waves, although these occurrences are relatively rare in San Francisco compared to areas prone to hurricanes or other major coastal storms or to developed areas near or below sea level. In 2008, the City and County of San Francisco adopted interim flood maps depicting the 100-year flood zone along the City's Bay shoreline. The 100-year flood zone represents areas that are subject to flooding once every 100 years on average or that have a 1-percent chance of flooding in any single year. Flooding in these areas has the potential to damage buildings and infrastructure. The proposed project is not located within a 100-year flood zone

identified on the City's interim flood maps.[180] Therefore, this section discusses the potential for increased flooding in the future as a result of sea level rise along with factors contributing to coastal flooding.

Factors Contributing to Coastal Flooding

Coastal areas are vulnerable to periodic flooding due to storm surge, extreme tides, and waves. Rising sea level due to climate change has the potential to increase the frequency, severity, and extent of flooding in coastal areas. These factors are described below.

Storm Surge. Storm surge occurs when persistent high winds and changes in air pressure push water towards the shore, which can raise the water level near the shoreline by several feet and may persist for several days. Along San Francisco's bay shoreline, storm surge typically raises the surface water elevation 2 to 3 feet during major winter storms several times a year. Extreme high tides in combination with storm surge can cause inundation of low-lying roads, boardwalks, and promenades; can exacerbate coastal flooding; and can interfere with stormwater and sewer outfalls.

The degree of storm surge depends on the severity of the storm as well as tidal levels at the time of the storm and is characterized using a return period which represents the expected frequency of a storm event occurring based on historical information. A one-year storm surge is expected to occur each year while a 100-year storm surge (which represents more extreme conditions) has a one percent chance of occurring in any year.

Tides. Diurnal (twice daily) high tides along San Francisco's bay shoreline typically range from approximately 5 to 7 feet based on the 1988 North American Vertical Datum (NAVD88), though annual maximum tides may exceed 7 feet. The twice yearly extreme high and low tides are called "king tides." These occur each year during the winter and summer when the earth, moon and sun are aligned, and may be amplified by winter weather. King tides and other high tides can result in temporary inundation of low-lying roads, boardwalks, and waterfront promenades. The Embarcadero waterfront (Pier 14) and the Marina area in San Francisco experience inundation under current king tide conditions.[181]

Waves. Waves and wave run-up primarily affect a narrow band along the shoreline where wave energy can damage structures and overtop both natural embankments and shoreline protection structures such as seawalls and levees. The influence of waves diminishes inland as wave energy dissipates. In addition, the Pacific Ocean waves, which are generally larger than those originating

[180] City and County of San Francisco, San Francisco Interim Floodplain Map, Northeast. Final Draft, July 2008. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

[181] San Francisco Water Power Sewer. *Climate Stressors and Impact: Bayside Sea Level Rise Mapping, Final Technical Memorandum.* June 2014. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

in the Bay, are substantially dampened along the Bay shoreline due to transformation processes within San Francisco Bay.

Sea Level Rise. Seas are rising globally due to climate change, and are expected to continue to rise at an accelerating rate for the foreseeable future. The sea level at the San Francisco tidal gauge has risen 8 inches over the past century.

The National Research Council's (NRC's) 2012 report, *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (the NRC Report) provides a scientific review of sea level rise for the West Coast and provides the most recent regional sea level rise predictions for 2030, 2050, and 2100, relative to the year 2000 sea level.[182] In this report, the NRC projects that sea levels in the San Francisco Bay area will rise 11 inches by 2050 and 36 inches by 2100 as presented in **Table 16**. As presented in the NRC Report, these sea level rise projections represent likely sea level rise values based on the current understanding of global climate change and assuming a moderate level of greenhouse gas (GHG) emissions[183] and extrapolation of continued accelerating land ice melt patterns, plus or minus one standard deviation.[184]

Table 16: Sea Level Rise Estimates for San Francisco Bay Relative to the Year 2000

Year	Projection
2030	6 ± 2 inches
2050	11 ± 4 inches
2100	36 ± 10 inches

Source: National Research Council, 2012

The estimates represent the permanent increase in Mean Sea Level and the associated average daily high tide conditions (represented by Mean Higher High Water, or MHHW)[185] that could result from

[182] National Research Council, *Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*. Washington, DC: The National Academies Press, 2012. Available online at http://www.nap.edu/catalog.php?record_id=13389. Accessed October 1, 2014.

[183] Future emissions of greenhouse gases depend on a collection of human decisions at local, regional, national, and international levels as well as potential unknown technological developments. For this reason, future changes in greenhouse gas emissions cannot be accurately estimated, and a range of emissions levels is considered in the NRC Report. Estimates of sea level rise relative to thermal expansion of the oceans were formulated using the mid-level, or moderate level, of predicted changes in greenhouse gas emissions (from a combination of fossil and non-fossil fuels), as well as an assumption of high economic growth; this represents scenario "A1B" as described by the Intergovernmental Panel on Climate Change (IPCC).

[184] One standard deviation roughly corresponds to a 15 percent/85 percent confidence interval, meaning that there is approximately 15 percent chance the value will exceed the high-end projection (8 inches for the 2030 example) and a 15 percent chance the value will be lower than the low-end projection (4 inches in 2030).

[185] Mean higher high water is the higher of each day's two high tides averaged over time.

sea level rise; they do not take into account storm surge, extreme tides, or waves which can result in water levels that are temporarily higher than MHHW as discussed above.

In March 2013, the California Ocean Protection Council updated its 2010 statewide sea level rise guidance to adopt the NRC Report as the current, best available science on sea level rise for California.[186] The California Coastal Commission supports the use of the NRC Report as the best science currently available in its 2013 Draft Sea-Level Rise Policy Guidance, which also emphasizes the importance of regularly updating sea level rise projections as the science continues to advance.[187] The San Francisco Bay Conservation and Development Commission (BCDC) also considers the NRC Report to be the best available science-based prediction of sea level rise for San Francisco Bay. Accordingly, this Initial Study considers the NRC Report to be the best science currently available on sea level rise affecting San Francisco for both CEQA and planning purposes.

Although the NRC Report provides the best available sea level rise projections for San Francisco Bay at this time, scientific uncertainty remains regarding the rate and magnitude of sea level rise. Sea level rise projections beyond 2050 are highly dependent on assumptions regarding future global GHG emissions and future changes in the rate of land ice melting. As a result of the uncertainties inherent in these assumptions, the range of sea level rise predictions becomes substantially broader beyond 2050 (see **Table 16**). In recognition of this uncertainty, the State of California Sea-Level Rise Guidance recommends an adaptive management approach for development in areas that may be subject to sea level rise beyond 2050.

Sea Level Rise Inundation Mapping

The SFPUC, as part of the planning for its Sewer System Improvement Project, has developed a series of maps representing areas of inundation along both the Bay and Ocean shoreline of San Francisco. These maps use a 1-meter horizontal grid resolution[188] based on the 2010/2011 California Coastal Mapping Program LiDAR.[189] The inundation maps leverage data from the Federal Emergency Management Agency's (FEMA's) California Coastal Mapping and Analysis

[186] *State of California Sea-Level Rise Guidance Document*. Developed by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), with science support provided by the Ocean Protection Council's Science Advisory Team and the California Ocean Science Trust. March 2013 Update. Available online at http://www.opc.ca.gov/webmaster/ftp/pdf/docs/2013_SLR_Guidance_Update_FINAL1.pdf. Accessed April 15, 2015.

[187] California Coastal Commission *Draft Sea Level Rise Policy Guidance, Public Review Draft*, October 14, 2013. Available online at http://www.coastal.ca.gov/climate/SLRguidance.html. Accessed April 15, 2015.

[188] The horizontal grid resolution of a digital elevation model defines the scale of the features that are modeled; this is generally the minimum resolution necessary to depict levees, berms, and other topographic features important to diverting floodwaters.

[189] LiDAR (Light Detection and Ranging) is a remote sensing technology that measures distance by illuminating a target with a laser and analyzing the reflected light. LIDAR is commonly used to create high-resolution terrain models, topography data sets, and topographic maps.

Project, which includes detailed coastal engineering analyses and mapping of the San Francisco Bay shoreline.

The SFPUC inundation maps evaluate scenarios that represent the NRC projections of sea level rise in combination with the effects of storm surge. They represent permanent inundation that could occur as a result of total water level rises (over and above year 2000 MHHW) based on daily tidal fluctuations as well as temporary, short-term inundation that could occur as a result of 1-year, 2-year, 5-year, 25-year, 50-year, and 100-year storm surges. Flooding as a result of storm surge would occur on a temporary basis, during and immediately after a storm event or extreme tide.

The scenarios used in the analysis for this Initial Study are representative of inundation that could occur by the year 2050 and the year 2100 based on the NRC's projected level of sea level rise and considering a 100-year storm surge:

- MHHW plus 12 inches of sea level rise (representative of NRC's projected sea level rise by 2050);
- MHHW plus 36 inches of sea level rise (representative of NRC's projected sea level rise by 2100),
- MHHW plus 52 inches of sea level rise (representative of NRC's projected sea level rise by the year 2050 in combination with a 100-year storm surge), and
- MHHW plus 77 inches of sea level rise (representative of NRC's projected sea level rise by the year 2100 in combination with a 100-year storm surge).

The SFPUC cautions that its maps represent a "do nothing" scenario, in which no measures are taken to prevent future flooding and no area-wide measures such as waterfront protection structures are constructed. In the event that the City undertakes area-wide measures to protect against inundation in the future, the mapping would need to be revised to reflect the modified inundation areas with construction of these measures.

The SFPUC inundation maps indicate that the project site would not be inundated with a water level rise of 12 inches, which is expected by 2050, even when the effects of 100-year storm surge are considered.[190] In addition, the project building site would not be inundated with 36 inches of water level rise which is expected by 2100; however, when the effects of a 100-year storm surge are considered under this scenario, the flood elevation would be approximately 13 feet NAVD88 and portions of the project building site could be temporarily inundated at depths of up to 2 feet.

However, as previously noted, this flooding scenario is based on 2010/2011 topographic conditions and assumes that no site-specific flood protection measures such as filling to raise the grade of low

[190] San Francisco Water Power Sewer, *Climate Stressors and Impact: Bayside Sea Level Rise Mapping, Final Technical Memorandum* and associated maps, June 2014. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

lying areas or area-wide measures such as construction of berms, levees or seawalls would be implemented to protect the project site or surrounding area during the intervening period. As such, it is likely that the actual flood zone would be different by 2100 than what is currently used for inundation mapping by the SFPUC, and the actual flood zone would include only those areas of the site with ground elevations below the flood elevation of 1.5 feet SFD (13 feet NAVD88) that are not protected by area-wide flood protection measures.

Planning for Sea Level Rise in San Francisco

The City has convened an inter-agency Climate Adaptation Working Group to identify ways to make sure that it is prepared to adapt to effects of sea level rise. Participating agencies include the Department of the Environment, SFPUC, Planning Department, City Administrator's office, Port of San Francisco (Port), San Francisco International Airport (SFO), Department of Public Works (DPW), Municipal Transportation Agency (SFMTA), Department of Public Health (DPH), and Department of Recreation and Parks. The working group is focusing its effort on the City's most imminent adaptation concerns, including sea level rise along Ocean Beach and shores, flooding from storm surge and extreme rain events, an increased likelihood of extreme heat, and decreased fog that supports redwoods and local ecosystems. To address sea level rise and flooding, the working group is focusing on efforts to improve the existing coastal flood protection infrastructure in time to prevent significant flooding impacts from sea level rise. The working group will establish requirements addressing proper flood insurance for structures in low lying areas, flood-resilient construction of new developments within inundation areas, and a low-carbon footprint for new developments. The working group is also assessing the use of natural solutions such as wetlands to protect the shoreline. The SFPUC is also addressing sea level rise as part of its Sewer System Improvement Program, and is conducting a detailed analysis of the potential for new and existing combined sewer infrastructure to be affected by sea level rise.[191] Accordingly, all new facilities will be built using a climate change criterion so the combined sewer system will be better able to respond to rising sea levels. Because rising sea levels and storm surge could potentially inundate the combined sewer system and exacerbate existing flooding from the sewer system, or cause new flooding, the SFPUC is also evaluating alternatives such as the installation of backflow preventers on the combined sewer discharge structures to restrict the intrusion of Bay water into the combined sewer system.

San Francisco Sea Level Rise Guidance

On September 22, 2014, the City's Capital Planning Committee (CPC) adopted the Guidance for Incorporating Sea Level Rise into Capital Planning in San Francisco: Assessing Vulnerability and

[191] San Francisco Water Power Sewer, *Bayside Drainage Basin Urban Watershed Opportunities, Final Draft Technical Memorandum,* July, 2014.

Risk to Support Adaptation, which was prepared by an inter-agency committee including the CPC, SFPUC, Port, SFO, DPW, SFMTA, and the Planning Department.[192] Accordingly, the City's capital planning program now requires the preparation of project-level sea level rise vulnerability and risk assessments for all City capital projects with a cost of $5 million or more that are located in areas potentially vulnerable to future flooding due to sea level rise.

The guidance presents a framework for incorporating sea level rise into the planning of capital projects implemented by the City and selecting appropriate adaptation measures based on site-specific information. The planning process described in the guidance includes six primary steps:

- Review sea level rise science,
- Assess vulnerability,
- Assess risk,
- Plan for adaptation,
- Implement adaptation measures, and
- Monitor.

As of September 2014, the City considers the NRC report as the best available science on sea level rise in California. However, the guidance acknowledges that the science of sea level rise is continually advancing and projections of sea level rise may need to be updated at some point to reflect the most updated science. Sea level rise inundation maps prepared by the SFPUC, described above, are considered the most up-to-date maps and take into account both water level rises and the temporary effects of storm surge along the shoreline. The guidance states that the review of available sea level science should determine whether the project site could be subject to flooding during the lifespan of the project.

For those City-sponsored capital projects that cost $5 million or more that could be flooded during their lifespan, the guidance specifies the need to conduct a vulnerability assessment based on the degree of flooding that could occur, the sensitivity of the project to sea level rise, and the adaptive capacity of the project site and design (the ability to adjust to sea level rise impacts without the need for substantial intervention or modification). The risk assessment takes into consideration the likelihood that the project could be adversely affected by sea level rise and the related consequences of flooding. The need to prepare an adaptation plan is specified for projects that are found to be vulnerable to sea level rise and have a potential for substantial consequences. The plan should focus on those aspects of the project that have the greatest consequences if flooded. It should

[192] City and County of San Francisco Sea Level Rise Committee, *Guidance for Incorporating Sea Level Rise into Capital Planning in San Francisco: Assessing Vulnerability and Risk to Support Adaptation*. September 22, 2011. Available online at http://onesanfrancisco.org/wp-content/uploads/San%20Francisco%20SLR%20Guidance%20Adopted%209.22.14%2012182014.pdf. Accessed February 5, 2015.

include clear accountability and trigger points for bringing adaptation strategies online as well as a well-defined process to ensure that milestones are being met and the latest science is being considered.

The City's sea level rise guidance document also acknowledges that there is some flexibility in how to plan for adaptations, and it may not always be feasible or cost effective to design and build for long-term potential sea level rise scenarios that are of a highly uncertain nature, such as an upper end of the NRC report range for the year 2100 (66-inches of sea level rise). In this case, a project could be designed and constructed to be resilient to the likely mid-century sea level rise (11± 4 inches by 2050). An alternative approach would be to build a project to be resilient to the *likely* sea level rise by 2100 (36 inches), while including adaptive capacity to be resilient to the *upper range* of sea level rise estimates for 2100 (66 inches).

Impact Conclusion

Under CEQA, the City considers city-sponsored projects that could be vulnerable to 100-year flooding in combination with sea level rise during their lifespan to have a significant risk related to flooding. As described above, the SFPUC inundation maps indicate that the project site would not be flooded with water level rises of 12 inches, which is expected by 2050, even when the effects of 100-year storm surge are considered. In addition, the project site would not be flooded with 36 inches of water level rise which is expected by 2100; however, when the effects of 100-year storm surge are considered under this scenario, the flood level would be approximately 13 feet NAVD88 and portions of the project building site could be temporarily flooded at depths of up to 2 feet.

Estimates of sea level rise are less certain after 2050. However, this mapping indicates that the project building site could be temporarily flooded as a result of sea level rise during the life of the project, including the basement and first floor of the proposed RDF and the pedestrian tunnel connection from the proposed RDF to the courtrooms in the existing HOJ building. The basement would provide access to the underground pedestrian tunnel and would also include uses such as building services, storage, laundry, and mechanical/electrical/plumbing uses. The first floor would include a public lobby, inmate visiting room, administrative offices, storage of central records and warrants, the kitchen, building and laundry services, and a multi-purpose room. While San Francisco's Floodplain Management Ordinance (Chapter 2A, Article XX, Sections 2A.280 through 2A.285 of the San Francisco Administrative Code) specifies construction standards for projects located in existing flood zones, these standards do not apply to future flood zones that could occur as a result of sea level rise.

As indicated in the analysis above, the proposed project could be temporarily flooded after 2050 as a result of future sea level rise and a 100-year storm surge. As such, the proposed project would be designed and constructed with flood-resistant building standards or, in some cases, designed to

be capable of adapting to meet these standards when needed in the future in recognition of future flood hazards due to sea level rise.

Further, prior to final design of the proposed project, the project sponsor would ensure that the structures conform to flood resiliency standards of the San Francisco's Floodplain Management requirements (Chapter 2A, Article XX, Sections 2A.280 through 2A.285 of the San Francisco Administrative Code). For building sites in flood prone areas, Section 2A.283 (b)(1) specifically requires that:

- The building must be adequately anchored to prevent flotation, collapse, or lateral movement.
- The building must be constructed with materials and utility equipment that is resistant to flood damage, and with methods and practices that minimize flood damage.
- Electrical, heating, ventilation, plumbing, and air conditioning equipment must be designed or located to prevent water from entering or accumulating within the components during flooding.
- All water supply and sanitary sewage systems must be designed to minimize or eliminate infiltration of flood waters into the system as well as discharges from the systems into floodwaters.

Additional strategies would include providing features such as the ability to relocate mechanical equipment above the flood elevation, providing extra room height to allow for raising the floor level in the future, provisions for installation of flood gates to prevent intrusion of flood waters into below ground features, and providing pumping capacity to provide flood relief in the future among others.

While the project site could be temporarily flooded at depths of up to 2.5 feet with 36 inches of sea level rise in combination with 100-year storm surge by 2100, the project would be designed and constructed to resist flood damage and provide for the safety of employees, occupants, and visitors in the event of flooding. Therefore, impacts related to flooding would be **less than significant**.

The project site is not located in an area subject to reservoir inundation hazards.[193] Therefore, there is **no impact** related to flooding as the result of failure of a levee or dam.

[193] San Francisco Department of Emergency Management, City and County of San Francisco Hazard Mitigation Plan, November 4, 2014, pp. 53-55 and Appendix C: Map C-14. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

Impact HY-5: The proposed project would not expose people or structures to substantial risk of loss due to existing flooding risks. ***(Less than Significant)***

The project site is located within an area of sewer-related flooding identified by the SFPUC.[194] Therefore, runoff from the project area could contribute to sewer backups or flooding from the sewer in the project area. Accordingly, the project sponsor would be referred to the SFPUC at the beginning of the permit process to determine whether the proposed project would result in ground level flooding during storms. If so, the project sponsor would be required to comply with SFPUC requirements for projects in flood-prone zones as part of the permit approval process. These measures could include actions such as providing a pump station for the sewage flow, raising the elevation of entryways, providing special sidewalk construction, and constructing deep gutters, among others. Implementation of SFPUC requirements as part of the permit approval process would ensure that the proposed project would not result in flood hazards that would endanger people or result in structural damage. Therefore, impacts related to exposure of people and structures to flooding risks would be **less than significant**, and no mitigation is necessary.

Impact C-HY-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would not result in a considerable contribution to significant cumulative impacts on hydrology and water quality. (*Less than Significant*)

Impacts resulting from the proposed project are limited to potential water quality impacts on the Eastern Drainage Basin of the combined sewer system and lower San Francisco Bay as well as adverse effects on groundwater resources of the Downtown Groundwater Basin. Therefore, the geographic scope of potential cumulative impacts on water quality encompasses the Eastern Drainage Basin of the combined sewer system, lower San Francisco Bay and the Downtown Groundwater Basin.

Water Quality Standards, Degradation of Water Quality, and Storm Sewer Capacity

Erosion and Use of Hazardous Materials during Construction and Groundwater Dewatering Discharges

Similar to the analysis presented in **Impact HY-1**, construction activities associated with construction of individual development projects such as the new office buildings at 598 Brannan Street and 510-520 Townsend Street listed under **Impact C-LU-1** on pp. 34-35 could degrade water quality as a result of increased soil erosion and associated sedimentation as well as from a potential accidental release of hazardous materials. Discharges of dewatering effluent from excavated areas could also adversely affect water quality. However, as for the proposed project, discharges from

[194] San Francisco Planning Department, Planning Director Bulletin No. 4, Review of Project Identified in Areas Prone to Flooding. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

these reasonably foreseeable future projects would flow into San Francisco's combined sewer system and would be subject to the requirements of Articles 4.1 and 4.2 of the *San Francisco Public Works Code* (supplemented by SFDPW Order No. 158170), which incorporate and implement the SFPUC's NPDES permit for discharges from the combined sewer system and would ensure compliance with water quality objectives. Therefore, cumulative impacts related to violation of water quality standards and degradation of water quality during construction would be less than significant, and no mitigation is necessary.

Combined Sewer Overflows During Operation and Storm Sewer Capacity

As discussed in **Impact HY-1**, implementation of the proposed project would result in less wastewater discharged to the combined sewer system. The stormwater runoff peak rate and total discharge volume would also be reduced by implementation of stormwater control measures in compliance with San Francisco's Stormwater Ordinance and Stormwater Design Guidelines. Other reasonably foreseeable future projects in the project vicinity such as the new office buildings at 598 Brannan Street and 510-520 Townsend Street listed under **Impact C-LU-1** on pp. 34-35 would also be required to minimize wastewater flows and reduce stormwater flows in accordance with the same regulatory requirements. The net effect of the cumulative development on combined sewer discharges would depend on the relative changes in wastewater and stormwater flows. However, the proposed project would not have a cumulatively considerable contribution to any increase in combined sewer discharges because of the net decrease in wastewater and stormwater flows that would be achieved. Similarly, the proposed project would not have a cumulatively considerable contribution regarding additional sources of stormwater pollutants because the proposed project would implement stormwater control measures that reuse some rainwater on site in accordance with regulatory requirements. This would result in a reduction in stormwater pollutants discharge to the combined sewer system. Therefore, the proposed project's contribution to combined sewer overflows, exceedance of combined sewer capacity, and additional sources of stormwater pollutants during operation of the proposed project would not be cumulatively considerable (less than significant).

Depletion of Groundwater Resources

The proposed project and many of the cumulative projects would require groundwater dewatering during construction and potentially during operation. Groundwater pumping under the proposed project in combination with other groundwater pumping in the vicinity could result in a cumulatively significant impact from the depletion of groundwater resources. However, as discussed in **Impact HY-2**, construction dewatering would occur on a short-term temporary basis. The Downtown San Francisco Groundwater Basin is not used as a potable water supply, and there are no plans for development of this basin for groundwater production. Therefore, the proposed project would not contribute considerably to significant cumulative impacts related to groundwater depletion.

Flooding

As discussed in **Impact HY-4**, the project site is located within an area of sewer-related flooding identified by the SFPUC,[195] and runoff from the project site could contribute to sewer backups or flooding from the sewer in the project area. However, the proposed project and other reasonably foreseeable future projects within the area of sewer-related flooding would be required to implement SFPUC requirements for projects in flood-prone zones as part of the permit approval process. Because implementation of these requirements would ensure that none of the reasonably foreseeable future projects would result in flood hazards that would endanger people or result in structural damage, cumulative impacts related to exposure of people and structures to flood risks would be **less than significant**.

Future Flooding due to Sea Level Rise

As described above, the City's Bay shoreline will be subject to an increased risk of flooding in the future due to sea level rise. Accordingly, the geographic scope for impacts related to flood risk includes those areas in the project vicinity that could be subject to flooding caused by sea level rise by 2100. Past, present and reasonably foreseeable future development in such areas could expose people or structures to a cumulatively significant risk of loss, injury or death due to flooding. However, as described in **Impact HY-4**, the proposed project's impact would be less-than-significant given that the proposed project would incorporate flood resilient design in accordance with San Francisco's Floodplain Management Ordinance (Chapter 2A, Article XX, Sections 2A.280 through 2A.285 of the San Francisco Administrative Code). Therefore, the proposed project's contribution to cumulative impacts related to future flood hazard risks due to sea level rise would not be considerable and no mitigation is necessary.

As detailed above under **Impacts HY-1**, **HY-2**, **HY-3**, **HY-4**, and **HY-5** the proposed project would have less-than-significant hydrology and water quality impacts and its contribution to cumulative impacts related to violations of water quality standards; the degradation of water quality; increased demand on the capacity of the combined sewer system; the depletion of groundwater resources; localized flooding; and future flooding as a result of sea level rise would be less than significant.

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[195] San Francisco Planning Department, Planning Director Bulletin No. 4, Review of Project Identified in Areas Prone to Flooding. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
15. HAZARDS AND HAZARDOUS MATERIALS— Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐	☐
h) Expose people or structures to a significant risk of loss, injury or death involving fires?	☐	☐	☒	☐	☐

The proposed project would not be located within an airport land use plan, within two miles of a public or public use airport, or in the vicinity of a private airstrip. Therefore, Topics E.15(e) and E.15(f) are not applicable.

Impact HZ-1: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. ***(Less than Significant)***

Regulatory Framework for Hazardous Materials Handling

Two articles of the San Francisco Health Code implemented by the DPH address the handling of hazardous materials and hazardous wastes:

- Article 21 of the San Francisco Health Code provides for safe handling of hazardous materials in the City. It requires any person or business that handles, sells, stores, or otherwise uses specified quantities of to keep a current certificate of registration and to implement a hazardous materials business plan. A special permit is required for underground storage tanks (USTs). This article also incorporates state tank regulations.
- Article 22 of the San Francisco Health Code provides for safe handling of hazardous wastes in the City. It authorizes DPH to implement the state hazardous waste regulations, including authority to conduct inspections and document compliance.

Impacts Related to Hazardous Materials Use

Operation and maintenance of the existing HOJ involves the use of common types of hazardous materials, such as cleaners, disinfectants, and chemical agents required to maintain the sanitation of detention areas, bathrooms, and food preparation areas. These commercial products are labeled to inform users of potential risks and to instruct them in appropriate handling procedures. Various chemicals are also used for building maintenance, including motor oil, thinner, diesel oil, refrigeration oil, vacuum pump oil, greases, refrigerants, corrosion inhibitors, biocides, oxygen scavengers, water treatment chemicals for boiler water and cooling water, and compressed gasses.[196] The existing HOJ also has two 8,000-gallon USTs for diesel storage. The facility manifests hazardous wastes for off-site disposal.

The proposed RDF would include the use of the same types of common hazardous materials and generate the same types of hazardous wastes. To ensure the safe handling of these materials, the project sponsor would continue to comply with the requirements of the City's hazardous materials and waste handling requirements specified in Articles 21 and 22 of the San Francisco Health Code. In accordance with these articles, the facility's Certificate of Registration and Hazardous Materials Business Plan on file with the DPH would be revised to reflect any increased quantities of hazardous materials used. The Hazardous Materials Business Plan includes chemical inventories, a program for reducing the use of hazardous materials and generation of hazardous wastes, site layouts, a program and implementation plan for training all new employees and annual training for

[196] City and County of San Francisco Environmental Health Management, Hazardous Materials and Waste Program, Application and Invoice and Disclosure Form for Hazardous Chemical Materials. September 1, 2014. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

all employees, and emergency response procedures and plans which provide for safe handling of hazardous materials, and also allow emergency responders to safely respond to a chemical emergency at the facility, if one were to occur.

Compliance with the San Francisco Health Code, which incorporates state and federal requirements, would minimize potential exposure of site personnel and the public to any accidental releases of hazardous materials or waste and would also protect against potential environmental contamination. In addition, transportation of hazardous materials is well regulated by the California Highway Patrol and the California Department of Transportation. Therefore, the potential impacts related to the routine use, transport, and disposal of hazardous materials associated with implementation of the proposed project would be **less than significant**. No mitigation is necessary.

Impact HZ-2: The proposed project would be constructed on a site identified on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 but activities would not expose workers and the public to adverse effects from release of hazardous materials during construction or operation of the project. ***(Less than Significant)***

Based on historic land uses and existing contamination at the site and vicinity (discussed below) and the potential presence of earthquake fill, workers and the public could be exposed to hazardous material during construction, and previously unidentified USTs may be encountered during excavation. Soil and groundwater could also require special handling/disposal procedures. Following construction, workers could potentially be exposed to any hazardous materials left in place. Site conditions related to the potential presence of hazardous materials and previously identified USTs are described below, along with the attendant regulatory requirements that would ensure workers, site occupants and visitors, and the public do not experience adverse effects related to hazardous materials exposure.

Existing Conditions

Previous Site Uses

The project site was developed prior to 1895 and has a history of industrial and commercial land uses.[197] Based on Sanborn Maps reviewed for the Phase I Environmental Site Assessment (ESA) completed for the proposed project, historic land uses at the site and in the immediate vicinity since 1913 that could have involved the use of hazardous materials include a fixture shop, a paint and oil storage facility, a construction supply store, an automobile service station, and a variety of commercial uses. The existing HOJ building was constructed in 1959-1961.

[197] AEW Engineering, Inc., Final Limited Phase I Environmental Site Assessment Report, Hall of Justice Replacement Project, San Francisco, California, April 2014. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

Artificial Fill

As discussed in Section E.13: Geology and Soils, artificial fill at the project site ranges in thickness from 7 to 10 feet, and consists of loose sands. In some locations the fill contains debris consisting of fragments of brick, concrete, asphalt, glass, and traces of organic materials. Because fill materials in San Francisco commonly include industrial refuse and building debris from the 1906 earthquake, these materials commonly contain polynuclear aromatic hydrocarbons (PAHs), heavy metals, oil and grease, and volatile organic compounds.[198]

Regulatory Standards for Evaluation of Soil and Groundwater Quality

For this analysis, the soil and groundwater analytical results are evaluated under the following criteria that are applicable to the disposal of the soil and potential health risks associated with exposure to the soil and groundwater:

- *Hazardous waste criteria adopted by the State of California (Title 22 of the California Code of Regulations, Section 66261.20, et seq.).* In accordance with these criteria, excavated soil would be classified as a hazardous waste if it contains a specified chemical at a total concentration greater than the State total threshold limit concentration (TTLC); a soluble concentration greater than the State soluble threshold limit concentration (STLC); a soluble concentration greater than federal toxicity regulatory levels using a test method called the toxicity characteristic leaching procedure (TCLP); or specified carcinogenic substances at a single or combined concentration of 0.001 percent.
- *Environmental screening levels published by the Regional Water Quality Control Boar*d.[199] Environmental Screening Levels (ESLs) are conservative estimates of safe levels of a chemical that a person could be exposed to in soil. If the concentration of a chemical in the soil is below the ESL, then it can be assumed that the chemical would not pose a health risk to a person. Because construction workers, site workers, and residents would experience different exposures to soil, there are different ESLs for each of these receptors. In general, residents would be expected to have the longest exposure to soil and therefore residential ESLs are generally lower than construction or site worker screening levels, and are the most stringent of the three criteria. Groundwater ESLs have also been established for the evaluation of the potential for vapor intrusion into buildings completed within or near the water table.

  Typically, a site can be suitable for unrestricted land uses if the chemical concentrations in soil and groundwater are less than the residential ESL, but land use restrictions can be imposed on a property if the chemical concentrations exceed the commercial ESL, or another less stringent requirement. Therefore, the discussion of analytical results below

[198] Volatile organic compounds are emitted as gases from certain solids or liquids, such as paints and lacquers, paint strippers, cleaning supplies, pesticides, building materials and furnishings, or office equipment (i.e., copiers and printers, correction fluids and carbonless copy paper, graphics and craft materials including glues and adhesives, permanent markers, and photographic solutions).

[199] California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region. Update to Environmental Screening Levels. Interim final, December 23, 2013. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

compares available results to the residential ESL. In addition, these screening levels are based on conservative exposure assumptions, and it is possible that a more detailed risk assessment using project-specific exposure assumptions would identify a higher concentration that would be safe for a specific site based on site-specific conditions and use.

Previous Underground Storage Tank Closures

Three USTs were closed in place at the existing HOJ in 1999: two 10,000-gallon fuel oil tanks and one 4,000-gallon diesel tank.[200] Based on site characterization information presented in the case closure report, benzene, toluene, ethylbenzene, and xylenes were not detected in soil or groundwater at the site, but total extractable petroleum hydrocarbons were detected at a maximum concentration of 250 milligram per kilogram (mg/kg) in the soil and 340 milligram per liter (mg/L) in the groundwater. However, the Remedial Action Completion Certificates for the UST abandonment does not include a description of the location of these tanks and the DPW maintenance department does not have a record of these tanks.

In 1994, three 5,000-gallon gasoline USTs and one 550-gallon waste oil UST were removed from a previous auto service station at 800 Bryant Street, located at the eastern corner of Bryant and Sixth streets at the location of the existing office building constructed in 2003 (adjacent to the proposed building site).[201] Soil from the underground tank excavations was aerated on site. Soil remaining in the excavations contained detectable levels of total petroleum hydrocarbons as diesel (7 mg/kg), total petroleum hydrocarbons as gasoline (13mg/kg), toluene (0.0051 mg/kg), ethylbenzene (0.049 mg/kg), and xylenes (0.13 mg/kg). Lead was detected at a maximum concentration of 47 mg/kg. Cadmium, chromium, lead, nickel, and zinc were also detected in soil samples from the waste oil tank excavation. At the time of case closure, site groundwater included detectable levels of gasoline and its components, including total petroleum hydrocarbons as gasoline (7 mg/L), benzene (0.22 mg/L), toluene (0.093 mg/L), ethylbenzene (0.01 mg/L), xylenes (0.066 mg/L), and methyl tertiary-butyl ether (MTBE, 0.95 mg/L). The soil concentrations are all below residential ESLs and hazardous waste criteria and none of the groundwater concentrations exceed ESLs for vapor intrusion. Further, the petroleum concentrations have likely decreased since 1994 due to naturally occurring processes.

[200] San Francisco Department of Public Health. Remedial Action Completion Certification, Underground Storage Tank (UST) Case, Hall of Justice, 850 Bryant Street, San Francisco, LOP Case Number: 10843. August 2, 2005. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

[201] San Francisco Department of Public Health. Remedial Action Completion Certification, Underground Storage Tank Closure, Auto Symphony, 800 Bryant Street, San Francisco. LOP Site Number 10229. November 17, 1997. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.0198E.

Environmental Database Review

As summarized in the Phase I ESA, the McDonald's property at 820 Bryant Street is listed in several environmental databases. Located at the northeastern corner of Bryant and Harriet streets, this ½-acre site formally included the Construction Device Company hardware store as well as a parking lot used by the San Francisco Police Department. An environmental investigation conducted in 1994 encountered primarily artificial fill with lead concentrations up to 3,500 mg/kg. The average lead concentration was 600 mg/kg. Both the maximum and average lead concentrations exceed the residential ESL of 80 mg/kg and the commercial ESL of 320 mg/kg. The maximum lead concentration is greater than the TTLC of 1,000 mg/kg for the classification of hazardous wastes, but the average lead concentration is below this value. Lead was not detected in grab groundwater samples from the property. Soluble lead concentrations in the excavated soil exceeded the STLC of 5.0 mg/L for lead but not the TCLP.[202]

Prior to California Department of Toxic Substances Control (DTSC) involvement, approximately 1,277 cubic yards of soil was excavated for construction of a McDonald's restaurant in 1994, and about 250 cubic yards of the excavated material was used in the backfill around the building foundation. An additional 350 cubic yards of soil were excavated for installation of site utilities.[203] Following surface grading, the site was paved with 5-inch-thick reinforced concrete, which restricts contact with soil containing lead that remains on site. Landscaped areas were lined with plastic and backfilled with clean soil and excess irrigation water is directed to the sanitary sewer system rather than being infiltrated. Because the soluble lead concentrations in the excavated soil exceeded the STLC for lead but not the TCLP, the excavated soil was classified as a hazardous waste under California law, but not under federal law.

The property owner registered a deed restriction with the DTSC in 1996 documenting the cap installation and specifying monitoring requirements as well as requirements for notifying the DTSC regarding subsurface work and change of ownership. The DTSC also inspects the cap annually and has found the cap to be in good condition. Under existing conditions, the cap and drainage installation prevent human exposure to lead remaining in place, and prevent infiltration of landscape and stormwater through the contaminated soil. However, changes in land use that involve removing or disturbing the cap would require further evaluation of potential human health and environmental risks to determine appropriate methods for remediating the soil and/or groundwater to limit human health risks as well as appropriate methods for managing excavated soil and groundwater produced during construction. The existing deed restriction would also require revision.

[202] Levine Fricke, Implementation Report for Environmental Services Conducted at McDonald's Corporation, 820 Bryant Street, San Francisco, California. December 15, 1995.
[203] Ibid.

Surrounding Sites

The environmental database review identified an open leaking UST site at 840 Harrison Street, approximately 0.28 mile northeast of the project site. Two USTs were removed from that site in 1990, including a 550-gallon UST removed from beneath the sidewalk on Clara Street and a 4,000-gallon gasoline UST removed from inside a building near Harrison Street. Extensive excavation was conducted to remove soil contamination observed in the tank excavations, and floating product was identified on the groundwater in the excavation for the 4,000-gallon UST. At completion of the site remediation, free product was observed on the groundwater in one of the three on-site monitoring wells. Based on the proximity to the Bay, groundwater flow directions are likely tidally influenced. The Phase I ESA for the proposed project reports that historical groundwater flow directions in the vicinity of 840 Bryant Street are reported to be to the northeast, northwest, and south. In 2012, the environmental consultant for the 840 Bryant Street project concluded that the hydrocarbon concentrations in the groundwater substantially attenuated within 80 feet of the source area. In April 2014, the DPH approved plans to further remediate that site, including use of vacuum extraction to remove hydrocarbons and addition of a bioorganic catalyst to promote breakdown of remaining hydrocarbons. Based on the distance from the project site, the 840 Harrison Street site is not expected to have affected groundwater quality at the project site. However, the Phase I ESA for the proposed project recommended sampling to confirm this conclusion.

The Phase I ESA concluded that none of the other sites identified by the environmental database review in the vicinity of the project site would have the potential to affect soil or groundwater quality at the project site. However, there is the potential for regional degradation of groundwater quality given that there are four sites identified in the RESPONSE database within a 1-mile radius of the project site (this database is the state equivalent of the federal National Priorities List database); 44 sites identified in the California ENVIROSTOR database within a 1-mile radius of the project site (this database includes sites with known contamination, or sites for which there may be a reason to investigate further); 166 sites identified in the LUST database within ½ mile (this database includes sites with leaking underground storage tanks [LUSTs]); 51 historic dry cleaning facilities located within ¼ mile; and 122 historic gasoline service stations within ¼ mile. As indicated by the identification of approximately 33 historic UST sites within ¼ mile of the project site, USTs have commonly been used in the area. Many of these tanks may have been abandoned when they were no longer in use, before regulations requiring unused UST removal were implemented; therefore, many previously unidentified USTs in the project vicinity may have been left in place.

Regulatory Requirements

Maher Program

Article 22A of the San Francisco Health Code (also known as the Maher Ordinance) previously required site assessments and cleanup of sites located bayward of the historic high tide line, but no

similar regulatory requirement applied to sites that were not bayward of the historic high tideline. To address this, the *Western SoMa Community Plan EIR* included **Mitigation Measure M-HZ-3**: Site Assessment and Corrective Action, which requires a site assessment and corrective action for sites that are not located bayward of the historical high tide line. However, subsequent to publication of the EIR, the San Francisco Board of Supervisors amended Article 22A, which is administered and overseen by the DPH. These amendments became effective August 24, 2013.

The amended Article 22A requires, prior to issuance of a building permit, that the project sponsor retain the services of a qualified professional to prepare a Phase I ESA that meets the requirements of San Francisco Health Code Section 22.A.6. The Phase I ESA determines the potential for site contamination and level of exposure risk associated with the project. Based on that information, the project sponsor may be required to conduct soil and/or groundwater sampling and analysis. Where such analysis reveals the presence of hazardous substances in excess of state or federal standards, the project sponsor is required to submit a site mitigation plan (SMP) to DPH or other appropriate state or federal agency(ies), and to remediate any site contamination in accordance with an approved SMP prior to the issuance of any building permit. For departments, boards, commissions and agencies of the City and County of San Francisco that authorize construction or improvements on land under their jurisdiction where no building or grading permit is required, the ordinance requires protocols be developed between that entity and DPH that will achieve the environmental and public health and safety goals of Article 22A.

Article 22A of the San Francisco Health Code applies to any site identified within the Maher area as well as any site that is:

- on a lot either currently or previously either zoned for or permitted for industrial use;
- within 150 feet of any of the elevated portions of U.S. Highway 101, Interstate 80 or Interstate 280;
- on a lot known or suspected by DPH to contain hazardous substances in the soil and/or groundwater; or
- on a lot known or suspected by DPH to contain or to be within 100 feet of a UST.

The project would be subject to Article 22A because it is located on a site that has been permitted for an industrial use, is within 150 feet of an elevated portion of Interstate 80, is known to contain hazardous substances in the soil, and is known to contain an underground storage tank.

Underground Storage Tank Closure

Article 21 of the San Francisco Health Code addresses closure of USTs. To close a UST, a closure plan must be prepared that identifies how the underground tank will be removed and appropriately disposed of. The plan must be submitted to DPH for approval prior to closure. This article also requires that soil from the UST excavation, and possibly the groundwater, be sampled. Upon

completion of closure, a final report documenting UST removal activities and any residual contamination left in place must be submitted to DPH. Upon approval of this report, DPH would issue a Certificate of Completion. If a release were indicated, the site owner would be required to assess the extent of any contamination and conduct a site remediation, as needed, in compliance with the DPH Local Oversight Program requirements. The DPH could approve abandonment of the UST in place if removal were infeasible.

Impacts Related to Exposure to Hazardous Materials in Soil and Groundwater

Construction within Contaminated Materials

As discussed above, the McDonald's property at 820 Bryant Street is located within the project building site. Soil historically excavated from this site contained lead concentrations in excess of the ESL for residential exposure. The elevated lead levels are associated with fill materials used at the site, and therefore it is likely that excavation for the proposed project would encounter soil with similar lead concentrations. In addition, excavation for construction of the proposed project could encounter other contaminants based on the proximity to the LUST site at 840 Harrison Street, and the proposed project would involve removal of the concrete cap used at the McDonald's property to prevent exposure to known contaminants in the soil. Contaminants could also be present at the other properties that would be acquired for the proposed project. Therefore, construction workers, future site occupants, and the public could be exposed to lead or other contaminants in the soil during construction without implementation of appropriate measures.

The project is subject to the Maher Ordinance, which is administered and overseen by DPH. This ordinance requires the project sponsor to retain the services of a qualified professional to prepare a Phase I ESA that meets the requirements of Health Code Section 22.A.6. The existing Phase I ESA would meet that requirement.

In compliance with Article 22A, the project sponsor would next submit a Maher Application to DPH along with the Phase I ESA prior to construction. Based on information provided with the application, the project sponsor may be required to conduct soil and/or groundwater sampling and analysis. If the analysis reveals the presence of hazardous substances in excess of state or federal standards, the project sponsor would be required to submit an SMP to the DPH or other appropriate state or federal agency(ies), and to remediate any site contamination in accordance with an approved SMP. In addition, the project sponsor would be required to contact the DTSC regarding change in ownership of the McDonald's property and removal of the cap. The project sponsor would then need to coordinate with the DTSC and also implement appropriate measures in accordance with the approved SMP to control exposure to contaminated soil during construction and once the project is constructed. Thus, the proposed project would not result in a significant hazard to the public or environment from site contamination, and the proposed project would have a **less than significant** impact related to construction within contaminated materials. With

implementation of the regulatory requirements of the amended Article 22A, implementation of the mitigation measure included in the *Western SoMa Community Plan EIR,* Mitigation Measure M-HZ-3: Site Assessment and Corrective Action, is not necessary to reduce this impact to a less-than-significant level; the mitigation measure does not apply to the proposed project.

Closure of Previously Unidentified USTs

As discussed above, there is a high potential to encounter previously unidentified USTs at the project site based on the identification of 33 historic UST sites within ¼ mile of the project site, 122 historic gasoline service stations within ¼ mile, and 166 sites with leaking underground storage tanks within ½ mile. Without proper precautions, workers and the public could be exposed to petroleum products potentially remaining in the USTs or in the surrounding soil.

If a previously unidentified UST were encountered, the project sponsor would be required to close the UST in accordance with Article 21 of the San Francisco Health Code. This article would require a closure plan identifying appropriate requirements for disposition of any remaining hazardous materials in the tank and the tank itself. The closure plan would be submitted to the City for approval prior to removal of the UST. Soil from the UST excavation, and possibly the groundwater, would also be sampled in accordance with Article 21. Upon completion of closure, a release or contamination report would be submitted to DPH if a release were indicated on the basis of visual observations or sampling, and a final report documenting tank removal activities and any residual contamination left in place would be submitted to DPH. Upon approval of this report, DPH would issue a Certificate of Completion. If a release were indicated, the project sponsor would be required to submit a corrective action plan, including a community health and safety plan, to DPH and the RWQCB, and remediation would be required in accordance with federal, state and local regulations. Alternatively, the tank could be abandoned in place if removal were infeasible. Implementation of the measures required in accordance with Article 21 of the San Francisco Health Code would ensure that hazardous materials impacts associated with encountering previously unidentified USTs would be **less than significant**. No mitigation is necessary.

Disposal of Contaminated Materials

As discussed above, soil previously excavated from the McDonald's site contained lead at concentrations greater than the TTLC and STLC which are used for the classification of hazardous wastes. The elevated lead levels are associated with the fill materials at the site, and therefore it is likely that at least some of the soil excavated for the project building site could also be classified as a hazardous waste. Further, if previously unidentified USTs are encountered, the tanks and associated soil would require off-site disposal. However, as the generator of the hazardous wastes, the project sponsor would be required to follow state and federal regulations for manifesting the wastes, using licensed waste haulers, and disposing the materials at a permitted disposal or

recycling facility. With compliance with these regulatory requirements, impacts related to disposal of hazardous wastes would be **less than significant**, and no mitigation is necessary.

Disposal of Groundwater Produced During Dewatering

As noted in Section E.13: Geology and Soils, the depth to groundwater at the project site is about 8 feet below ground surface. This groundwater could potentially contain contaminants as a result of lead identified in soils at the McDonald's property and previous USTs at and near the existing HOJ, described above. However, during construction of the proposed RDF, groundwater produced by dewatering would be discharged to the combined sewer system in compliance with Article 4.1 of the San Francisco Public Works Code as supplemented by Order No. 158170, which specifies conditions and criteria for discharge of groundwater (see Section E.14: Hydrology and Water Quality for additional discussion of Article 4.1 and Order No. 158170). This article also prohibits discharge of hazardous wastes into the combined sewer system. The discharged water would have to be sampled and tested during dewatering to demonstrate that discharge limitations are met. If the groundwater does not meet discharge requirements, on-site pretreatment may be required before discharge to the sewer system. If standards could not be met with on-site treatment, off-site disposal by a certified waste hauler would be required. Impacts related to discharge of the groundwater produced during construction-related dewatering would be **less than significant** with compliance with the specified discharge limitations. No mitigation is necessary.

Impact HZ-3: Demolition and reconfiguration of the existing buildings would not expose workers and the public to hazardous building materials including asbestos-containing materials, lead-based paint, polychlorinated biphenyls (PCBs), bis (2-ethylhexyl) phthalate (DEHP), and mercury, or result in a release of these materials into the environment during construction. (*Less than Significant*)

Construction of the proposed RDF would require demolition and removal of the office building constructed in 1956 (444 Sixth Street), the commercial building constructed in 1959 (450 Sixth Street), and the McDonald's restaurant constructed in 1996 (820 Bryant Street). In addition, connection of the proposed underground tunnel to the existing HOJ, constructed in 1958-1961, would involve reconfiguration of a portion of the basement in the HOJ. Based on their ages, the buildings could contain hazardous building materials such as asbestos-containing materials and lead-based paint. Although these materials were banned from use in the 1970's, their use was continued until existing stocks were used up and they could be present in some buildings constructed after the 1970's. Other hazardous building materials that could be present in all of the buildings include electrical equipment containing PCBs; fluorescent light ballasts containing PCBs or bis (2-ethylhexyl) phthalate (DEHP); and fluorescent light tubes containing mercury vapors.

If these materials were present, workers and the public could be exposed to hazardous building materials if they were not abated prior to demolition or renovation. However, as discussed below, there is a well-established regulatory framework for the abatement of these materials, and impacts

related to exposure to hazardous building materials would be less than significant with compliance with regulatory requirements as discussed below.

Asbestos-Containing Materials

Section 19827.5 of the California Health and Safety Code requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. The Bay Area Air Quality Management District (BAAQMD) is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified of any demolition or renovation project that involves the removal of 100 square feet or more of asbestos-containing materials 10 days in advance of the work.

Notification includes the names and addresses of operations and persons responsible; a description and location of the structure to be demolished/altered including size, age, and prior use; the approximate amount of friable asbestos that would be removed or disturbed; the scheduled starting and completion dates of demolition or abatement; the nature of the planned work and methods to be employed; the procedures to be employed to meet BAAQMD requirements; and the name and location of the waste disposal site to be used. Approved methods for control of asbestos-containing materials during abatement include adequate wetting of all asbestos-containing materials and providing containment with a negative air pressure ventilation system to prevent migration of asbestos-containing materials. BAAQMD randomly inspects asbestos removal operations. In addition, BAAQMD will inspect any removal operation when a complaint has been received.

The local office of the State Occupational Safety and Health Administration (Cal/OSHA) must be notified of asbestos abatement to be carried out. Asbestos abatement contractors must follow state regulations contained in 8CCR1529 and 8CCR341.6 through 341.17 where there is asbestos-related work involving 100 square feet or more of asbestos-containing material. Asbestos removal contractors must be certified as such by the Contractors Licensing Board of the State of California. The owner of the property where abatement is to occur must have a Hazardous Waste Generator Number assigned by and registered with the Office of the California Department of Health Services in Sacramento. The contractor and hauler of the material are required to file a Hazardous Waste Manifest which details the hauling of the material from the site and the disposal of it. Pursuant to California law, the DBI would not issue the required permit until the applicant has complied with the notice and abatement requirements described above.

Accordingly, the project sponsor would ensure that all buildings that would be demolished or altered are surveyed for asbestos-containing materials prior to demolition or alteration, and would provide BAAQMD with notification of any planned demolition or renovation activities a minimum of 10 days prior to these activities. The project sponsor would retain a certified asbestos removal

contractor to completely remove all asbestos-containing materials prior to demolition or renovation using BAAQMD-approved methods, and would also retain a licensed waste hauler to legally dispose of the removed materials. Implementation of the required procedures in accordance with the legal requirements described above, already established as a part of the permit review process, would ensure that any potential impacts due to demolition or renovation of structures with asbestos-containing materials would be **less than significant**. No mitigation is necessary.

Lead-Based Paint

Title 17 of the California Code of Regulations, Section 35033 defines lead-based paint as paint that contains 1.0 milligram of lead per square centimeter of paint, or 5,000 mg/kg of lead. Section 3426 of the San Francisco Building Code, Work Practices for Lead-Based Paint on Pre-1979 Buildings and Steel Structures, applies to the exterior of all buildings on which original construction was completed prior to 1979 (which are assumed to have lead-based paint on their surfaces, unless demonstrated otherwise through laboratory analysis) and to any steel structures with lead-based paint. This section of the Building Code applies only to the interior of residential buildings, hotels, and childcare centers, and would therefore not apply to the demolition of existing buildings or reconfiguration of a portion of the basement level of the existing HOJ under the proposed project.

Section 3426 of the San Francisco Building Code requires specific notification and work standards, and identifies prohibited work methods and penalties. (The reader may be familiar with notices commonly placed on residential and other buildings in San Francisco that are undergoing re-painting. Generally affixed to a drape that covers all or portions of a building, these notices are a required part of the Section 3426 notification procedure.) The notification requirements include notification of DBI and posting of required signs. Prior to the commencement of work, the responsible party must provide written notice to the Director of DBI of the address and location of the project; the scope of work, including specific location; methods and tools to be used; the approximate age of the structure; anticipated job start and completion dates for the work; whether the building is residential or nonresidential, owner-occupied or rental property; the dates by which the responsible party has fulfilled or will fulfill any tenant or adjacent property notification requirements; and the name, address, telephone number, and pager number of the party who will perform the work. The responsible party must also post notices informing the public and adjacent property owners of the work and also restricting public access to the work area, or provide specific notice to adjacent property owners. Section 3426 also contains provisions regarding inspection and sampling for compliance by DBI, enforcement, and penalties for non-compliance with the requirements of the ordinance.

The specified performance standards include establishment of containment barriers at least as effective at protecting human health and the environment as those in the U.S. Department of Housing and Urban Development Guidelines (the most recent Guidelines for Evaluation and Control of Lead-Based Paint Hazards), and identification of practices that may not be used in

disturbance or removal of lead-based paint. Any person performing work subject to the ordinance shall, to the maximum extent possible, protect the ground from contamination during exterior work and make all reasonable efforts to prevent migration of lead paint contaminants beyond containment barriers during the course of the work. Clean-up standards require the removal of visible work debris, including the use of a High Efficiency Particulate Air Filter (HEPA) vacuum following interior work.

If lead-based paint is present in the sections of the existing HOJ that would be reconfigured for connection to the underground tunnel, the reconfiguration would be subject to the Cal/OSHA Lead in Construction Standard (8 CCR Section 1532.1). This standard requires development and implementation of a lead compliance plan when materials containing lead would be disturbed during construction. The plan must describe activities that could emit lead, methods that will be used to comply with the standard, safe work practices, and a plan to protect workers from exposure to lead during construction activities. Cal/OSHA would require 24-hour notification if more than 100 square feet of materials containing lead would be disturbed

Implementation of procedures required by Section 3426 the San Francisco Building Code and Lead in Construction Standard (8 CCR Section 1532.1) would ensure that potential impacts of demolition or reconfiguration of structures with lead-based paint would be **less than significant**. No mitigation is necessary.

Other Hazardous Building Materials

Other hazardous building materials that could be present within the buildings to be demolished or reconfigured include electrical transformers that could contain PCBs, fluorescent light ballasts that could contain PCBs or DEHP, and fluorescent light tubes that could contain mercury vapors.

Under the Toxic Substance Control Act, the U.S. Environmental Protection Agency (U.S. EPA) began to impose bans on PCB manufacturing and sales and on most PCB uses in 1978; however, some electrical transformers still in use today use oils that contain PCBs. The Toxic Substance Control Act requires incineration or an alternative destruction method for oils containing PCB concentrations greater than 50 parts per million and requires that free liquids be drained from electrical equipment prior to disposal, and that the liquids are appropriately disposed of. In California, PCB wastes are regulated as hazardous waste if the PCB concentration exceeds 50 parts per million or the soluble concentration exceeds 5 parts per million as oily liquid.

Most fluorescent light ballasts manufactured before 1978 contain PCBs in their capacitor and potting material. Ballasts manufactured after January 1, 1978, do not contain PCBs and should be labeled as such on the ballast. Approved disposal methods for PCB-containing ballasts depend on the condition of the ballast and the PCB content of the potting material and capacitor oil. If the PCB concentration of the potting material is less than 50 ppm and the ballast contains a small,

intact, non-leaking capacitor, the ballast may be disposed of at a municipal landfill. In general, all leaking ballasts and ballasts containing potting material with PCB concentrations greater than or equal to 50 ppm must be incinerated or destroyed by alternative methods, disposed of in a hazardous waste landfill, or decontaminated using approved methods.

Between 1979 and the early 1990s, DEHP was used in place of PCB as a dielectric fluid in some fluorescent light ballasts and other electrical equipment.[204] DEHP is classified as a probable human carcinogen by the United States Department of Health and Human Services and as a hazardous substance by the U.S. EPA. Because of this, ballasts containing DEHP must be legally disposed of or recycled and are commonly handled in the same manner as PCB ballasts.

Spent fluorescent lamps and tubes commonly contain mercury vapors and are considered a hazardous waste in California (22 CCR 66261.50) because they contain mercury. Because they are considered a hazardous waste, all fluorescent lamps and tubes must be recycled or taken to a universal waste handler.

The *Western SoMa Community Plan EIR* included Mitigation Measure M-HZ-2: Hazardous Building Materials Abatement, which requires project sponsors to ensure that any equipment or fixtures containing PCBs or mercury are removed and properly disposed of according to applicable federal, state, and local laws. However, since publication of that EIR, understanding of applicable laws and regulations has become more commonplace and mitigation is not necessary. Therefore, this impact would be **less than significant** because any electrical transformers that contain PCBs, fluorescent light ballasts that contain PCBs or DEHP, and fluorescent light tubes would be removed and disposed of in accordance with the established regulatory framework described above. Implementation of Mitigation Measure M-HZ-2 from the *Western SoMa Community Plan EIR* is no longer necessary to reduce this impact to a less-than-significant level.

Impact HZ-4: The proposed project would not emit hazardous emissions or handle acutely hazardous materials, substances, or waste within a quarter-mile of a school. ***(Less than Significant)***

Bessie Carmichael Elementary School and Pre-Kindergarten program (375 Seventh Street) are located within one-quarter mile of the project site, approximately 0.1 mile to the northwest.

The State of California defines extremely hazardous materials in Section 25532 (2)(g) of the Health and Safety Code. However, construction of the proposed project would use only common hazardous materials such as paints, solvents, cements, adhesives, and petroleum products (such as asphalt, oil, and fuel), and none of these materials is considered extremely hazardous. Further, operation of the proposed RDF would not involve the use of extremely hazardous materials.

[204] Green Lights Recycling, Inc., "Ballasts". Available online at http://glrnow.com/ballasts/. Accessed April 3, 2015.

Therefore, there would be **no impact** associated with the use of extremely hazardous materials within one-quarter mile of a school.

Hazardous air emissions are toxic air contaminants (TACs) identified by the California Air Resources Board (CARB) and the BAAQMD. Project operation would not result in generation of substantial pollutant concentrations or otherwise result in air quality impacts. Impacts associated with TACs that may be emitted during construction are discussed in Section E.6: Air Quality. Therefore, impacts associated with the hazardous emissions within one-quarter mile of a school would be **less than significant**, and no mitigation is necessary.

Impact HZ-5: The proposed project would not impair or interfere with implementation of an adopted emergency response or evacuation plan or expose people to a significant risk of loss, injury, or death involving fires. ***(Less than Significant)***

As described in Section A, Project Description, pp. 5-7, the proposed project would have a capacity of up to 640 beds, 265 fewer beds than in the existing CJ#3 and CJ#4. The number of employees associated with the proposed RDF would increase by about 47. However, the occupants of the business that would be demolished on the building site block, including McDonald's restaurant customers, would no longer travel to the project site. Therefore, there would be a decrease in traffic resulting from trips to and from the project site, and project-related traffic would not contribute to congestion if an emergency evacuation of the greater Downtown or South of Market areas were required. Similarly, the proposed project would not interfere with the City's Emergency Response Plan, prepared by the Department of Emergency Management as part of the City's Emergency Management Program, which includes plans for hazard mitigation and disaster preparedness and recovery.[205] Further, the proposed project would comply with the applicable requirements of the San Francisco Fire Code for fire safety. Therefore, impacts related to interference with emergency response or evacuation plans and fire safety would be **less than significant**, and no mitigation is necessary.

Impact C-HZ-1: The proposed project, in combination with other past, present or reasonably foreseeable future projects in the site vicinity, would not result in a considerable contribution to significant cumulative impacts related to hazards and hazardous materials. ***(Less than Significant)***

Hazardous materials impacts related to implementation of the proposed project could result from use of hazardous materials, conducting construction activities within potentially contaminated soil and groundwater, and demolition of structures that contain hazardous building materials. These impacts would be primarily restricted to the project site and immediate vicinity; therefore, the

[205] San Francisco Department of Emergency Management, City and County of San Francisco Emergency Response Plan, December 2009. Available online at http://www.sfdem.org/Modules/ShowDocument.aspx?documentid=1154. Accessed November 14, 2014.

geographic scope for cumulative impacts related to hazards includes the project site and immediate vicinity.

As discussed above, all of the potential impacts that could arise with the construction and operation of the proposed project would be less than significant with implementation of regulatory requirements. All cumulative development in San Francisco would be subject to the same regulatory framework as the proposed project, and these existing regulations would serve to avoid any significant cumulative impacts. Any impacts of cumulative development, such as those related to hazardous building materials in structures or soil contamination, would be investigated and, as necessary, abated on a project-by-project basis. Therefore, no significant cumulative impacts are anticipated, and the proposed project would therefore not have a cumulatively considerable contribution to any such cumulative impacts.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
16. MINERAL AND ENERGY RESOURCES—Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒	☐
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒	☐
c) Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	☐	☐	☒	☐	☐

Impact ME-1: The proposed project would not result in the loss of availability of a known mineral resource or a locally-important mineral resource recovery site. (*No Impact*)

All land in the City and County of San Francisco, including the project site, is designated Mineral Resource Zone 4 (MRZ-4) by the California Division of Mines and Geology (CDMG) under the Surface Mining and Reclamation Act of 1975.[206] This designation signifies that there is inadequate information available for assignment to any other MRZ, and the project site is not a designated area of significant mineral deposits. Since the project site does not contain any known mineral resources, the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. Implementation of the proposed project would not result in the loss of a locally-important mineral resource recovery site

[206] California Division of Mines and Geology, Open File Report 96-03, 1996 and Special Report 146 Parts I and II, 1986.

because there are none delineated in the *San Francisco General Plan* or other land use plan. Therefore, there would be **no impact** on mineral resources, and no mitigation would be necessary.

Impact ME-2: The proposed project would consume additional energy, but not in large amounts or in a wasteful manner. (*Less than Significant*)

In California, energy consumption in buildings is regulated by Title 24 of the California Code of Regulations. Title 24 includes standards that regulate energy consumption for the heating, cooling, ventilation, and lighting of residential and nonresidential buildings. In San Francisco, documentation demonstrating compliance with Title 24 standards is required to be submitted with a building permit application. Compliance with Title 24 standards is enforced by the San Francisco Department of Building Inspection. It is anticipated that the proposed RDF would be constructed to meet or exceed basic LEED Silver or GreenPoint Rated standards established in the San Francisco Green Building Ordinance with respect to energy and water use for City-owned buildings. Thus, the proposed project would comply with or exceed the standards of Title 24 and would comply with the requirements of the San Francisco Green Building Ordinance, minimizing the amount of fuel, water, or energy used. The proposed project would not encourage activities that result in the use of large amounts of fuel, water, or energy, or use them in a wasteful manner.

The proposed project would involve the demolition of three of the five existing buildings on the project building site. A 200,000-gsf, 95-foot-tall (plus a 15-foot-tall mechanical penthouse), five-story RDF with a partial basement level would be constructed in their place. Demolition and construction activities would require electricity to operate air compressors, hand tools, mobile project offices, and lighting. The proposed project would also include construction of a subterranean tunnel connecting the proposed RDF with the existing HOJ building. Construction vehicles and equipment would primarily use diesel fuel, and construction workers would use gasoline and diesel to commute. The construction activities would not result in demand for electricity or fuels greater than that for any other similar project in the region. Given this, the construction-related energy use associated with the proposed project would not be large or wasteful. Therefore, the construction-related impacts on energy resources would be **less than significant**, and no mitigation is necessary.

Impact C-ME-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a significant cumulative impact on mineral and energy resources. (*No Impact*)

As discussed above, San Francisco is not a designated area of significant mineral deposits and does not have locally important mineral resource recovery sites. Implementation of nearby development projects would not affect any operational mineral resource recovery sites. In addition, nearby development projects would be subject to the same energy conservation, water conservation, recycling and composting, and construction demolition and debris ordinances applicable to the proposed project. Compliance with these ordinances would ensure that the effects of nearby

development projects would be reduced to less-than-significant levels, and no significant cumulative impacts on mineral or energy resources would occur. For these reasons, the proposed project would not contribute considerably to a significant cumulative impact on mineral and energy resources in combination with other reasonably foreseeable development in the project vicinity.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
17. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. **—Would the project**					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)) or timberland (as defined by Public Resources Code Section 4526)?	☐	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use?	☐	☐	☐	☐	☒

The project site is located within a developed and urbanized area of San Francisco. The project site does not contain agricultural uses, and it is not zoned for such uses. The California Department of Conservation's Farmland Mapping and Monitoring Program identifies the project site as Urban and Built-Up Land, which is defined as "... land [that] is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other

developed purposes."[207] Implementation of the proposed project would not convert farmland to non-agricultural use and would not conflict with existing zoning for agricultural use or an existing Williamson Act contract.

The project site does not contain forest land or timberland, and it is not zoned for such uses. Forest land is defined as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits" (Public Resources Code § 12220(g)). Timberland is defined as "land, other than land owned by the federal government and land designated by the board (State Board of Forestry and Fire Protection) as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species uses to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis after consultation with the district committees and others" (Government Code § 51104(g)). Implementation of the proposed project would not conflict with existing zoning for forest use or timberland and would not result in the loss or conversion of forest land or timberland to non-forest use.

Therefore, Topics E.17(a), (b), (c), (d), and (e) are not applicable to the proposed project.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
18. MANDATORY FINDINGS OF SIGNIFICANCE—Would the project:					
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐	☐

[207] California Department of Conservation, San Francisco Bay Area Important Farmland 2010. Available online at ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/regional/2010/bay_area_fmmp2010.pdf. Accessed on December 5, 2014.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
b) Have impacts that would be individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐	☐
c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒	☐

As described in Section E.3, Cultural and Paleontological Resources, the construction activities associated with the proposed project could result in a substantial adverse change in the significance of historical architectural and archeological resources. In addition, the proposed project could disturb human remains. Implementation of **Mitigation Measures M-CP-2a**, **M-CP-2b**, and **M-CP-3** would reduce the impacts to less-than-significant levels. Therefore, the proposed project would not result in a significant impact through the elimination of important examples of major periods of California history or prehistory.

The proposed project has the potential to result in significant noise and air quality impacts to sensitive receptors on and off site. Any potential adverse noise and air quality effects to sensitive receptors from the proposed project would be reduced to less-than-significant levels by implementation of the proposed mitigation measures, which address construction noise (**Mitigation Measures M-NO-2)**, operational noise (**Mitigation Measures M-NO-3**), and diesel generator emissions (**Mitigation Measures M-AQ-4**). Therefore, the proposed project would not result in a significant noise or air quality impacts.

Both long-term and short-term environmental effects associated with the proposed project would be less than significant, as discussed under each environmental topic. Each environmental topic area includes an analysis of cumulative impacts based on land use projections, compliance with adopted plans, statutes, and ordinances, and currently proposed projects. No significant cumulative impacts from the proposed project have been identified.

Mitigation measures are discussed in greater detail below.

F. MITIGATION MEASURES AND IMPROVEMENT MEASURES

Mitigation Measures

Mitigation Measure M-CP-2a: Protect Historical Resources from Adjacent Construction Activities

The project sponsor of a development project in the Draft Plan Area and on the Adjacent Parcels shall consult with Planning Department environmental planning/preservation staff to determine whether adjacent or nearby buildings constitute historical resources that could be adversely affected by construction-generated vibration. For purposes of this measure, nearby historic buildings shall include those within 100 feet of a construction site if pile driving would be used in a subsequent development project; otherwise, it shall include historic buildings within 25 feet if heavy equipment would be used on the subsequent development project. (No measures need be applied if no heavy equipment would be employed.) If one or more historical resources is identified that could be adversely affected, the project sponsor shall incorporate into construction specifications for the proposed project a requirement that the construction contractor(s) use all feasible means to avoid damage to adjacent and nearby historic buildings. Such methods may include maintaining a safe distance between the construction site and the historic buildings (as identified by the Planning Department preservation staff), using construction techniques that reduce vibration, appropriate excavation shoring methods to prevent movement of adjacent structures, and providing adequate security to minimize risks of vandalism and fire.

Mitigation Measure M-CP-2b: Construction Monitoring Program for Historical Resources

For those historical resources identified in **Mitigation Measure M-CP-2a**, and where heavy equipment would be used on a subsequent development project, the project sponsor of such a project shall undertake a monitoring program to minimize damage to adjacent historic buildings and to ensure that any such damage is documented and repaired. The monitoring program, which shall apply within 100 feet where pile driving would be used and within 25 feet otherwise, shall include the following components. Prior to the start of any ground-disturbing activity, the project sponsor shall engage a historic architect or qualified historic preservation professional to undertake a pre-construction survey of historical resource(s) identified by the San Francisco Planning Department within 125 feet of planned construction to document and photograph the buildings of existing conditions. Based on the construction and condition of the resource(s), the consultant shall also establish a maximum vibration level that shall not be exceeded at each building, based on existing condition, character-defining features, soils conditions, and anticipated construction practices (a common standard is 0.2 inch per second, peak particle velocity). To ensure that vibration levels do not exceed the established standard, the project sponsor shall monitor vibration levels at each structure and shall prohibit vibratory construction activities that generate vibration levels in excess of the standard. Should vibration levels be observed in excess of the standard, construction shall be halted and alternative construction techniques put in practice, to the extent feasible. (For example, pre-drilled piles could be substituted for driven piles, if feasible based on soils conditions; smaller, lighter equipment might be able to be used in some cases.) The consultant shall conduct regular periodic inspections of each building during ground-disturbing activity on the project site. Should damage to either building occur, the building(s) shall be remediated to its pre-construction condition at the conclusion of ground-disturbing activity on the site.

Mitigation Measure M-CP-3: Archeological Testing

Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archaeological consultant from the rotational Department Qualified Archaeological Consultants List (QACL) maintained by the Planning Department archaeologist. The project sponsor shall contact the Department archeologist to obtain the names and contact information for the next three archeological consultants on the QACL. The archeological consultant shall prepare an Addendum to the Vanished Community: Archaeological Research Design and Treatment Plan for the SF-80 Bayshore Viaduct Seismic Retrofit Project (J. McIlroy & M. Praetzellis (ed. 1997).

The Addendum to the ARDTP shall have the following content:

a) Summary: Description of subsurface effect of the proposed project and of previous soils-disturbing activities;

b) Historical Development: If demographic data for the project site is absent in the discussion in the ARDTP, the addendum shall include new demographic data regarding former site occupants;

c) Identification of potential archeological resources: Discussion of any identified potential prehistoric or historical archeological resources;

d) Integrity and Significance: Eligibility of identified expected resources for listing to the CRHR; Identification of applicable Research Themes/Questions (in the ARDTP) that would be addressed by the expected archeological resources that are identified;

e) Impacts of Proposed Project;

f) Potential Soils Hazards: Update discussion for proposed project;

g) Archeological Testing Plan (if archeological testing is determined warranted): the Archeological Testing Plan (ATP) shall include:

   A) Proposed archeological testing strategies and their justification

   B) Expected archeological resources

   C) For historic archeological resources

      a) Historic address or other location identification

      b) Archeological property type

   D) For all archeological resources

      a) Estimate depth below the surface

      b) Expected integrity

      c) Preliminary assessment of eligibility to the CRHR

   E) ATP Map

      a) Location of expected archeological resources

      b) Location of expected project sub-grade impacts

      c) Areas of prior soils disturbance

d) Archeological testing locations by type of testing

e) Base map: 1886/7 Sanborn Fire Insurance Co. map

The archeological consultant's work shall be conducted in accordance with this measure at the direction of the Environmental Review Officer (ERO). All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5 (a)(c).

Consultation with Descendant Communities: On discovery of an archeological site[208] associated with descendant Native Americans, the Overseas Chinese, or other potentially interested descendant group an appropriate representative[209] of the descendant group and the ERO shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to offer recommendations to the ERO regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the Final Archaeological Resources Report shall be provided to the representative of the descendant group.

Archeological Testing Program. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological resource(s) that potentially could be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.

At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. No archeological data recovery shall be undertaken without the prior approval of the ERO or the Planning Department archeologist. If the ERO determines that a significant

[208] The term "archeological site" is intended here to minimally include any archeological deposit, feature, burial, or evidence of burial.

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

archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:

A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or

B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archeological Monitoring Program. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context;
- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO.

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological

consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures*. Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis*. Description of selected cataloguing system and artifact analysis procedures.
- *Discard and Deaccession Policy*. Description of and rationale for field and post-field discard and deaccession policies.
- *Interpretive Program*. Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
- *Security Measures*. Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- *Final Report*. Description of proposed report format and distribution of results.
- *Curation*. Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains and Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, ERO, and MLD shall have up to but not beyond six days of discovery to make all reasonable efforts to develop an agreement for the treatment of , human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)) with appropriate dignity. The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. Nothing in existing State regulations or in this mitigation measure compels the project sponsor and the ERO to accept recommendations of an MLD. The archeological consultant shall retain possession of any Native American human remains and associated or unassociated burial objects until completion of any scientific analyses of the human remains or objects as specified in the treatment agreement if such as agreement has been made or, otherwise, as determined by the archeological consultant and the ERO.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance

of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Environmental Planning division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

Mitigation Measure M-NO-2: General Construction Noise Control Measures

To ensure that project noise from construction activities is minimized to the maximum extent feasible, the project's construction contractors shall undertake the following:

- The project's general contractor shall be required to ensure that equipment and trucks used for project construction utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).
- The project's general contractor shall be required to locate stationary noise sources (such as compressors) as far from adjacent or nearby sensitive receptors as possible, to muffle such noise sources, and to construct barriers around such sources and/or the construction site, which could reduce construction noise by as much as 5 dBA. To further reduce noise, the contractor shall locate stationary equipment in pit areas or excavated areas, if feasible.
- The project's general contractor shall be required to use impact tools (e.g., jack hammers, pavement breakers, and rock drills) that are hydraulically- or electrically-powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically-powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used, along with external noise jackets on the tools, which could reduce noise levels by as much as 10 dBA.
- The following noise control requirements in specifications provided to construction contractors. Such requirements could include, but not be limited to, performing all work in a manner that minimizes noise disruption to the courts, offices, and various commercial and industrial uses to the extent feasible; use of equipment with effective mufflers; undertaking the most noisy activities during times of least disturbance to surrounding residents and occupants, as feasible; and selecting haul routes that avoid residential buildings inasmuch as such routes are otherwise feasible.

Prior to the issuance of building permits, along with the submission of construction documents, the project's general contractor shall submit to the Planning Department and Department of Building Inspection (DBI) a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include (1) a procedure and phone numbers for notifying DBI, the Department of Public Health, and the Police Department (during regular construction hours and off-hours); (2) a sign posted on-site describing noise complaint

procedures and a complaint hotline number that shall be answered at all times during construction; (3) designation of an on-site construction complaint and enforcement manager for the project; and (4) notification of Hall of Justice courts and offices on the east side of the building as well as offices and residences within 100 feet of the project construction area at least 30 days in advance of extreme noise-generating activities (defined as activities generating noise levels of 90 dBA or greater) about the estimated duration of the activity.

Mitigation Measure M-NO-3: Incorporate Noise Attenuation Measures to Achieve Acceptable Interior Noise Levels

Noise attenuation measures shall be incorporated into the building design to ensure that interior noise levels within the podular housing units do not exceed 45 dBA (L_{dn}) and are maintained at 50 dBA (L_{dn}) or below within the building's classrooms and offices. Noise attenuation measures that could be incorporated into the building design to ensure that these performance standards can be met include the following:

- Install fixed, double-paned windows,
- Provide air space between exterior wall and interior walls,
- Design ventilation systems (including vents) to achieve interior noise levels of 45 dBA (L_{dn}), and
- Increase insulation of exterior walls.

Mitigation Measure M-AQ-4: Best Available Control Technology for Diesel Generators

The project sponsor shall ensure that the backup diesel generator meet or exceed one of the following emission standards for particulate matter: (1) Tier 4 certified engine, or (2) Tier 2 or Tier 3 certified engine that is equipped with a California Air Resources Board (ARB) Level 3 Verified Diesel Emissions Control Strategy (VDECS). A non-verified diesel emission control strategy may be used if the filter has the same particulate matter reduction as the identical ARB verified model and if the Bay Area Air Quality Management District (BAAQMD) approves of its use. The project sponsor shall submit documentation of compliance with the BAAQMD New Source Review permitting process (Regulation 2, Rule 2, and Regulation 2, Rule 5) and the emission standard requirement of this mitigation measure to the Planning Department for review and approval prior to issuance of a permit for a backup diesel generator from any City agency.

Improvement Measures

Improvement Measure I-TR-1: Transportation Demand Management (TDM) Plan

As an improvement measure to reduce vehicle miles traveled (VMT) by the proposed project and to encourage use of alternate modes, the SFDPW could develop and implement a TDM Plan as part of project approval. The following TDM measures have been identified for the proposed project, and are based on the standard Planning Department TDM Program measures:

1. Identify TDM Coordinator

The project sponsor should identify a TDM Coordinator for the project site. The TDM Coordinator would be responsible for the implementation and ongoing operation of all applicable TDM measures described below. The TDM Coordinator could be a brokered service through an existing transportation management association (e.g., the Transportation

Management Association of San Francisco, TMASF), or the TDM Coordinator could be a staff member (e.g., DPW or Sheriff's Department facility manager). The TDM Coordinator would not have to work full-time at the project site. However, the TDM Coordinator should be the single point of contact for all transportation-related questions from facility employees and City (i.e., Planning Department) staff. The TDM Coordinator should provide TDM information to facility employees about the transportation amenities and options available at the project site (e.g., Class 1 bicycle parking spaces) and nearby (e.g., Muni bus routes).

2. Provide TDM Training for the TDM Coordinator

3. Provide Transportation and Trip Planning Information to Facility Employees and Visitors

3a. New-hire packet. Provide a transportation insert in the new-hire packet that includes information on transit service (local and regional, schedules and fares), information on where transit passes could be purchased, information on the 511 Regional Rideshare Program and nearby bike and car share programs, and information on where to find additional web-based alternative transportation materials (e.g., NextMuni phone app). This new-hire packet should be continuously updated as local transportation options change, and the packet should be provided to each new facility employee. Provide Muni maps, San Francisco Bicycle and Pedestrian maps upon request.

3b. Current transportation resources. Maintain an available supply of Muni maps, San Francisco Bicycle and Pedestrian maps, schedules, information and updates, for visitors.

3c. Posted and real-time information. A local map and real-time transit information could be installed on-site in a prominent and visible location, such as within the public lobby of the proposed RDF. The local map should clearly identify transit, bicycle, and key pedestrian routes, and also depict nearby destinations and commercial corridors. Real-time transit information via NextMuni data could be displayed on a digital screen.

4. Annually conduct a City-approved commuter survey of staff and visitors

5. City Access for Data Collection

As part of an ongoing effort to quantify the efficacy of TDM measures, City staff may need to access the project site to perform trip counts, and/or intercept surveys and/or other types of data collection. All on-site activities should be coordinated through the TDM Coordinator. DPW or Sheriff's Department should assure future access to the site by City staff.

Improvement Measure I-TR-2: On-Street Commercial Loading Spaces

As an improvement measure to accommodate commercial loading/unloading activities for the 480-484 Sixth Street building, DPW could replace the existing driveway on Sixth Street that would be eliminated with up to two commercial loading spaces. The commercial loading/unloading spaces would need to be approved at a public hearing through the SFMTA.

Improvement Measure I-TR-3: **Construction Management Plan and Public Updates**

Construction Coordination – To reduce potential conflicts between construction activities and pedestrians, bicyclists, transit and vehicles at the project site, the contractor is required to

prepare a Construction Management Plan for the project construction period. The project sponsor/construction contractor(s) is also required to meet with DPW, SFMTA, the Fire Department, Muni Operations and other City agencies to coordinate feasible measures to reduce traffic congestion, and other measures to reduce potential traffic, bicycle, and transit disruption and pedestrian circulation effects during construction of the proposed project. This review considers other ongoing construction in the project area.

Construction Truck Traffic Restrictions – To minimize potential for conflicts between construction truck traffic traveling to and from the project building site, and nearby peak period commute traffic, to the extent feasible, the construction contractor shall limit construction truck trips to and from the project building site, as well as staging or unloading of equipment and materials, to between the hours of 9:00 a.m. and 4:00 p.m. The hours of construction truck restrictions would be determined by the SFMTA.

Carpool, Bicycle, Walk and Transit Access for Construction Workers – In addition to required elements of the Construction Management Plan, to minimize parking demand and vehicle trips associated with construction workers, the construction contractor shall include as part of the Construction Management Plan methods to encourage carpooling, bicycle, walk, and transit access to the project site by construction workers (such as providing transit subsidies to construction workers, providing secure bicycle parking spaces, participating in free-to-employee ride matching program from *www.511.org*, participating in emergency rider home program through the City of San Francisco (*www.sferh.org*), and providing transit information to construction workers).

Project Construction Updates for Adjacent Businesses and Residents – In addition to required elements of the Construction Management Plan, to minimize construction impacts on access to nearby institutions, businesses and residents, the project sponsor, as part of the Construction Management Plan, shall provide nearby residences and adjacent businesses with regularly-updated information regarding project construction, including construction activities, peak construction vehicle activities (e.g., concrete pours), travel lane closures, parking lane and sidewalk closures. For example, a regular email notice could be distributed by the project sponsor that would provide current construction information of interest to neighbors, as well as contact information for specific construction inquiries or concerns. Similarly, a construction website could be created to provide such construction information.

G. PUBLIC NOTICE AND COMMENT

On March 9, 2015, the Planning Department mailed a Notification of Project Receiving Environmental Review to owners of properties within 300 feet of the project site, adjacent occupants, and neighborhood groups. During the public review and comment period, the Planning Department received 59 comment letters from interested parties. The comment letters are available for review at the Planning Department offices in Case File No. 2014.0198E.

The Planning Department has considered the comments made by the public in preparation of this Preliminary Mitigated Negative Declaration. Comments are summarized below and references to where the comments are addressed in the Preliminary Mitigated Negative Declaration are provided.

Transportation and Circulation

A comment was received from the California Department of Transportation stating that the environmental review should include an analysis of the proposed project on state highway facilities in the project vicinity. Impacts related to state highway facilities (including on- and off-ramps and Interstate 80) are addressed in Section E.4, Transportation and Circulation, on pp. 68-71.

Another commenter expressed concern with traffic impacts during and following construction, including the proposed reconfiguration of Harriet Street and Ahern Way. Construction- and operation-related transportation and circulation impacts are discussed in Section E.4, Transportation and Circulation, on pp. 54-89.

Alternatives

A comment suggested that a modification of the San Francisco County Jail #5 - San Bruno Complex and No Project should be considered as alternatives to the proposed project. Per CEQA, an Initial Study or Preliminary Mitigated Negative Declaration only requires the analysis of the proposed project. However, if an Initial Study or Preliminary Mitigated Negative Declaration reveals that a proposed project would have significant adverse effects on the environment that cannot be mitigated, an Environmental Impact Report, along with a range of reasonable alternatives including an analysis of a No Project alternative, would be required. The project sponsor considered expanding facilities at the San Bruno Jail site, but rejected that option because of the requirement to transport inmates to and from courts and other facilities in San Francisco on a daily basis, among other reasons.

Comments Expressing Concern Over Transparency

A majority of the commenters were concerned that the preliminary technical background studies had not been made available to the public. The technical background studies have been available for review at the Planning Department as they were completed, and are included in the project file and available for review by the public. The technical background studies have also been attached to this Preliminary Mitigated Negative Declaration and appendices. Upon completion, the Preliminary Mitigated Negative Declaration and its appendices will be posted to the Planning Department's website. The public will have the opportunity to review and comment on the Preliminary Mitigated Negative Declaration during the 20 day public review period. Any written comments received during that period will be considered by the Planning Department. Based on these comments, the Preliminary Mitigated Negative Declaration will be revised and City decision-makers will consider the Preliminary Mitigated Negative Declaration along with public comments and any necessary changes to the CEQA determination will be made at that time.

Comments Expressing the Need for an Environmental Impact Report

A majority of the comments focused on the need for a comprehensive analysis of the proposed project's physical environmental impacts, and that the analysis should not be limited to traffic, air, and light. The commenters expressed a desire for a comprehensive Environmental Impact Report that addresses all environmental topics. The Preliminary Mitigated Negative Declaration has been prepared in accordance with CEQA and *CEQA Guidelines*. The Preliminary Mitigated Negative Declaration provides a project-specific analysis of the physical environmental impacts of construction and operation of the proposed project, and the proposed project's contribution to cumulative impacts from reasonably foreseeable future projects in the project site vicinity and the City as a whole. The document provides a discussion of the proposed project's potential impacts under all environmental topics in the City's CEQA Checklist. As the PMND analysis did not find any significant unavoidable impacts as a result of the proposed project, it was determined that an EIR was not required per CEQA. The Preliminary Mitigated Negative Declaration has been posted to the Planning Department's website, and the public will have the opportunity to review and comment on the Preliminary Mitigated Negative Declaration during the 20-day public review period. Those comments will be considered by decision-makers and any necessary changes to the Preliminary Mitigated Negative Declaration and/or the CEQA determination will be made.

Comments Expressing Concern with Social and Economic Benefits of a Replacement Jail

A commenter expressed concerns that the proposed rehabilitation and detention facility would not be the best use of urban land and/or city resources. The comments raise economic issues and do not raise any specific environmental issues that require discussion in the Preliminary Mitigated Negative Declaration. Such comments may be considered by the decision-makers as part of their decision to approve, modify, or disapprove the proposed project. This consideration is carried out independent of the environmental review process.

The commenter also questions whether the demolition of CJ#3 and CJ#4 would contribute to urban decay. The proposed project does not include demolition of any part of the HOJ. Even if the 6th and 7th floors of the west wing of the HOJ were to remain vacant for an extended period after inmates were relocated to the proposed RDF, the other floors of that wing would continue in use. No "urban decay" would be expected to result from maintaining two vacant floors of a multi-story civic building.

H. DETERMINATION

On the basis of this Initial Study:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

Sarah B. Jones
Environmental Review Officer
for
John Rahaim
Director of Planning

DATE May 13, 2015

I. INITIAL STUDY PREPARERS

Planning Department, City and County of San Francisco
Environmental Planning Division
1650 Mission Street, Suite 400
San Francisco, CA 94103

Environmental Review Officer:	Sarah B. Jones
Senior Environmental Planner:	Joy Navarrete
Environmental Coordinator:	Christopher Espiritu
Transportation Coordinator:	Susan Mickelsen
Historic Preservation Specialist:	Richard Sucre

CONSULTANTS

Turnstone Consulting, a Division of SWCA
330 Townsend Street, Suite 216
San Francisco, CA 94107

Principal in Charge:	Barbara W. Sahm
Project Manager:	Julie Tilley Barlow, AICP
Deputy Project Manager	Peter Mye
	Michael Kometani
	Elizabeth Haines
	Zhamal Zhanybek Kyzy
	Ian Todd
	Juliana Lehnen

Orion Environmental Associates
211 Sutter Street, #803
San Francisco, CA 94108

Principal	Joyce Hsiao
Senior Geologist	Mary Lucas McDonald
Senior Associate	Valerie Geier

LCW Consulting
3990 20th Street
San Francisco, CA 94114

Principal Consultant:	Luba C. Wyznyckyj, AICP

CHS Consulting Group
130 Sutter Street, Suite 468
San Francisco, CA 94104

Peter Costa

PreVision
1067 Market Street, Suite 4006
San Francisco, CA 94103

Adam Phillips

Rowan William Davis (RWDI)
650 Woodlawn Road West
Guelph, Ontario, Canada N1K 1B8

Dan Bacon

PROJECT SPONSORS

San Francisco Department of Public Works
Building, Design and Construction, Project Management
City and County of San Francisco
30 Van Ness Street, Suite 4100
San Francisco, CA 94102

Project Manager	Jumoke Akin-Taylor, PMP, Assoc. DBIA, LEED-GA

City and County of San Francisco Sheriff's Department
Sheriff's Bureau of Building Services
425 7th Street
San Francisco, CA 94103

	Dan Santizo, Facilities Maintenance Manager and RDF Project Liaison

APPENDICES

APPENDIX A

San Francisco Planning Department
Preservation Team Review Form
April 3, 2015

SAN FRANCISCO
PLANNING DEPARTMENT

PRESERVATION TEAM REVIEW FORM

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

Preservation Team Meeting Date:	07/22/2014	**Date of Form Completion**	4/1/2015

PROJECT INFORMATION:		
Planner:	Address:	
Rich Sucre	850 Bryant Street (APN 3759/009-010, -012, -014, -042, -043 and -045)	
Block/Lot:	Cross Streets:	
See Address	6th and 7th Streets	
CEQA Category:	Art. 10/11:	BPA/Case No.:
Category B		2014.0198E

PURPOSE OF REVIEW:			**PROJECT DESCRIPTION:**	
◉ CEQA	○ Article 10/11	○ Preliminary/PIC	○ Alteration	◉ Demo/New Construction

DATE OF PLANS UNDER REVIEW:	10/28/2014

PROJECT ISSUES:	
☒	Is the subject Property an eligible historic resource?
☒	If so, are the proposed changes a significant impact?
	Additional Notes:
	- The proposed project includes the new construction of a new five-story replacement jail on lots (APN 3759/009, -012, -043 and -045), adjacent to the existing Hall of Justice at 850 Bryant Street. The project would retain the existing building at 480-4 6th Street, and would demolish the subject properties at 444 and 450 6th Streets.

PRESERVATION TEAM REVIEW:			
Historic Resource Present	◉ Yes	○ No *	○ N/A

Individual	Historic District/Context
Property is individually eligible for inclusion in a California Register under one or more of the following Criteria:	Property is in an eligible California Register Historic District/Context under one or more of the following Criteria:
Criterion 1 - Event: ◉ Yes ○ No	Criterion 1 - Event: ○ Yes ◉ No
Criterion 2 -Persons: ○ Yes ◉ No	Criterion 2 -Persons: ○ Yes ◉ No
Criterion 3 - Architecture: ○ Yes ◉ No	Criterion 3 - Architecture: ○ Yes ◉ No
Criterion 4 - Info. Potential: ○ Yes ◉ No	Criterion 4 - Info. Potential: ○ Yes ◉ No
Period of Significance: 1961	Period of Significance: n/a
	○ Contributor ○ Non-Contributor

Complies with the Secretary's Standards/Art 10/Art 11:	(•) Yes	( ) No	( ) N/A
CEQA Material Impairment:	( ) Yes	(•) No	
Needs More Information:	( ) Yes	(•) No	
Requires Design Revisions:	( ) Yes	(•) No	
Defer to Residential Design Team:	( ) Yes	(•) No	

* If No is selected for Historic Resource per CEQA, a signature from Senior Preservation Planner or Preservation Coordinator is required.

PRESERVATION TEAM COMMENTS:

As part of the environmental review under CEQA, the Project Sponsor submitted two reports by VerPlanck Historic Preservation Consulting:
- Memorandum, re: Potential Historic Significance of 444, 450, 480-4 6th Street (September 22, 2014); and,
- Draft Historic Resource Evaluation, RDF HOJ Replacement Jail Project, San Francisco (December 2014)

The Department concurs with the consultant's historic resource determinations for: 850 Bryant Street (Hall of Justice); 444 6th Street; 450 6th Street; and, 480-4 6th Street.

Of these four properties, 444 6th Street and 450 6th Street are NOT historic resources for the purposes of CEQA.

850 Bryant Street (Hall of Justice) is considered to be a historic resource, since it is eligible for the California Register of Historical Resources under Criterion 1 (Events) as a major legal and civic institution in San Francisco.

480-4 6th Street is also considered to be a historic resource, since it is eligible for the California Register under Criterion 1 (Events) as a well-preserved and early example of multi-family residential building in the San Francisco's South of Market neighborhood. This determination is consistent with the existing CHRSC of "3CS," which was determined as part of the South of Market Historic Resource Survey.

In terms of the project's impact upon the historic resources at 850 Bryant Street and 480-4 6th Street, the Department concurs with the consultant's project analysis. The proposed new jail facility will have a less-than-significant impact upon the historic resources at 850 Bryant Street and 480-4 6th Street. The new construction occurs on a separate site (APN 3759/009, -012, -043 and -045), which will be connected to 850 Bryant Street via a below-grade tunnel. The new construction does not impact the historical significance or integrity of the two nearby historic resources.

Therefore, the proposed project will have a less-than-significant impact upon historic resources on the project site.

Signature of a Senior Preservation Planner / Preservation Coordinator:	Date:
Jim Ow	4-3-2015

APPENDIX B
CHS Consulting Group
Intersection LOS Information
February 20, 2015

INTERSECTION LOS INFORMATION

Hall of Justice Retention and Rehabilitation Facility
WEEKDAY PM PEAK HOUR VOLUMES

Intersection Turning Movement Volumes

Intersection	Northbound			Southbound			Eastbound			Westbound			Total
	L	T	R	L	T	R	L	T	R	L	T	R	
1. Harrison/Sixth													
Existing	**15**	**1,041**	**0**	**0**	**1,087**	**363**	**0**	**0**	**0**	**470**	**1,263**	**141**	**4,380**
2040 Cumulative	**0**	**1,300**	**0**	**0**	**1,310**	**500**	**0**	**0**	**0**	**720**	**1,510**	**380**	***5,720***
2. Harrison/Seventh													
Existing	**385**	**1,741**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**605**	**979**	**325**	**4,035**
2040 Cumulative	**460**	**2,090**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**810**	**1,050**	**390**	***4,800***
3. Bryant/Sixth													
Existing	**0**	**998**	**194**	**92**	**1,500**	**0**	**110**	**689**	**124**	**0**	**0**	**0**	**3,707**
2040 Cumulative	**0**	**1,240**	**390**	**110**	**1,950**	**0**	**140**	**1,150**	**360**	**0**	**0**	**0**	***5,340***
4. Bryant/Seventh													
Existing	**0**	**1,304**	**222**	**180**	**0**	**0**	**193**	**721**	**0**	**0**	**0**	**0**	**2,620**
2040 Cumulative	**0**	**1,670**	**370**	**700**	**0**	**0**	**230**	**830**	**0**	**0**	**0**	**0**	***3,800***

Source: Central SoMa TIS Appendix
2040 Cumulative with Howard/Folsom One-way configuration

HCM Signalized Intersection Capacity Analysis
53: Harrison St. & Fifth St.

5/9/2014

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	NWL2	NWL	NWR
Lane Configurations										
Volume (vph)	272	1171	161	52	302	537	219	192	722	265
Ideal Flow (vphpl)	1800	1800	1800	1900	1900	1700	1700	1900	1900	1900
Total Lost time (s)		2.0			2.0	2.0			2.0	2.0
Lane Util. Factor		0.81			0.95	0.95			0.94	0.86
Frpb, ped/bikes		0.99			1.00	0.96			0.99	0.87
Flpb, ped/bikes		0.99			1.00	1.00			0.84	1.00
Frt		0.98			1.00	0.96			1.00	0.85
Flt Protected		0.99			0.99	1.00			0.95	1.00
Satd. Flow (prot)		5749			3016	2327			3606	1033
Flt Permitted		0.99			0.66	1.00			0.95	1.00
Satd. Flow (perm)		5749			2004	2327			3606	1033
Peak-hour factor, PHF	0.92	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.93	0.93
Adj. Flow (vph)	296	1259	173	56	325	577	235	209	776	285
RTOR Reduction (vph)	0	22	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	1706	0	0	381	808	0	0	1014	256
Confl. Peds. (#/hr)	50		100	100			100	50	100	100
Confl. Bikes (#/hr)			10				10			10
Bus Blockages (#/hr)	0	5	0	0	5	5	0	0	0	0
Parking (#/hr)		10				10				
Turn Type	Perm			Perm				Perm		Perm
Protected Phases		6			4	4			7	
Permitted Phases	6			4				7		7
Actuated Green, G (s)		27.0			25.0	25.0			24.0	24.0
Effective Green, g (s)		29.0			28.0	28.0			27.0	27.0
Actuated g/C Ratio		0.32			0.31	0.31			0.30	0.30
Clearance Time (s)		4.0			5.0	5.0			5.0	5.0
Lane Grp Cap (vph)		1852			623	724			1082	310
v/s Ratio Prot						c0.35				
v/s Ratio Perm		0.30			0.19				0.28	0.25
v/c Ratio		0.92			0.61	1.12			0.94	0.83
Uniform Delay, d1		29.4			26.4	31.0			30.7	29.3
Progression Factor		1.45			1.77	1.00			1.00	1.00
Incremental Delay, d2		6.6			1.7	70.0			15.9	21.6
Delay (s)		49.3			48.4	101.0			46.6	50.9
Level of Service		D			D	F			D	D
Approach Delay (s)		49.3			48.4	101.0			47.4	
Approach LOS		D			D	F			D	

Intersection Summary				
HCM Average Control Delay	58.7	HCM Level of Service	E	
HCM Volume to Capacity ratio	0.97			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0	
Intersection Capacity Utilization	109.3%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
54: Harrison St. & Sixth St.

5/9/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	470	1263	141	15	1041	0	0	1087	363
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1200	1200	1200
Total Lost time (s)				2.0	2.0			2.0			2.0	
Lane Util. Factor				0.81	0.81			0.91			0.91	
Frpb, ped/bikes				1.00	0.99			1.00			0.98	
Flpb, ped/bikes				1.00	1.00			1.00			1.00	
Frt				1.00	0.99			1.00			0.96	
Flt Protected				0.95	1.00			1.00			1.00	
Satd. Flow (prot)				1181	4639			4160			2620	
Flt Permitted				0.95	1.00			0.91			1.00	
Satd. Flow (perm)				1181	4639			3783			2620	
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)	0	0	0	495	1329	148	16	1096	0	0	1144	382
RTOR Reduction (vph)	0	0	0	0	26	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	0	386	1560	0	0	1112	0	0	1523	0
Confl. Peds. (#/hr)	100		80	80		100	100		50	50		100
Confl. Bikes (#/hr)			10			10			10			10
Bus Blockages (#/hr)	0	0	0	0	5	0	0	5	0	0	5	0
Parking (#/hr)					10							
Turn Type				Split			Perm					
Protected Phases				6	6			4			4	
Permitted Phases							4					
Actuated Green, G (s)				22.0	22.0			29.0			29.0	
Effective Green, g (s)				25.0	25.0			31.0			31.0	
Actuated g/C Ratio				0.42	0.42			0.52			0.52	
Clearance Time (s)				5.0	5.0			4.0			4.0	
Lane Grp Cap (vph)				492	1933			1955			1354	
v/s Ratio Prot				0.33	c0.34						c0.58	
v/s Ratio Perm								0.29				
v/c Ratio				0.78	0.81			0.57			1.12	
Uniform Delay, d1				15.2	15.4			9.9			14.5	
Progression Factor				1.00	1.00			0.25			0.67	
Incremental Delay, d2				11.9	3.7			0.1			57.3	
Delay (s)				27.0	19.1			2.6			67.0	
Level of Service				C	B			A			E	
Approach Delay (s)		0.0			20.7			2.6			67.0	
Approach LOS		A			C			A			E	

Intersection Summary				
HCM Average Control Delay	31.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.97			
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	4.0	
Intersection Capacity Utilization	88.6%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
55: Harrison St. & Seventh St.

5/9/2014

Movement	WBL	WBT	WBR	NBL2	NBL	NBT
Lane Configurations						
Volume (vph)	605	979	325	179	206	1741
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12
Total Lost time (s)	4.8	1.8		2.3		2.3
Lane Util. Factor	0.81	0.81		0.81		0.81
Frpb, ped/bikes	1.00	0.95		1.00		1.00
Flpb, ped/bikes	1.00	1.00		1.00		1.00
Frt	1.00	0.97		1.00		1.00
Flt Protected	0.95	0.99		0.95		0.99
Satd. Flow (prot)	1004	4331		1222		4900
Flt Permitted	0.95	0.99		0.95		0.99
Satd. Flow (perm)	1004	4331		1222		4900
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	630	1020	339	186	215	1814
RTOR Reduction (vph)	0	1	0	98	0	2
Lane Group Flow (vph)	397	1591	0	69	0	2046
Confl. Peds. (#/hr)			400			
Confl. Bikes (#/hr)			30			
Bus Blockages (#/hr)	0	5	5	0	5	5
Parking (#/hr)	10	10	10			10
Turn Type	Perm			Perm	Split	
Protected Phases		6			8	8
Permitted Phases	6			8		
Actuated Green, G (s)	28.2	28.2		21.7		21.7
Effective Green, g (s)	28.2	31.2		24.7		24.7
Actuated g/C Ratio	0.47	0.52		0.41		0.41
Clearance Time (s)	4.8	4.8		5.3		5.3
Lane Grp Cap (vph)	472	2252		503		2017
v/s Ratio Prot						c0.42
v/s Ratio Perm	c0.40	0.37		0.06		
v/c Ratio	0.84	0.71		0.14		1.01
Uniform Delay, d1	13.9	10.9		11.0		17.6
Progression Factor	1.54	1.46		1.00		1.00
Incremental Delay, d2	11.0	1.2		0.6		23.7
Delay (s)	32.5	17.2		11.6		41.4
Level of Service	C	B		B		D
Approach Delay (s)		20.2				39.1
Approach LOS		C				D

Intersection Summary				
HCM Average Control Delay	30.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.92			
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	7.1	
Intersection Capacity Utilization	64.9%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
56: Harrison St. & Eighth St.

5/9/2014

Movement	WBL	WBT	SBT	SBR	NWL
Lane Configurations					
Volume (vph)	205	929	1227	226	522
Ideal Flow (vphpl)	1800	1800	1800	1800	1800
Total Lost time (s)		2.8	1.9	2.4	3.5
Lane Util. Factor		0.81	0.86	1.00	0.94
Frpb, ped/bikes		1.00	1.00	0.81	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00
Flt Protected		0.99	1.00	1.00	0.95
Satd. Flow (prot)		6162	5058	1052	4113
Flt Permitted		0.99	1.00	1.00	0.95
Satd. Flow (perm)		6162	5058	1052	4113
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	214	968	1278	235	544
RTOR Reduction (vph)	0	0	0	43	0
Lane Group Flow (vph)	0	1182	1278	192	544
Confl. Peds. (#/hr)				175	
Confl. Bikes (#/hr)				39	
Bus Blockages (#/hr)	0	0	5	0	0
Parking (#/hr)	10		10		
Turn Type	Perm			Perm	
Protected Phases		6	4		3
Permitted Phases	6			4	
Actuated Green, G (s)		15.2	23.6	23.6	21.0
Effective Green, g (s)		17.2	26.1	25.6	23.5
Actuated g/C Ratio		0.23	0.35	0.34	0.31
Clearance Time (s)		4.8	4.4	4.4	6.0
Lane Grp Cap (vph)		1413	1760	359	1289
v/s Ratio Prot			c0.25		c0.13
v/s Ratio Perm		0.19		0.18	
v/c Ratio		0.84	0.73	0.54	0.42
Uniform Delay, d1		27.6	21.3	19.9	20.4
Progression Factor		1.00	1.00	1.00	1.00
Incremental Delay, d2		6.0	2.7	5.6	1.0
Delay (s)		33.6	24.0	25.5	21.4
Level of Service		C	C	C	C
Approach Delay (s)		33.6	24.2		21.4
Approach LOS		C	C		C

Intersection Summary				
HCM Average Control Delay	27.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.64			
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.2	
Intersection Capacity Utilization	58.1%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
64: Bryant St. & Freeway On Ramp

5/9/2014

Movement	EBL2	EBL	EBT	EBR	NBT	NBR	NBR2	SBL2	SBL	SBT
Lane Configurations										
Volume (vph)	60	60	754	74	269	306	50	233	161	670
Ideal Flow (vphpl)	1000	1000	1000	1000	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5	2.0		2.5				2.5	2.5
Lane Util. Factor		0.81	0.81		0.95				0.91	0.91
Frpb, ped/bikes		1.00	0.99		0.82				1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00				1.00	1.00
Frt		1.00	0.99		0.91				1.00	1.00
Flt Protected		0.95	1.00		1.00				0.95	0.99
Satd. Flow (prot)		1313	1910		2169				1327	2544
Flt Permitted		0.95	1.00		1.00				0.20	0.72
Satd. Flow (perm)		1313	1910		2169				276	1852
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	65	65	811	80	289	329	54	251	173	720
RTOR Reduction (vph)	0	0	11	0	7	0	0	0	0	0
Lane Group Flow (vph)	0	123	887	0	665	0	0	0	332	812
Confl. Peds. (#/hr)	25			60		200				
Confl. Bikes (#/hr)				10			10	10		
Bus Blockages (#/hr)	0	0	5	0	5	0	0	0	0	5
Parking (#/hr)			10							10
Turn Type	Split	Split						pm+pt	pm+pt	
Protected Phases	2	2	2		8			7	7	4
Permitted Phases								4	4	
Actuated Green, G (s)		22.5	22.5		23.0				42.0	42.0
Effective Green, g (s)		22.5	25.0		24.5				43.5	43.5
Actuated g/C Ratio		0.25	0.28		0.27				0.48	0.48
Clearance Time (s)		4.5	4.5		4.0				4.0	4.0
Lane Grp Cap (vph)		328	531		590				326	1022
v/s Ratio Prot		0.09	c0.46		c0.31				c0.19	0.15
v/s Ratio Perm									0.30	0.24
v/c Ratio		0.38	1.67		1.29dr				1.02	0.79
Uniform Delay, d1		27.9	32.5		32.8				29.2	19.5
Progression Factor		1.00	1.00		1.00				0.82	0.75
Incremental Delay, d2		3.3	310.1		77.1				31.1	1.9
Delay (s)		31.2	342.6		109.8				55.1	16.4
Level of Service		C	F		F				E	B
Approach Delay (s)			305.0		109.8					27.7
Approach LOS			F		F					C

Intersection Summary				
HCM Average Control Delay	146.9	HCM Level of Service	F	
HCM Volume to Capacity ratio	1.25			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.5	
Intersection Capacity Utilization	99.5%	ICU Level of Service	F	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
65: Bryant St. & Sixth St.

5/9/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	689	124	0	0	0	0	998	194	92	1500	0
Ideal Flow (vphpl)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Total Lost time (s)		2.0						2.0	2.0		2.0	
Lane Util. Factor		*0.50						0.95	1.00		0.91	
Frpb, ped/bikes		0.99						1.00	0.94		1.00	
Flpb, ped/bikes		1.00						1.00	1.00		1.00	
Frt		0.98						1.00	0.85		1.00	
Flt Protected		0.99						1.00	1.00		1.00	
Satd. Flow (prot)		1989						1601	685		2306	
Flt Permitted		0.99						1.00	1.00		0.79	
Satd. Flow (perm)		1989						1601	685		1822	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	117	733	132	0	0	0	0	1062	206	98	1596	0
RTOR Reduction (vph)	0	31	0	0	0	0	0	0	88	0	0	0
Lane Group Flow (vph)	0	951	0	0	0	0	0	1062	118	0	1694	0
Confl. Peds. (#/hr)	35		75				75		50	50		75
Confl. Bikes (#/hr)			10						10			10
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	5	0
Parking (#/hr)		10										
Turn Type	Split								Perm	Prot		
Protected Phases	2	2						8		7	4	
Permitted Phases									8			
Actuated Green, G (s)		17.0						24.5	24.5		33.0	
Effective Green, g (s)		20.0						26.5	26.5		36.0	
Actuated g/C Ratio		0.33						0.44	0.44		0.60	
Clearance Time (s)		5.0						4.0	4.0		5.0	
Lane Grp Cap (vph)		663						707	303		1166	
v/s Ratio Prot		c0.48						c0.66			c0.22	
v/s Ratio Perm									0.17		0.65	
v/c Ratio		1.43						1.50	0.39		1.45	
Uniform Delay, d1		20.0						16.8	11.3		12.0	
Progression Factor		0.65						0.94	1.53		0.91	
Incremental Delay, d2		202.7						226.6	0.3		205.0	
Delay (s)		215.7						242.4	17.6		215.8	
Level of Service		F						F	B		F	
Approach Delay (s)		215.7			0.0			205.9			215.8	
Approach LOS		F			A			F			F	

Intersection Summary				
HCM Average Control Delay	212.6	HCM Level of Service	F	
HCM Volume to Capacity ratio	1.43			
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	6.0	
Intersection Capacity Utilization	157.2%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
66: Bryant St. & Seventh St.

5/9/2014

Movement	EBL	EBT	NBT	NBR	SEL
Lane Configurations					
Volume (vph)	193	721	1304	222	180
Ideal Flow (vphpl)	1800	1800	1800	1800	1800
Total Lost time (s)		2.0	2.0		2.0
Lane Util. Factor		0.81	0.86		0.94
Frpb, ped/bikes		1.00	0.95		1.00
Flpb, ped/bikes		0.93	1.00		1.00
Frt		1.00	0.98		1.00
Flt Protected		0.99	1.00		0.95
Satd. Flow (prot)		5504	4743		4086
Flt Permitted		0.99	1.00		0.95
Satd. Flow (perm)		5504	4743		4086
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	199	743	1344	229	186
RTOR Reduction (vph)	0	0	51	0	0
Lane Group Flow (vph)	0	942	1522	0	186
Confl. Peds. (#/hr)	400			400	
Confl. Bikes (#/hr)				30	
Bus Blockages (#/hr)	0	5	0	0	5
Parking (#/hr)	10	10	10	10	
Turn Type	Perm				
Protected Phases		2	8		7
Permitted Phases	2				
Actuated Green, G (s)		13.0	23.0		10.0
Effective Green, g (s)		16.0	26.0		12.0
Actuated g/C Ratio		0.27	0.43		0.20
Clearance Time (s)		5.0	5.0		4.0
Lane Grp Cap (vph)		1468	2055		817
v/s Ratio Prot			c0.32		c0.05
v/s Ratio Perm		0.17			
v/c Ratio		0.64	0.74		0.23
Uniform Delay, d1		19.5	14.2		20.1
Progression Factor		1.00	1.00		1.00
Incremental Delay, d2		2.2	2.4		0.6
Delay (s)		21.6	16.6		20.8
Level of Service		C	B		C
Approach Delay (s)		21.6	16.6		20.8
Approach LOS		C	B		C

Intersection Summary				
HCM Average Control Delay	18.7	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.58			
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	6.0	
Intersection Capacity Utilization	55.4%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
67: Bryant St. & Ninth St.

5/9/2014

Movement	EBL	EBT	NBT	NBR	NEL	NER
Lane Configurations						
Volume (vph)	84	1096	1346	185	402	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		2.0	2.0		2.0	2.0
Lane Util. Factor		0.81	0.86		0.94	0.86
Frpb, ped/bikes		1.00	0.96		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5986	4783		4115	1100
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5986	4783		4115	1100
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	94	1231	1512	208	452	92
RTOR Reduction (vph)	0	17	31	0	0	0
Lane Group Flow (vph)	0	1308	1689	0	461	83
Confl. Peds. (#/hr)	400			400		
Confl. Bikes (#/hr)				10		
Bus Blockages (#/hr)	0	5	0	5	0	5
Parking (#/hr)	10	10	10	10		
Turn Type	Split					Perm
Protected Phases	2	2	8		7	
Permitted Phases						7
Actuated Green, G (s)		22.0	20.0		23.0	23.0
Effective Green, g (s)		25.0	23.0		26.0	26.0
Actuated g/C Ratio		0.31	0.29		0.32	0.32
Clearance Time (s)		5.0	5.0		5.0	5.0
Lane Grp Cap (vph)		1871	1375		1337	358
v/s Ratio Prot		c0.22	c0.35		c0.11	
v/s Ratio Perm						0.08
v/c Ratio		0.70	1.23		0.34	0.23
Uniform Delay, d1		24.2	28.5		20.5	19.7
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		2.2	109.5		0.7	1.5
Delay (s)		26.4	138.0		21.2	21.2
Level of Service		C	F		C	C
Approach Delay (s)		26.4	138.0		21.2	
Approach LOS		C	F		C	

Intersection Summary				
HCM Average Control Delay	79.1	HCM Level of Service	E	
HCM Volume to Capacity ratio	0.72			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	6.0	
Intersection Capacity Utilization	72.9%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
53: Harrison St. & Fifth St.

9/2/2014

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	NWL2	NWL	NWR
Lane Configurations										
Volume (vph)	250	1050	150	100	570	770	340	300	1360	460
Ideal Flow (vphpl)	1800	1800	1800	1900	1900	1700	1700	1900	1900	1900
Lane Width	10	10	10	11	11	11	11	11	11	11
Total Lost time (s)		4.0	4.0		3.0	3.0			3.0	3.0
Lane Util. Factor		0.86	1.00		0.95	0.95			0.94	0.86
Frpb, ped/bikes		1.00	0.84		1.00	0.95			0.99	0.84
Flpb, ped/bikes		0.98	1.00		1.00	1.00			1.00	1.00
Frt		1.00	0.85		1.00	0.95			1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00			0.95	1.00
Satd. Flow (prot)		4928	1052		2827	2487			4308	990
Flt Permitted		0.99	1.00		0.53	1.00			0.95	1.00
Satd. Flow (perm)		4928	1052		1499	2487			4308	990
Peak-hour factor, PHF	0.92	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.93	0.93
Adj. Flow (vph)	272	1129	161	108	613	828	366	326	1462	495
RTOR Reduction (vph)	0	0	24	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	1401	137	0	721	1193	0	0	1838	445
Confl. Peds. (#/hr)	50		100	100			100	50	100	100
Confl. Bikes (#/hr)			10				30			10
Parking (#/hr)					10					
Turn Type	Perm		Perm	Perm				Split		Perm
Protected Phases		8			2	6		9	9	
Permitted Phases	8		8	2						9
Actuated Green, G (s)		24.0	24.0		24.0	24.0			24.0	24.0
Effective Green, g (s)		26.0	26.0		27.0	27.0			27.0	27.0
Actuated g/C Ratio		0.29	0.29		0.30	0.30			0.30	0.30
Clearance Time (s)		6.0	6.0		6.0	6.0			6.0	6.0
Lane Grp Cap (vph)		1424	304		450	746			1292	297
v/s Ratio Prot						0.48			0.43	
v/s Ratio Perm		0.28	0.13		c0.48					c0.45
v/c Ratio		0.98	0.45		1.77dl	1.60			1.42	1.50
Uniform Delay, d1		31.8	26.2		31.5	31.5			31.5	31.5
Progression Factor		1.48	1.70		0.80	0.69			1.00	1.00
Incremental Delay, d2		4.3	0.4		277.1	270.4			194.7	241.2
Delay (s)		51.3	44.9		302.3	292.1			226.2	272.7
Level of Service		D	D		F	F			F	F
Approach Delay (s)		50.6			302.3	292.1			235.3	
Approach LOS		D			F	F			F	

Intersection Summary				
HCM Average Control Delay	205.4	HCM Level of Service	F	
HCM Volume to Capacity ratio	1.37			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0	
Intersection Capacity Utilization	138.9%	ICU Level of Service	H	
Analysis Period (min)	15			

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
54: Harrison St. & Sixth St.

9/2/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	720	1510	380	0	1300	0	0	1310	500
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1200	1200	1200
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)					3.0	4.0		4.0			4.0	
Lane Util. Factor					0.86	1.00		0.95			0.95	
Frpb, ped/bikes					1.00	0.84		1.00			0.96	
Flpb, ped/bikes					0.96	1.00		1.00			1.00	
Frt					1.00	0.85		1.00			0.96	
Flt Protected					0.98	1.00		1.00			1.00	
Satd. Flow (prot)					4824	1055		2788			1702	
Flt Permitted					0.98	1.00		1.00			1.00	
Satd. Flow (perm)					4824	1055		2788			1702	
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)	0	0	0	758	1589	400	0	1368	0	0	1379	526
RTOR Reduction (vph)	0	0	0	0	0	7	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	2347	393	0	1368	0	0	1902	0
Confl. Peds. (#/hr)	100		80	80		100	100		50	50		100
Confl. Bikes (#/hr)			10			10			10			10
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Turn Type				Perm		Perm						
Protected Phases					8			2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					39.0	39.0		39.0			39.0	
Effective Green, g (s)					42.0	41.0		41.0			41.0	
Actuated g/C Ratio					0.47	0.46		0.46			0.46	
Clearance Time (s)					6.0	6.0		6.0			6.0	
Lane Grp Cap (vph)					2251	481		1270			775	
v/s Ratio Prot								0.49			c1.12	
v/s Ratio Perm					0.49	0.37						
v/c Ratio					1.20dl	0.82		1.08			2.45	
Uniform Delay, d1					24.0	21.2		24.5			24.5	
Progression Factor					0.70	0.65		1.11			1.01	
Incremental Delay, d2					20.8	1.5		36.4			654.9	
Delay (s)					37.7	15.3		63.5			679.6	
Level of Service					D	B		E			F	
Approach Delay (s)		0.0			34.4			63.5			679.6	
Approach LOS		A			C			E			F	

Intersection Summary				
HCM Average Control Delay	245.2	HCM Level of Service	F	
HCM Volume to Capacity ratio	1.74			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	7.0	
Intersection Capacity Utilization	153.6%	ICU Level of Service	H	
Analysis Period (min)	15			

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
55: Harrison St. & Seventh St.

9/2/2014

Movement	WBL	WBT	WBR	NBL2	NBL	NBT
Lane Configurations						
Volume (vph)	810	1050	390	240	220	2090
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	12	12
Total Lost time (s)	6.0	3.0	4.0	3.0		3.0
Lane Util. Factor	0.86	0.86	1.00	0.81		0.81
Frpb, ped/bikes	1.00	1.00	0.63	1.00		1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00
Frt	1.00	1.00	0.85	1.00		1.00
Flt Protected	0.95	0.99	1.00	0.95		0.99
Satd. Flow (prot)	1029	3588	777	1222		4903
Flt Permitted	0.95	0.99	1.00	0.95		0.99
Satd. Flow (perm)	1029	3588	777	1222		4903
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	844	1094	406	250	229	2177
RTOR Reduction (vph)	0	0	1	47	0	2
Lane Group Flow (vph)	473	1465	405	178	0	2429
Confl. Peds. (#/hr)			400			
Confl. Bikes (#/hr)			30			
Bus Blockages (#/hr)	0	0	5	0	0	5
Parking (#/hr)	10	10				10
Turn Type	Split		Perm	Perm	Perm	
Protected Phases	8	8				2
Permitted Phases			8	2	2	
Actuated Green, G (s)	39.0	39.0	39.0	39.0		39.0
Effective Green, g (s)	39.0	42.0	41.0	42.0		42.0
Actuated g/C Ratio	0.43	0.47	0.46	0.47		0.47
Clearance Time (s)	6.0	6.0	6.0	6.0		6.0
Lane Grp Cap (vph)	446	1674	354	570		2288
v/s Ratio Prot	0.46	0.41				
v/s Ratio Perm			c0.52	0.15		0.50
v/c Ratio	1.06	0.88	1.14	0.31		1.06
Uniform Delay, d1	25.5	21.6	24.5	15.0		24.0
Progression Factor	0.56	0.61	0.61	1.00		1.00
Incremental Delay, d2	32.6	0.7	68.2	1.4		37.8
Delay (s)	46.8	14.0	83.2	16.4		61.8
Level of Service	D	B	F	B		E
Approach Delay (s)		32.6				57.9
Approach LOS		C				E

Intersection Summary				
HCM Average Control Delay	46.0	HCM Level of Service	D	
HCM Volume to Capacity ratio	1.10			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	7.0	
Intersection Capacity Utilization	79.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Signalized Intersection Capacity Analysis
56: Harrison St. & Eighth St.

9/2/2014

Movement	WBL	WBT	SBT	SBR	NWL
Lane Configurations					
Volume (vph)	380	1300	1450	270	560
Ideal Flow (vphpl)	1800	1800	1800	1800	1800
Lane Width	10	10	11	11	11
Total Lost time (s)		4.0	3.5	4.0	3.5
Lane Util. Factor		0.86	0.86	1.00	0.94
Frpb, ped/bikes		1.00	1.00	0.71	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00
Flt Protected		0.99	1.00	1.00	0.95
Satd. Flow (prot)		4853	5058	911	4113
Flt Permitted		0.99	1.00	1.00	0.95
Satd. Flow (perm)		4853	5058	911	4113
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	396	1354	1510	281	583
RTOR Reduction (vph)	0	0	0	15	0
Lane Group Flow (vph)	0	1750	1510	266	583
Confl. Peds. (#/hr)				175	
Confl. Bikes (#/hr)				39	
Bus Blockages (#/hr)	0	0	5	5	0
Parking (#/hr)	10	10	10		
Turn Type	Perm			Perm	
Protected Phases		8	6		9
Permitted Phases	8			6	
Actuated Green, G (s)		31.0	22.0	22.0	19.0
Effective Green, g (s)		33.0	24.5	24.0	21.5
Actuated g/C Ratio		0.37	0.27	0.27	0.24
Clearance Time (s)		6.0	6.0	6.0	6.0
Lane Grp Cap (vph)		1779	1377	243	983
v/s Ratio Prot			c0.30		c0.14
v/s Ratio Perm		0.36		0.29	
v/c Ratio		0.98	1.10	1.10	0.59
Uniform Delay, d1		28.2	32.8	33.0	30.4
Progression Factor		0.96	0.66	0.62	1.00
Incremental Delay, d2		14.6	44.8	49.8	2.6
Delay (s)		41.6	66.3	70.2	33.0
Level of Service		D	E	E	C
Approach Delay (s)		41.6	67.0		33.0
Approach LOS		D	E		C

Intersection Summary				
HCM Average Control Delay	51.4	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.91			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0	
Intersection Capacity Utilization	76.0%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Signalized Intersection Capacity Analysis
64: Bryant St. & Freeway On Ramp

9/2/2014

Movement	EBL2	EBL	EBT	EBR	NBT	NBR	NBR2	SBL2	SBL	SBT
Lane Configurations										
Volume (vph)	90	290	1050	110	550	500	140	260	180	950
Ideal Flow (vphpl)	1000	1000	1000	1000	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	11	12	12	10	10	11
Total Lost time (s)		6.0	3.5	4.0	4.5	4.0			4.5	4.5
Lane Util. Factor		0.86	0.86	1.00	1.00	1.00			0.97	1.00
Frpb, ped/bikes		1.00	1.00	0.83	1.00	0.68			1.00	1.00
Flpb, ped/bikes		0.97	1.00	1.00	1.00	1.00			1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85			1.00	1.00
Flt Protected		0.95	1.00	1.00	1.00	1.00			0.95	1.00
Satd. Flow (prot)		1307	1415	578	1535	917			2732	1305
Flt Permitted		0.95	1.00	1.00	1.00	1.00			0.23	1.00
Satd. Flow (perm)		1307	1415	578	1535	917			652	1305
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	97	312	1129	118	591	538	151	280	194	1022
RTOR Reduction (vph)	0	0	0	17	0	11	0	0	0	0
Lane Group Flow (vph)	0	378	1160	101	591	678	0	0	474	1022
Confl. Peds. (#/hr)	25			60		200				
Confl. Bikes (#/hr)				10		30	30	10		
Parking (#/hr)										10
Turn Type	Perm	Prot		Perm		Perm		Perm	Perm	
Protected Phases		7	4		2					6
Permitted Phases	4			4		2		6	6	
Actuated Green, G (s)		39.0	39.0	39.0	39.0	39.0			39.0	39.0
Effective Green, g (s)		39.0	41.5	41.0	40.5	41.0			40.5	40.5
Actuated g/C Ratio		0.43	0.46	0.46	0.45	0.46			0.45	0.45
Clearance Time (s)		6.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Grp Cap (vph)		566	652	263	691	418			293	587
v/s Ratio Prot			c0.82		0.38					c0.78
v/s Ratio Perm		0.29		0.17		0.74			0.73	
v/c Ratio		0.67	1.78	0.38	0.86	1.62			1.85dl	1.74
Uniform Delay, d1		20.3	24.2	16.2	22.1	24.5			24.8	24.8
Progression Factor		0.60	0.70	0.51	0.81	0.78			1.19	1.19
Incremental Delay, d2		0.6	351.2	0.4	1.4	280.4			279.4	334.1
Delay (s)		12.8	368.2	8.7	19.2	299.5			308.8	363.5
Level of Service		B	F	A	B	F			F	F
Approach Delay (s)			261.5		170.1					346.2
Approach LOS			F		F					F

Intersection Summary				
HCM Average Control Delay	263.7	HCM Level of Service	F	
HCM Volume to Capacity ratio	1.76			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	126.7%	ICU Level of Service	H	
Analysis Period (min)	15			

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
65: Bryant St. & Sixth St.

9/2/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	1150	360	0	0	0	0	1240	390	110	1950	0
Ideal Flow (vphpl)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)		3.0	4.0					4.0	4.0		3.0	
Lane Util. Factor		*0.50	1.00					0.95	1.00		0.95	
Frpb, ped/bikes		1.00	0.87					1.00	0.91		1.00	
Flpb, ped/bikes		0.99	1.00					1.00	1.00		1.00	
Frt		1.00	0.85					1.00	0.85		1.00	
Flt Protected		0.99	1.00					1.00	1.00		1.00	
Satd. Flow (prot)		1568	520					1546	637		1545	
Flt Permitted		0.99	1.00					1.00	1.00		0.57	
Satd. Flow (perm)		1568	520					1546	637		883	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	149	1223	383	0	0	0	0	1319	415	117	2074	0
RTOR Reduction (vph)	0	0	1	0	0	0	0	0	10	0	0	0
Lane Group Flow (vph)	0	1372	382	0	0	0	0	1319	405	0	2191	0
Confl. Peds. (#/hr)	35		75				75		50	50		75
Confl. Bikes (#/hr)			10						10			10
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	5	0
Parking (#/hr)	10	10	10									
Turn Type	Perm		Perm						Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4		4						2	6		
Actuated Green, G (s)		39.0	39.0					39.0	39.0		39.0	
Effective Green, g (s)		42.0	41.0					41.0	41.0		42.0	
Actuated g/C Ratio		0.47	0.46					0.46	0.46		0.47	
Clearance Time (s)		6.0	6.0					6.0	6.0		6.0	
Lane Grp Cap (vph)		732	237					704	290		412	
v/s Ratio Prot								0.85				
v/s Ratio Perm		0.88	0.74						0.64		c2.48	
v/c Ratio		1.87	1.61					1.87	1.40		5.32	
Uniform Delay, d1		24.0	24.5					24.5	24.5		24.0	
Progression Factor		0.56	0.52					0.73	0.77		1.03	
Incremental Delay, d2		395.7	284.4					393.6	179.9		1943.6	
Delay (s)		409.1	297.2					411.6	198.7		1968.3	
Level of Service		F	F					F	F		F	
Approach Delay (s)		384.7			0.0			360.6			1968.3	
Approach LOS		F			A			F			F	

Intersection Summary				
HCM Average Control Delay	988.2	HCM Level of Service	F	
HCM Volume to Capacity ratio	3.60			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0	
Intersection Capacity Utilization	242.6%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
66: Bryant St. & Seventh St.

9/2/2014

Movement	EBL	EBT	NBT	NBR	SEL
Lane Configurations					
Volume (vph)	230	830	1670	370	700
Ideal Flow (vphpl)	1800	1800	1800	1800	1800
Lane Width	10	10	11	11	11
Total Lost time (s)	3.0	3.0	3.0		4.0
Lane Util. Factor	0.81	0.81	0.86		0.94
Frpb, ped/bikes	1.00	1.00	0.93		1.00
Flpb, ped/bikes	0.64	0.99	1.00		1.00
Frt	1.00	1.00	0.97		1.00
Flt Protected	0.95	1.00	1.00		0.95
Satd. Flow (prot)	621	4567	4613		4113
Flt Permitted	0.95	1.00	1.00		0.95
Satd. Flow (perm)	621	4567	4613		4113
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	237	856	1722	381	722
RTOR Reduction (vph)	0	0	3	0	0
Lane Group Flow (vph)	211	882	2100	0	722
Confl. Peds. (#/hr)	400			400	
Confl. Bikes (#/hr)				30	
Parking (#/hr)	10	10	10	10	
Turn Type	Perm				
Protected Phases		4	2		9
Permitted Phases	4				
Actuated Green, G (s)	18.0	18.0	39.0		15.0
Effective Green, g (s)	21.0	21.0	42.0		17.0
Actuated g/C Ratio	0.23	0.23	0.47		0.19
Clearance Time (s)	6.0	6.0	6.0		6.0
Lane Grp Cap (vph)	145	1066	2153		777
v/s Ratio Prot			c0.46		c0.18
v/s Ratio Perm	c0.34	0.19			
v/c Ratio	1.46	0.83	0.98		0.93
Uniform Delay, d1	34.5	32.8	23.5		35.9
Progression Factor	1.00	1.00	1.00		1.00
Incremental Delay, d2	238.9	7.4	14.4		19.0
Delay (s)	273.4	40.2	37.9		54.9
Level of Service	F	D	D		D
Approach Delay (s)		85.2	37.9		54.9
Approach LOS		F	D		D

Intersection Summary				
HCM Average Control Delay	54.2	HCM Level of Service	D	
HCM Volume to Capacity ratio	1.09			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0	
Intersection Capacity Utilization	77.5%	ICU Level of Service	D	
Analysis Period (min)	15			

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HCM Signalized Intersection Capacity Analysis
67: Bryant St. & Ninth St.

9/2/2014

Movement	EBL	EBT	NBT	NBR	NEL	NER
Lane Configurations						
Volume (vph)	90	1100	1850	260	410	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		2.0	2.0		2.0	2.0
Lane Util. Factor		0.81	0.86		0.94	0.86
Frpb, ped/bikes		1.00	0.96		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6009	4771		4114	1100
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6009	4771		4114	1100
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	101	1236	2079	292	461	101
RTOR Reduction (vph)	0	17	28	0	0	0
Lane Group Flow (vph)	0	1320	2343	0	471	91
Confl. Peds. (#/hr)	400			400		
Confl. Bikes (#/hr)				10		
Bus Blockages (#/hr)	0	0	0	0	0	5
Parking (#/hr)	10	10	10	10		
Turn Type	Split					Perm
Protected Phases	2	2	8		7	
Permitted Phases						7
Actuated Green, G (s)		25.0	25.0		25.0	25.0
Effective Green, g (s)		28.0	28.0		28.0	28.0
Actuated g/C Ratio		0.31	0.31		0.31	0.31
Clearance Time (s)		5.0	5.0		5.0	5.0
Lane Grp Cap (vph)		1869	1484		1280	342
v/s Ratio Prot		c0.22	c0.49		c0.11	
v/s Ratio Perm						0.08
v/c Ratio		0.71	1.58		0.37	0.27
Uniform Delay, d1		27.4	31.0		24.1	23.3
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		2.3	263.7		0.8	1.9
Delay (s)		29.7	294.7		24.9	25.2
Level of Service		C	F		C	C
Approach Delay (s)		29.7	294.7		25.0	
Approach LOS		C	F		C	

Intersection Summary				
HCM Average Control Delay	176.2	HCM Level of Service	F	
HCM Volume to Capacity ratio	0.87			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0	
Intersection Capacity Utilization	83.1%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

APPENDIX C

CHS Consulting Group/Baymetrics

Data Collection

February 11, 2015

DATA COLLECTION

Hall of Justice Rehabilitation and Detention Facility Project

Survey Date: 2/11/15

Existing Travel Demand on Project Site (PM Peak Hour: 4 PM - 5 PM)

Vehicle Trips			Person Trips		
In	Out	Total	In	Out	Total
34	48	82	79	95	174

Sidewalk Pedestrian Volumes (PM Peak Hour: 4 PM - 5 PM)

6th Street between Bryant St and Ahern Wy (West Sidewalk)			Bryant Street between Sixth St and Harriet St (North Sidewalk)		
NB	SB	Total	EB	WB	Total
82	50	132	124	88	212

Intersection Turning Movements (PM Peak Hour)

	NB			SB			EB			WB			
Intersection	L	T	R	L	T	R	L	T	R	L	T	R	PHF
Bryant Street and Harriet Street		Harriet Street			Harriet Street			Bryant Street			Bryant Street		
		6	18				47	930	6				0.95
Harrison Street and Harriet Street		Harriet Street			Harriet Street			Harrison Street			Harrison Street		
	77					139					1887		0.73
Sixth Street and Ahern Way		Sixth Street			Sixth Street			Ahern Way					
	8	1093			1676	7	4		25				0.98

Pedestrian Crosswalk Volumes

Intersection	North	South	East	West
Bryant Street and Harriet Street	115	69	12	5
Harrison Street and Harriet Street	77	17		
Sixth Street and Ahern Way				88

On-Street Parking Conditions in Project Vicinity (Midday: 12 PM - 2 PM)

Street	From	To	Supply	Occupancy	Utilization (%)
Brannan	Seventh	Sixth	48	46	96%
	Sixth	Fifth	53	42	79%
Bryant	Seventh	Sixth	54	52	96%
	Sixth	Fifth	42	62	148%
Harrison	Seventh	Sixth	64	46	72%
	Sixth	Fifth	45	42	93%
Folsom	Seventh	Sixth	47	36	77%
	Sixth	Fifth	31	33	106%
Seventh	Folsom	Harrison	39	31	79%
	Harrison	Bryant	22	15	68%
	Bryant	Brannan	34	40	118%
Sixth	Folsom	Harrison	27	27	100%
	Harrison	Bryant	38	29	76%
	Bryant	Brannan	36	33	92%
Fifth	Folsom	Harrison	27	21	78%
	Harrison	Bryant	13	8	62%
	Bryant	Brannan	36	31	86%
Welsh	End	Fifth	30	31	103%
Ahern	Harriet	Sixth	17	17	100%
Cleveland	Seventh	Sherman	12	12	100%
Clara	Sixth	Fifth	25	27	108%
Shipley	Sixth	Fifth	14	14	100%
Sherman	Folsom	Harrison	18	17	94%
Columbia Sq	Folsom	Harrison	44	44	100%
Harriet	Folsom	Harrison	36	27	75%
	Harrison	Bryant	29	29	100%
	Bryant	Brannan	38	37	97%
Falmouth	Folsom	Shipley	8	8	100%
Morris	Harrison	Bryant	0	14	-
	Bryant	End	12	15	125%
Oak Grove	Harrison	Bryant	38	38	100%
Merlin	Harrison	End	18	18	100%
Gilbert	Bryant	Brannan	18	18	100%
Boardman	Bryant	Brannan	15	16	107%
Total			**1028**	**976**	**95%**

Note:

Parking utilization above 100 percent indicates vehicle(s) were parked illegal space (e.g., in front of a driveway)

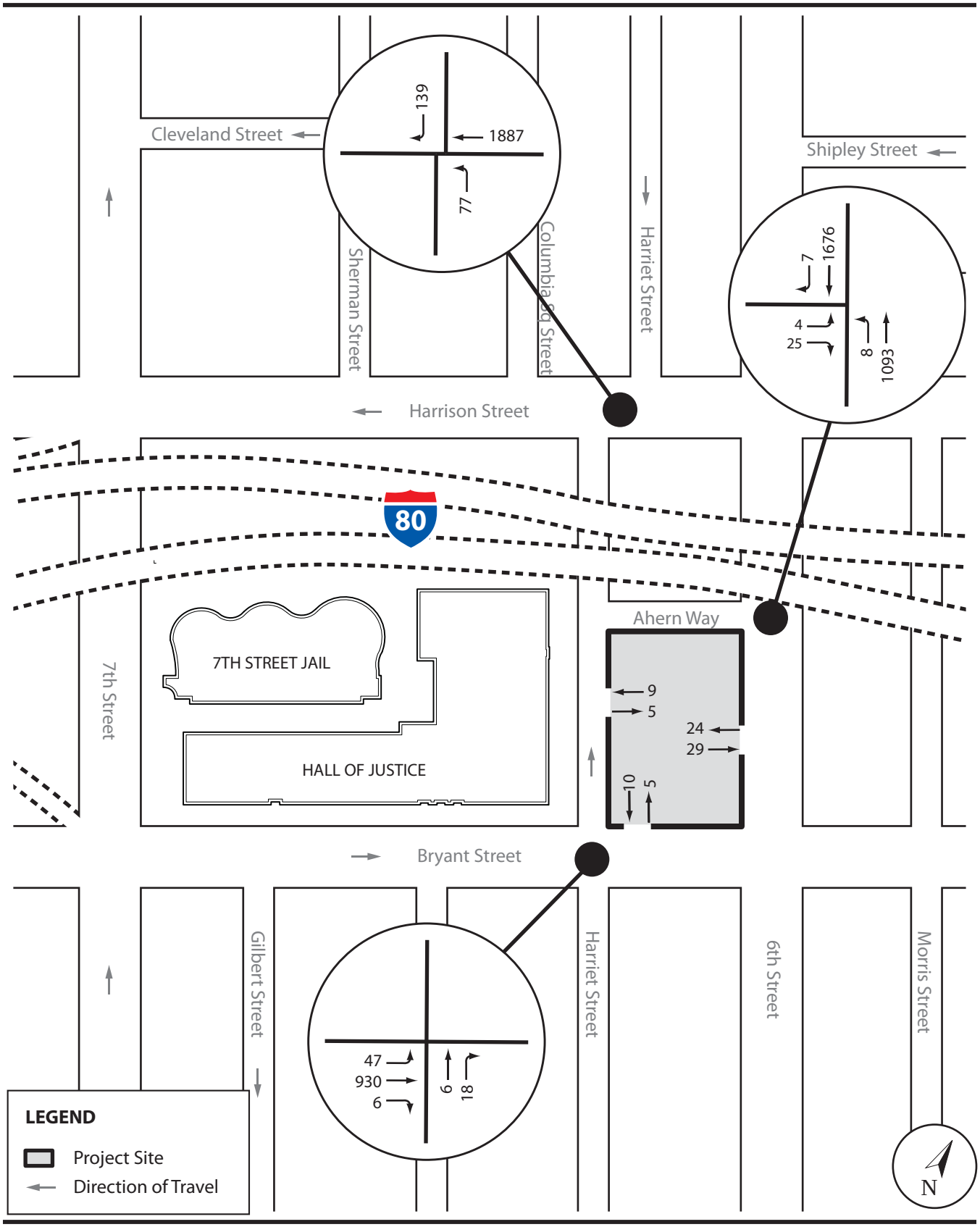

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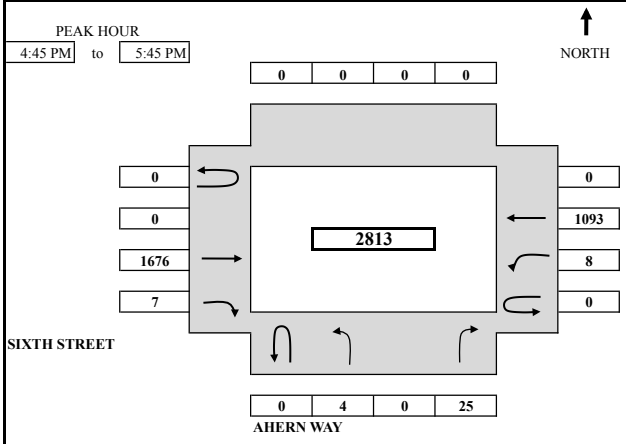
Figure
Existing Weekday PM Peak Hour Traffic Volumes

B.A.Y.M.E.T.R.I.C.S.

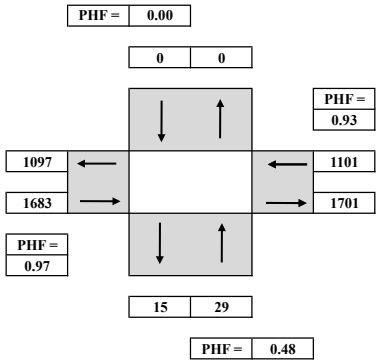
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**DATA COLLECTION IN SAN FRANCISCO**	**SURVEY DATE:**	**2/11/15**	**DAY:**	**WEDNESDAY**
N-S APPROACH:	**AHERN WAY**	**SURVEY TIME:**	**4:00 PM**	**TO**	**6:00 PM**
E-W APPROACH:	**SIXTH STREET**	**JURISDICTION:**	**SAN FRANCISCO**	**FILE:**	**3502021-3PM**

PEAK HOUR 4:45 PM to 5:45 PM



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM		1		7							384	3	0	1	260		**656**
4:15 PM	to	4:30 PM		1		12							789	6	1	2	554		**1365**
4:30 PM	to	4:45 PM		1		21							1199	7	1	5	786		**2020**
4:45 PM	to	5:00 PM		2		24							1628	10	1	9	1066		**2740**
5:00 PM	to	5:15 PM		2		28							2053	11	1	11	1320		**3426**
5:15 PM	to	5:30 PM		3		33							2478	12	1	12	1585		**4124**
5:30 PM	to	5:45 PM		5		46							2875	14	1	13	1879		**4833**
5:45 PM	to	6:00 PM		5		47							3255	18	1	14	2145		**5485**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	1	0	7	0	0	0	0	0	0	384	3	0	1	260	0	**656**
4:15 PM	to	4:30 PM	0	0	0	5	0	0	0	0	0	0	405	3	1	1	294	0	**709**
4:30 PM	to	4:45 PM	0	0	0	9	0	0	0	0	0	0	410	1	0	3	232	0	**655**
4:45 PM	to	5:00 PM	0	1	0	3	0	0	0	0	0	0	429	3	0	4	280	0	**720**
5:00 PM	to	5:15 PM	0	0	0	4	0	0	0	0	0	0	425	1	0	2	254	0	**686**
5:15 PM	to	5:30 PM	0	1	0	5	0	0	0	0	0	0	425	1	0	1	265	0	**698**
5:30 PM	to	5:45 PM	0	2	0	13	0	0	0	0	0	0	397	2	0	1	294	0	**709**
5:45 PM	to	6:00 PM	0	0	0	1	0	0	0	0	0	0	380	4	0	1	266	0	**652**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	2	0	24	0	0	0	0	0	0	1628	10	1	9	1066	0	**2740** 0
4:15 PM	to	5:15 PM	0	1	0	21	0	0	0	0	0	0	1669	8	1	10	1060	0	**2770** 0
4:30 PM	to	5:30 PM	0	2	0	21	0	0	0	0	0	0	1689	6	0	10	1031	0	**2759** 0
4:45 PM	to	5:45 PM	0	4	0	25	0	0	0	0	0	0	1676	7	0	8	1093	0	**2813** 1
5:00 PM	to	6:00 PM	0	3	0	23	0	0	0	0	0	0	1627	8	0	5	1079	0	**2745** 0

PEAK HOUR SUMMARY

4:45 PM to 5:45 PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME	0	4	0	25	0	0	0	0	0	0	1676	7	0	8	1093	0	**2813**
PHF BY MOVEMENT	0.00	0.50	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.58	0.00	0.50	0.93	0.00	OVERALL
PHF BY APPROACH	0.48				0.00				0.97				0.93				**0.98**
PED (Inc JAY-WALK)	3				0				39				49				**91**
BICYCLE	0				0				9				6				**15**

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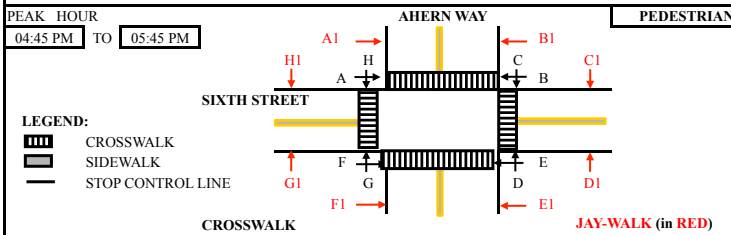
PEDESTRIAN & BICYCLE MOVEMENT SUMMARY

PROJECT:	DATA COLLECTION IN SAN FRANCISCO	**SURVEY DATE:**	2/11/15	**DAY:**	WEDNESDAY
N-S APPROACH:	AHERN WAY	**SURVEY PERIOD:**	4:00 PM	to	6:00 PM
E-W APPROACH:	SIXTH STREET	**JURISDICTION:**	SAN FRANCISCO	**FILE:**	3502021-3PM

PEAK HOUR SUMMARY

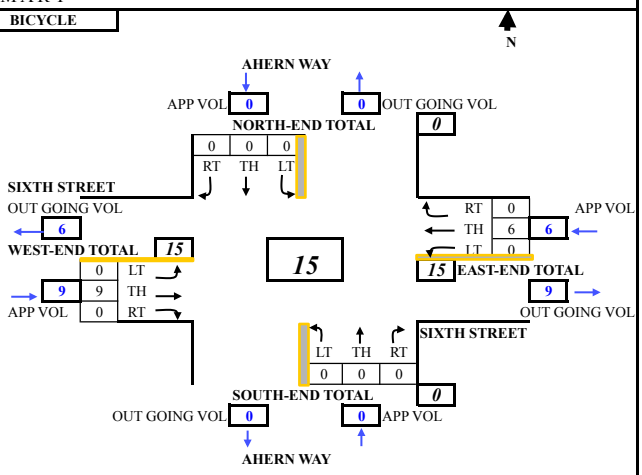
PEAK HOUR: 04:45 PM TO 05:45 PM

PEDESTRIAN | **BICYCLE**



CROSSWALK — **JAY-WALK (in RED)**

A	B	BY LEG N-END	BY DIR NB(D+G)	BY DIR NB(D1+G1)	BY LEG N-END	A1	B1
0	0	0	0	3	0	0	0
C	D	E-END	SB(C+H)	SB(C1+H1)	E-END	C1	D1
0	0	0	0	0	0	0	0
E	F	S-END	EB(A+F)	EB(A1+F1)	S-END	E1	F1
49	39	88	39	0	0	0	0
G	H	W-END	WB(B+E)	WB(B1+E1)	W-END	G1	H1
0	0	0	49	0	3	3	0
		TOTAL PEDESTRIAN	88	TOTAL JAY-WALK	3		
		TOTAL PEDESTRIAN (Incided JAY-WALK)			91		



TIME From	To	PEDESTRIAN @ CROSSWALK / STOP LINE N-END A	B	E-END C	D	S-END E	F	W-END G	H	TOTAL	JAY-WALK (From Intersection to Midblock) N-END A1	B1	E-END C1	D1	S-END E1	F1	W-END G1	H1	TOTAL	BICYCLE NB SOUTH-END LT	TH	RT	SB NORTH-END LT	TH	RT	EB WEST-END LT	TH	RT	WB EAST-END LT	TH	RT	TOTAL	OVER ALL TOTAL
TOTAL BY PERIOD																																
04:00 PM	04:15 PM					18	13			31									0							3						3	*34*
04:15 PM	04:30 PM					15	8			23									0							3						3	*26*
04:30 PM	04:45 PM					10	9			19									0							2				1		3	*22*
04:45 PM	05:00 PM					8	9			17									0							2						2	*19*
05:00 PM	05:15 PM					9	8			17							2		2							3				2		5	*24*
05:15 PM	05:30 PM					18	10			28							1		1							1				2		3	*32*
05:30 PM	05:45 PM					14	12			26									0							3				2		5	*31*
05:45 PM	06:00 PM					5	5			10							1		1							2	1			3		6	*17*
HOURLY TOTALS																																
04:00 PM	05:00 PM	0	0	0	0	51	39	0	0	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	1	0	11	*101*
04:15 PM	05:15 PM	0	0	0	0	42	34	0	0	76	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	10	0	0	3	0	13	*91*
04:30 PM	05:30 PM	0	0	0	0	45	36	0	0	81	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	8	0	0	5	0	13	*97*
04:45 PM	05:45 PM	0	0	0	0	49	39	0	0	88	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	9	0	0	6	0	15	*106*
05:00 PM	06:00 PM	0	0	0	0	46	35	0	0	81	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	9	1	0	9	0	19	*104*

SUMMARY (HOURLY COUNT)

TIME From	To	PEDESTRIAN COUNTS NB(D+G)	SB(C+H)	EB(A+F)	WB(B+E)	TOTAL	PEDESTRIAN COUNTS (INCLUDED JAY-WALK) NB(D+G)	SB(C+H)	EB(A+F)	WB(B+E)	TOTAL	BICYCLE COUNTS NB	SB	EB	WB	TOTAL
04:00 PM	05:00 PM	0	0	39	51	**90**	0	0	39	51	***90***	0	0	10	1	***11***
04:15 PM	05:15 PM	0	0	34	42	**76**	2	0	34	42	***78***	0	0	10	3	***13***
04:30 PM	05:30 PM	0	0	36	45	**81**	3	0	36	45	***84***	0	0	8	5	***13***
04:45 PM	05:45 PM	0	0	39	49	**88**	3	0	39	49	***91***	0	0	9	6	***15***
05:00 PM	06:00 PM	0	0	35	46	**81**	4	0	35	46	***85***	0	0	10	9	***19***

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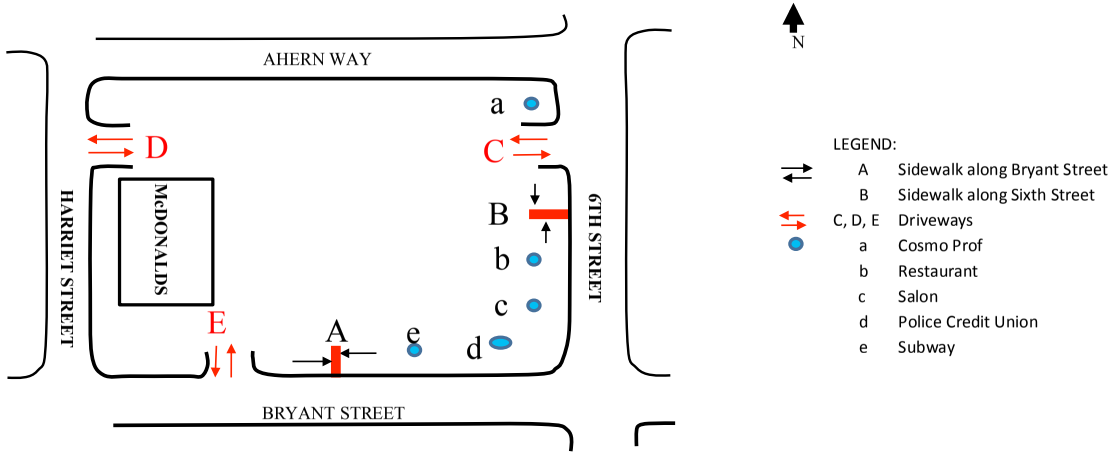
BAYMETRICS

PEDESTRIAN MOVEMENT SUMMARY

PROJECT:	DATA COLLECTION IN SAN FRANCISCO	SURVEY DATE:	2/11/15	SURVEY DAY:	WEDNESDAY
LOCATION:	A. North Side of Bryant Street between Sixth Street & Harriet Street	SURVEY TIME:	12:00 PM	to	2:00 PM
	B. West Side Sixth Street between Bryant Street & Ahern Way	JURISDICTION:	SAN FRANCISCO	FILE NUMBER:	3502021-PED (MD)



SUMMARY

	PEDESTRIAN ON SIDE-WALK				VEHICLE TRIPS						PERSON TRIPS										TOTAL
	A		B		C		D		E		COSMO		RESTAURANT		SALON		CREDIT UNION		SUBWAY		
PEAK HOUR	EB	WB	NB	SB	IN	OUT	IN	OUT	IN	OUT											
12:00 PM to 1:00 PM	252	156	147	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	645

DATA BY PERIOD

TIME		PEDESTRIAN ON SIDE-WALK				VEHICLE TRIPS						PERSON TRIPS										TOTAL
		A		B		C		D		E		COSMO		RESTAURANT		SALON		CREDIT UNION		SUBWAY		
From	To	EB	WB	NB	SB	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	
12:00 PM ---	12:15 PM	121	32	57	23																	233
12:15 PM ---	12:30 PM	55	27	34	14																	130
12:30 PM ---	12:45 PM	39	39	33	22																	133
12:45 PM ---	1:00 PM	37	58	23	31																	149
1:00 PM ---	1:15 PM	30	55	26	24																	135
1:15 PM ---	1:30 PM	23	48	23	34																	128
1:30 PM ---	1:45 PM	24	32	24	21																	101
1:45 PM ---	2:00 PM	39	28	19	13																	99
HOURLY DATA																						
12:00 PM ---	1:00 PM	252	156	147	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	645
12:15 PM ---	1:15 PM	161	179	116	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	547
12:30 PM ---	1:30 PM	129	200	105	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	545
12:45 PM ---	1:45 PM	114	193	96	110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	513
1:00 PM ---	2:00 PM	116	163	92	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	463

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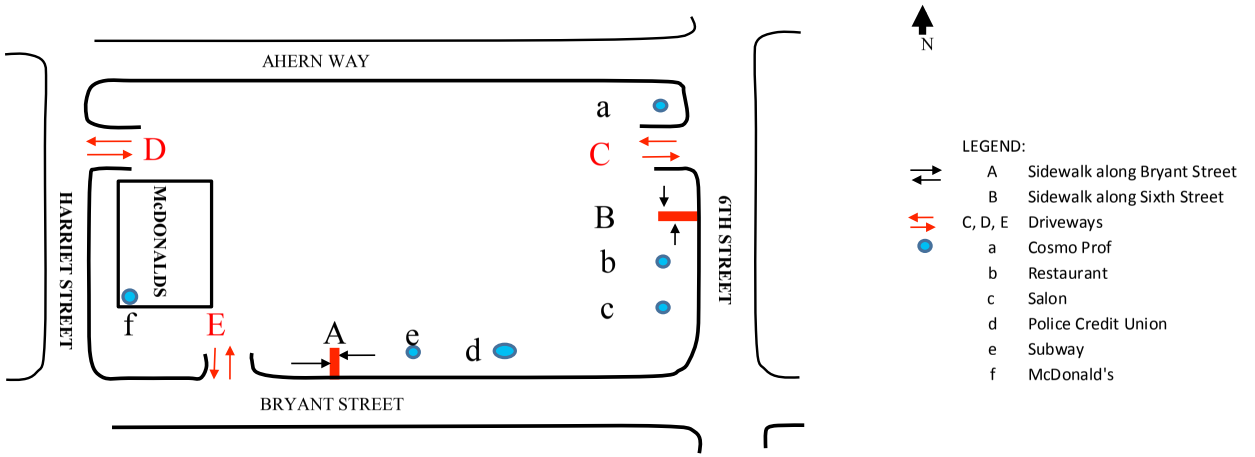
BAYMETRICS

PEDESTRIAN MOVEMENT SUMMARY

PROJECT:	DATA COLLECTION IN SAN FRANCISCO	SURVEY DATE:	2/11/15	SURVEY DAY:	WEDNESDAY
LOCATION:	A. North Side of Bryant Street between Sixth Street & Harriet Street	SURVEY TIME:	4:00 PM	to	6:00 PM
	B. West Side Sixth Street between Bryant Street & Ahern Way	JURISDICTION:	SAN FRANCISCO	FILE NUMBER:	3502021-PED (MD)



SUMMARY

PEAK HOUR		PEDESTRIAN ON SIDE-WALK				VEHICLE TRIPS						PERSON TRIPS												TOTAL
		A		B		C		D		E		MCDONALD'S		COSMO		RESTAURANT		SALON		CREDIT UNION		SUBWAY		
		EB	WB	NB	SB	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	
4:00 PM	to 5:00 PM	124	88	82	50	24	29	5	9	5	10	48	66	9	9	1	1	0	2	14	14	7	3	486

DATA BY PERIOD

TIME		PEDESTRIAN ON SIDE-WALK				VEHICLE TRIPS						PERSON TRIPS												TOTAL
		A		B		C		D		E		MCDONALD'S		COSMO		RESTAURANT		SALON		CREDIT UNION		SUBWAY		
From	To	EB	WB	NB	SB	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	
4:00 PM ---	4:15 PM	44	19	32	12	4	15	3	1	2	5	10	25	1	3	0	0	0	0	4	2	3	1	151
4:15 PM ---	4:30 PM	31	17	21	10	5	3	0	4	0	3	10	13	3	3	0	0	0	0	3	4	0	2	109
4:30 PM ---	4:45 PM	24	27	13	14	9	7	1	2	2	1	18	15	2	2	0	0	0	1	5	3	0	0	113
4:45 PM ---	5:00 PM	25	25	16	14	6	4	1	2	1	1	10	13	3	1	1	1	0	1	2	5	4	0	113
5:00 PM ---	5:15 PM	29	27	21	9	2	4	2	2	1	1	15	10	1	5	0	0	2	0	1	0	4	0	111
5:15 PM ---	5:30 PM	31	24	27	14	7	11	1	1	2	3	13	19	0	3	3	2	0	0	4	2	0	5	140
5:30 PM ---	5:45 PM	29	16	28	11	1	5	2	2	1	2	9	15	0	1	0	0	0	0	1	2	1	2	104
5:45 PM ---	6:00 PM	19	21	8	10	3	6	1	2	1	2	8	13	2	1	0	0	0	1	3	2	0	2	84
HOURLY DATA																								
4:00 PM ---	5:00 PM	124	88	82	50	24	29	5	9	5	10	48	66	9	9	1	1	0	2	14	14	7	3	486
4:15 PM ---	5:15 PM	109	96	71	47	22	18	4	10	4	6	53	51	9	11	1	1	2	2	11	12	8	2	446
4:30 PM ---	5:30 PM	109	103	77	51	24	26	5	7	6	6	56	57	6	11	4	3	2	2	12	10	8	5	477
4:45 PM ---	5:45 PM	114	92	92	48	16	24	6	7	5	7	47	57	4	10	4	3	2	1	8	9	9	7	468
5:00 PM ---	6:00 PM	108	88	84	44	13	26	6	7	5	8	45	57	3	10	3	2	2	1	9	6	5	9	439

TEL: (510) 232 -1271 FAX: (510) 232 - 1272

BAYMETRICS

ON - STREET PARKING OCCUPANCY SURVEY SUMMARY

PROJECT:	**PARKING OCCUPANCY IN SAN FRANCISCO**	**SURVEY DATE**	**3/5/2014**
LOCATION:	**BRANNAN ST to FOLSOM ST & 5TH ST to 7TH ST**	**SURVEY DAY:**	**WEDNESDAY**
SURVEY TIME:	**12:00AM TO 2:00PM**	**JURISDICTION:**	**SAN FRANCISCO FILE: 3502021**

SURVEY DATA

1. Along Brannan Street

	a. from 7th St to Gilbert St						b. from Gilbert St to Boardman Pl						c. from Boardman Pl to Harriet St						d. from Harriet St to 6th St						e. from 6th St to 5th St					
Time		North Side			South Side			North Side			South Side			North Side			South Side			North Side			South Side			North Side			South Side		
	Space	**3**			**7**		Space	**11**			**7**		Space	**8**			**5**		Space	**7**			**NP**		Space	**28**			**25**		
12:00 PM	Occupied	3			7		Occupied	8			8		Occupied	6			7		Occupied	7			0		Occupied	16			26		
1:00 PM		3			4			8			7			3			7			7			0			15			23		
2:00 PM		3			4			8			6			4			7			7			0			15			22		

2. Along Bryant Street

	a. from 7th St to Gilbert St						b. from Gilbert St to Boardman Pl						c. from Boardman Pl to Harriet St						d. from Harriet St to 6th St						e. from 6th St to MorrisSt					
Time		North Side			South Side			North Side			South Side			North Side			South Side			North Side			South Side			North Side			South Side		
	Space	**8**	**DP**		**4**		Space	**9**	**DP**		**6**	**1**	Space	**8**	**DP**		**7**		Space	**4**	**2**		**5**		Space	**4**		**12**	**2**		**0**
12:00 PM	Occupied	4	3		4		Occupied	7	3		6	0	Occupied	7	2		5		Occupied	4	2		7		Occupied	2		10	1		6
1:00 PM		7	5		5			7	3		7	1		5	4		9			4	1		3			8		12	1		6
2:00 PM		5	4		4			6	2		6	0		5	2		6			4	1		3			6		12	1		6

3. Along Welsh Street

	f. from MorrisSt to Oak Grove St						g. from Oak Grove St to 5th St						a. from Street to 5th St						a. from Harriet St to 6th St					
Time		North Side			South Side			North Side			South Side			North Side			South Side			North Side			South Side		
	Space	**4**			**8**		Space	**10**			**14**		Space	**15**			**15**		Space	**9**			**8**		
12:00 PM	Occupied	4			8		Occupied	14			13		Occupied	13			17		Occupied	9			8		
1:00 PM		4			8			14			15			14			17			9			7		
2:00 PM		4			7			12			13			13			15			8			8		

4. Along Ahren Way

5. Along Harrison Street

	a. from 7th St to Sherman St						b. from Sherman St to Columbia Sq St						c. from Columbia Sq St to Harriet St						d. from Harriet St to 6th St						e. from 6th St to MorrisSt					
Time		North Side			South Side			North Side			South Side			North Side			South Side			North Side			South Side			North Side			South Side		
	Space	**12**	**1**		**14**		Space	**9**			**12**		Space	**5**			**4**		Space	**NP**			**7**		Space	**7**			**5**		
12:00 PM	Occupied	7	0		9		Occupied	3			11		Occupied	2			4		Occupied	1			9		Occupied	7			7		
1:00 PM		6	0		7			3			11			3			4			0			8			7			7		
2:00 PM		6	0		7			3			11			3			4			0			7			7			5		

6. Along Cleveland Street

	f. from MorrisSt to Oak Grove St						g. from Oak Grove St to Merlin St						h. from Merlin St to 5th St						a. from 7th St to Sherman St					
Time		North Side			South Side			North Side			South Side			North Side			South Side			North Side			South Side		
	Space	**5**			**7**		Space	**7**	**0**		**9**		Space	**3**			**2**		Space	**NP**			**12**		
12:00 PM	Occupied	5			7		Occupied	7	1		8		Occupied	1			0		Occupied	0			12		
1:00 PM		5			6			7	1		9			1			3			0			11		
2:00 PM		5			6			7	1		8			1			2			0			11		

7. Along Clara Street

	a. from 6th St to 5th St					
Time		North Side			South Side	
	Space	**NP**			**25**	**0**
12:00 PM	Occupied	0			22	1
1:00 PM		0			27	0
2:00 PM		0			24	0

8. Along Folsom Street

	a. from 7th St to Moss St						b. from Moss St to Sherman St						c. from Sherman St to RussSt						d. from Russ St to Columbia Sq St						e. from Columbia Sq St to Harriet St					
Time		North Side			South Side			North Side			South Side			North Side			South Side			North Side			South Side			North Side			South Side		

	Space	6			5			Space	4			3			Space	3			2			Space	3			3			Space	3			5		
12:00 PM	Occupied	5			3			Occupied	4			3			Occupied	3			3			Occupied	4			2			Occupied	3			3		
1:00 PM		6			2				4			1				4			2				4			1				2			5		
2:00 PM		5			2				3			2				3			2				3			1				2			4		

9. Along Shipley Street

Time	f. from Harriet St to 6th St	North Side			South Side			g. from 6th St to Falmouth St	North Side			South Side			h. from Falmouth St to 5th St	North Side			South Side			a. from 6th St to Falmouth St	North Side			South Side			b. from Falmouth St to 5th St	North Side			South Side		
	Space	6			4			Space	11			12			Space	15	Close		8			Space	14			NP			Space	Close			Close		
12:00 PM	Occupied	6			3			Occupied	14			13			Occupied	0			6			Occupied	14			0			Occupied	0			0		
1:00 PM		5			0				14			11				0			6				14			0				0			0		
2:00 PM		5			0				12			11				0			5				14			0				0			0		

A. Along 7th Street

Time	1. from Folsom St to Cleveland St	West Side			East Side			2. from Cleveland St Harrison St	West Side	m		East Side	m		3. from Harrison St to Bryant St	West Side			East Side			4. from Bryant St to Brannan St	West Side	m		East Side	m		1. from Folsom St to Cleveland St	West Side	m		East Side		
	Space	10			6			Space	14	0		9	0		Space	NP	5		17			Space	17	0		17	0		Space	6	0		NP		
12:00 PM	Occupied	0			3			Occupied	14	3		10	3		Occupied	0	0		15			Occupied	18	3		22	1		Occupied	6	1		0		
1:00 PM		3			7				14	2		7	3			0	0		15				17	3		19	3			6	1		0		
2:00 PM		3			5				14	2		7	3			0	0		15				17	3		18	3			6	1		0		

B. Along Sherman Street

C. Along Columbia Square St

Time	2. from Cleveland St Harrison St	West Side	m		East Side			1. from Folsom St to Harrison St	West Side			East Side			1. from Folsom St to Harrison St	West Side			East Side			2. from Harrison St to Ahren Way	West Side			East Side			3. from Ahren Way to Bryant St	West Side	m		East Side		
	Space	12	0		NP			Space	22			22			Space	16			20			Space	7			NP			Space	NP	0		Falmouth		
12:00 PM	Occupied	11	0		0			Occupied	22			20			Occupied	17			10			Occupied	7			0			Occupied	11	5		11		
1:00 PM		10	1		0				20			24				14			11				7			0				10	5		11		
2:00 PM		10	1		0				18			21				13			10				7			0				8	3		11		

D. Along Harriet Street

E. Along 6th Street

Time	4. from Bryant St to Brannan St	West Side	m		East Side	m		1. from Folsom St to Shipley St	West Side			East Side			2. from Shipley St to Clara St	West Side			East Side			3. from Clara St to Harrison St	West Side			East Side			4. from Harrison St to Ahern Way	West Side			East Side		
	Space	19	0		19	0		Space	6			4			Space	8			4			Space	2			3			Space	8			8		
12:00 PM	Occupied	21	0		14	3		Occupied	6			3			Occupied	6			4			Occupied	2			3			Occupied	6			3		
1:00 PM		20	1		17	3			6			4				5			4				3			5				8			6		
2:00 PM		20	1		15	3			6			3				5			4				2			3				6			4		

F. Along Falmouth Street

G. Along 5th Street

Time	5. from Ahren Way to Bryant St	West Side			East Side			6. from Bryant St to Brannan St	West Side			East Side			1. from Folsom St to Shipley St	West Side			East Side			1. from Folsom St to Shipley St	West Side			East Side			2. from Shipley St to Clara St	West Side			East Side		
	Space	14			8			Space	20			16			Space	NP			8			Space	1			6	1		Space	5			5		
12:00 PM	Occupied	6			7			Occupied	18			13			Occupied	0			7			Occupied	2			7	1		Occupied	4			5		
1:00 PM		9			6				21			12				0			8				2			6	0			3			4		
2:00 PM		7			6				19			11				0			7				1			6	0			3			4		

H. Along Morris Street

Time	3. from Clara St to Harrison St	West Side			East Side			4. from Harrison St to Bryant St	West Side			East Side			5. from Bryany St to Welsh St	West Side			East Side			6. from Welsh St to Brannan St	West Side			East Side			1. from Harrison St to Bryant St	West Side			East Side		
	Space	7			2			Space	13			NP			Space	5			4			Space	15			12			Space	NP			NP		
12:00 PM	Occupied	0			2			Occupied	8			0			Occupied	4			3			Occupied	9			11			Occupied	5			1		
1:00 PM		0			2				5			0				7			4				8			12				7			7		
2:00 PM		0			1				5			0				5			3				8			11				5			7		

I. Along Oak Grove Street

J. Along Merlin Street

K. Along Gilbert Street

L. Along Boardman Street

Time	2. from Bryant St to end of Morris St	West Side			East Side			1. from Harrison St to Bryant St	West Side			East Side			1. from Harrison St to end of St	West Side			East Side			1. from Bryant St to Brannan St	West Side			East Side			1. from Bryant St to Brannan St	West Side			East Side		

	Space	NP	4		12	0		Space	18	0		20	0		Space	NP			18			Space	18			NP			Space	15	2		NP		
12:00 PM	Occupied	0	4		15	1		Occupied	16	1		20	1		Occupied	0			18			Occupied	18			6			Occupied	16	2		0		
1:00 PM		0	6		8	1			18	1		20	0			0			18				18			6				16	3		0		
2:00 PM		0	4		8	1			17	1		20	0			0			17				18			6				15	2		0		

Legend

Estimated Parking Spaces

No Paarking at any time

Motocycle Parking

Handicap Parking Spaces

Closed - Underconstruction

Double Parking

TEL: (510) 232 - 1271 **FAX: (510) 232 1272**

BAYMETRICS

ON - STREET PARKING OCCUPANCY SURVEY SUMMARY

PROJECT:	PARKING OCCUPANCY IN SAN FRANCISCO	**SURVEY DATE**	3/5/2015
LOCATION:	BRANNAN ST to FOLSOM ST & 5TH ST to 7TH ST	**SURVEY DAY:**	WEDNESDAY
TIME:	12:00AM TO 2:00PM **JURISDICTION:** SAN FRANCISCO	**FILE:**	3502021

SUMMARY

1. Along Brannan Street

Time	Stall	North	South	Total	% Occupied
	Space	65	44	**109**	
12:00 PM	Occupied	40	48	**88**	**80.7%**
1:00 PM		36	41	**77**	**70.6%**
2:00 PM		37	39	**76**	**69.7%**
Max Occupied @		**12:00 PM**		***88***	***80.7%***

2. Along Bryant Street

Time	Stall	North	South	Total	% Occupied
	Space	61	47	**108**	
12:00 PM	Occupied	62	50	**112**	**103.7%**
1:00 PM		74	55	**129**	**119.4%**
2:00 PM		63	46	**109**	**100.9%**
Max Occupied @		**1:00 PM**		***129***	***119.4%***

3. Along Welsh Street

Time	Stall	North	South	Total	% Occupied
	Space	15	15	**30**	
12:00 PM	Occupied	13	17	**30**	**100.0%**
1:00 PM		14	17	**31**	**103.3%**
2:00 PM		13	15	**28**	**93.3%**
Max Occupied @		**1:00 PM**		***31***	***103.3%***

4. Along Ahren Way

Time	Stall	North	South	Total	% Occupied
	Space	9	8	**17**	
12:00 PM	Occupied	9	8	**17**	**100.0%**
1:00 PM		9	7	**16**	**94.1%**
2:00 PM		8	8	**16**	**94.1%**
Max Occupied @		**12:00 PM**		***17***	***100.0%***

5. Along Harrison Street

Time	Stall	North	South	Total	% Occupied
	Space	49	60	**109**	
12:00 PM	Occupied	34	55	**89**	**81.7%**
1:00 PM		33	55	**88**	**80.7%**
2:00 PM		33	50	**83**	**76.1%**
Max Occupied @		**12:00 PM**		***89***	***81.7%***

6. Along Cleveland Street

Time	Stall	North	South	Total	% Occupied
	Space	0	12	**12**	
12:00 PM	Occupied	0	12	**12**	**100.0%**
1:00 PM		0	11	**11**	**91.7%**
2:00 PM		0	11	**11**	**91.7%**
Max Occupied @		**12:00 PM**		***12***	***100.0%***

7. Along Clara Street

Time	Stall	North	South	Total	% Occupied
	Space	0	25	**25**	
12:00 PM	Occupied	0	23	**23**	**92.0%**
1:00 PM		0	27	**27**	**108.0%**
2:00 PM		0	24	**24**	**96.0%**
Max Occupied @		**1:00 PM**		***27***	***108.0%***

8. Along Folsom Street

Time	Stall	North	South	Total	% Occupied
	Space	51	42	**93**	
12:00 PM	Occupied	39	36	**75**	**80.6%**
1:00 PM		39	28	**67**	**72.0%**
2:00 PM		33	27	**60**	**64.5%**
Max Occupied @		**12:00 PM**		***75***	***80.6%***

9. Along Shipley Street

Time	Stall	North	South	Total	% Occupied
	Space	14	0	**14**	
12:00 PM	Occupied	14	0	**14**	**100.0%**
1:00 PM		14	0	**14**	**100.0%**
2:00 PM		14	0	**14**	**100.0%**
Max Occupied @		**12:00 PM**		***14***	***100.0%***

A. Along 7th Street

	Space	46	49	**95**	

B. Along Sherman Street

	Space	18	0	**18**	

12:00 PM	Occupied	38	54	**92**	**96.8%**
1:00 PM		39	54	**93**	**97.9%**
2:00 PM		39	51	**90**	**94.7%**
Max Occupied @		**1:00 PM**		***93***	***97.9%***

12:00 PM	Occupied	18	0	**18**	**100.0%**
1:00 PM		18	0	**18**	**100.0%**
2:00 PM		18	0	**18**	**100.0%**
Max Occupied @		**1:00 PM**		***18***	***100.0%***

C. Along Columbia Square St

	Space	22	22	**44**	
12:00 PM	Occupied	6	20	**26**	**59.1%**
1:00 PM		6	24	**30**	**68.2%**
2:00 PM		6	21	**27**	**61.4%**
Max Occupied @		**1:00 PM**		***30***	***68.2%***

D. Along Harriet Street

	Space	42	50	**92**	
12:00 PM	Occupied	61	38	**99**	**107.6%**
1:00 PM		57	42	**99**	**107.6%**
2:00 PM		52	39	**91**	**98.9%**
Max Occupied @		**1:00 PM**		***99***	***107.6%***

E. Along 6th Street

	Space	58	43	**101**	
12:00 PM	Occupied	44	33	**77**	**76.2%**
1:00 PM		52	37	**89**	**88.1%**
2:00 PM		45	31	**76**	**75.2%**
Max Occupied @		**1:00 PM**		***89***	***88.1%***

F. Along Falmouth Street

	Space	0	8	**8**	
12:00 PM	Occupied	0	7	**7**	**87.5%**
1:00 PM		0	8	**8**	**100.0%**
2:00 PM		0	7	**7**	**87.5%**
Max Occupied @		**1:00 PM**		***8***	***100.0%***

G. Along 5th Street

	Space	46	30	**76**	
12:00 PM	Occupied	27	29	**56**	**73.7%**
1:00 PM		25	28	**53**	**69.7%**
2:00 PM		22	25	**47**	**61.8%**
Max Occupied @		**12:00 PM**		***56***	***73.7%***

H. Along Morris Street

	Space	4	12	**16**	
12:00 PM	Occupied	9	17	**26**	**162.5%**
1:00 PM		13	16	**29**	**181.3%**
2:00 PM		9	16	**25**	**156.3%**
Max Occupied @		**1:00 PM**		***29***	***181.3%***

I. Along Oak Grove Street

	Space	18	18	**36**	
12:00 PM	Occupied	17	21	**38**	**105.6%**
1:00 PM		20	21	**41**	**113.9%**
2:00 PM		18	20	**38**	**105.6%**
Max Occupied @		**1:00 PM**		***41***	***113.9%***

J. Along Merlin Street

	Space	0	18	**18**	
12:00 PM	Occupied	0	19	**19**	**105.6%**
1:00 PM		0	18	**18**	**100.0%**
2:00 PM		0	17	**17**	**94.4%**
Max Occupied @		**12:00 PM**		***19***	***105.6%***

K. Along Gilbert Street

	Space	18	0	**18**	
12:00 PM	Occupied	18	6	**24**	**133.3%**
1:00 PM		20	6	**26**	**144.4%**
2:00 PM		18	6	**24**	**133.3%**
Max Occupied @		**1:00 PM**		***26***	***144.4%***

L. Along Boardman Street

	Space	16	0	**16**	
12:00 PM	Occupied	18	0	**18**	**112.5%**
1:00 PM		20	1	**21**	**131.3%**
2:00 PM		17	3	**20**	**125.0%**
Max Occupied @		**1:00 PM**		***21***	***131.3%***

OVERALL PARKING OCCUPANCY:

TIME	TOTAL STALL AVAILABLE	TOTAL STALL OCCUPIED	% OF OCCUPANCY
12:00 PM	**1055**	**960**	**91.0%**
1:00 PM		**985**	**93.4%**
2:00 PM		**901**	**85.4%**
Max Occupied @	**1:00 PM**	***985***	***93.4%***

TEL: (510) 232 - 1271 **FAX: (510) 232 - 1272**

APPENDIX D

LCW Consulting

Hall of Justice Rehabilitation and Detention Facility Project

Summary of Daily and PM Peak Hour Trip Generation

April 9, 2015

TRAVEL DEMAND CALCULATIONS

Hall of Justice Rehabilitation and Detention Facility Project

SUMMARY OF DAILY AND PM PEAK HOUR TRIP GENERATION
April 9, 2015

Project

RDF visitors (occupied beds)	201	beds	640 proposed, less 439 currently occupied
RDF employees	47	FTE	295 FTE proposed, less 248 existing
daytime shift = 7 AM - 3 PM	48%	23	
swing shift = 3 - 11 PM	30%	14	
midnight shift = 11 PM - 7 AM	22%	10	
SRO building reuse:			
Office	4,770	gsf	7,150 gsf / 3 = 2,380 x 2, plus 10
Restaurant	2,380	gsf	7,150 gsf / 3 = 2,380 x 1

Daily	**Person Trips**					**Vehicle**
	Auto	**Transit**	**Walk**	**Other**	**Total**	**Trips**
RDF visitors (occupied beds)	36	26	32	7	101	15
RDF employees	51	68	9	3	131	33
480-484 Sixth - office	32	30	20	4	86	16
480-484 Sixth - restaurant	513	382	442	91	1,428	222
Total	***632***	***506***	***503***	***105***	***1,746***	***286***

PM Peak Hour	**Person Trips**					**Vehicle**
New Trips	**Auto**	**Transit**	**Walk**	**Other**	**Total**	**Trips**
RDF visitors (occupied beds)	3	3	3	1	10	1
RDF employees	3	5	1	0	9	2
480-484 Sixth - office	3	3	1	0	7	2
480-484 Sixth - restaurant	69	52	60	12	193	30
Total	***78***	***63***	***65***	***13***	***219***	***35***
Credit	49	35	43	9	136	82
Net-new	**29**	**28**	**22**	**4**	***83***	***-47***

Notes:

1. RDF Visitors

905 existing beds, and 439 beds currently occupied
640 proposed beds, less 439 occupied = 201 new beds
assume .25 visitor per bed per day = .5 trips per bed per day
assume 10 percent of visitors arrive or leave during PM peak hour
Visiting hours are currently between 7:45 AM and 2:00 PM
On Thursdays have additional visiting hours between 5:30 and 8:00 PM
Mode & distribution from SF Guidelines - Table E-11: Visitor Trips to SD 1 - All Other

2. RDF New Employees

Increase in the number of employees from 248 to 295 FTE =			47
daytime shift = 7 AM - 3 PM	48%	23	
swing shift = 3 - 11 PM	30%	14	
midnight shift = 11 PM - 7 AM	22%	10	

assume 3 trips per day per employee for daytime and swing shift (2 to/from work, and 1 to/from other)
assume 2 trips per day per employee for midnight shift (2 to/from work)

assume 25 percent of daytime and swing shift occur during the PM peak hour
Mode & distribution from SF Guidelines - Table E-3: Work Trips to SD 1 - All

3. Reuse of 480-484 Sixth Building
7,150 gsf total within 3 stories = about 2,380 gsf per floor
assume ground floor restaurant (composite) = 2,380 restaurant
assume remainder is office = 4,770 office
SF Guidelines trip generation rates for office and composite restaurant
SF Guidelines mode & distribution:
Table E-3: Work Trips to SD 1 All
Table E-11: Visitor Trips to SD 1 All Other

4. Credit for Existing Uses to be Removed
Based on Field Surveys February 2015
Vehicle Trips - driveway counts
Person Trips - doorway counts
Person trips assigned to modes per Table E-11: Visitor Trips to SD 1 All Other

Parking Demand	**Short Term**	**Long Term**	**Total**
RDF visitors (occupied beds)	1	0	1
RDF employees	0	9	9
480-484 Sixth - office	1	4	5
480-484 Sixth - restaurant	19	2	21
	21	15	36

Institutional	200,000	gsf
Office	4,770	gsf
Restaurant	2,380	gsf

Loading Demand

RDF - Institutional		R =	0.1
	Daily Trips	20.0	trips
	Average Hour	0.9	spaces
	Peak Hour	1.2	spaces
Office:		R =	0.21
	Daily Trips	1.0	trips
	Average Hour	0.0	spaces
	Peak Hour	0.1	spaces
Restaurant:		R=	3.6
	Daily Trips	8.6	trips
	Average Hour	0.4	spaces
	Peak Hour	0.5	spaces

Total

Daily Trips	**29.6**	**trips**
Average Hour	**1.4**	**spaces**
Peak Hour	**1.7**	**spaces**

Hall of Justice RDF - Net-new Employee Trips
PROJECT TRIP GENERATION - WEEKDAY
LAND USE: JAIL EMPLOYEES (WORK TRIPS)

Proposed Size:		**47 employees**			
DAILY			**PM PEAK HOUR**		
Person-trip Generation Rate [1]:		2.8 trips/employee	Person-trip Generation Rate [1]:		0.19 trips/employee
Total Person-trips:		131 person-trips	Total Person-trips:		9 person-trips
Work Trips [2]:	100%	131 person-trips	Work Trips [2]:	100%	9 person-trips

Origins	Distribution [3]	Mode	Percent [3]	AVO [3]	Daily		PM Peak Hour	
					Person Trips	Vehicle-Trips	Person Trips	Vehicle-Trips
Superdistrict 1	12.8%	Auto	13.8%	1.54	2	2	0	0
		Transit	36.0%		6		0	
		Walk	47.5%		8		1	
		Other	2.7%		0		0	
		TOTAL	***100.0%***		***17***	***2***	***1***	***0***
Superdistrict 2	14.4%	Auto	31.6%	1.23	6	5	0	0
		Transit	65.8%		12		1	
		Walk	1.3%		0		0	
		Other	1.3%		0		0	
		TOTAL	***100.0%***		***19***	***5***	***1***	***0***
Superdistrict 3	17.0%	Auto	39.5%	1.29	9	7	1	0
		Transit	54.4%		12		1	
		Walk	3.8%		1		0	
		Other	2.3%		1		0	
		TOTAL	***100.0%***		***22***	***7***	***2***	***0***
Superdistrict 4	11.2%	Auto	41.7%	1.53	6	4	0	0
		Transit	54.5%		8		1	
		Walk	0.0%		0		0	
		Other	3.8%		1		0	
		TOTAL	***100.0%***		***15***	***4***	***1***	***0***
East Bay	22.4%	Auto	39.4%	3.33	12	3	1	0
		Transit	57.0%		17		1	
		Walk	0.0%		0		0	
		Other	3.6%		1		0	
		TOTAL	***100.0%***		***29***	***3***	***2***	***0***
North Bay	6.1%	Auto	52.8%	1.70	4	2	0	0
		Transit	45.3%		4		0	
		Walk	0.0%		0		0	
		Other	1.9%		0		0	
		TOTAL	***100.0%***		***8***	***2***	***1***	***0***
South Bay	14.3%	Auto	58.0%	1.23	11	9	1	1
		Transit	40.7%		8		1	
		Walk	0.0%		0		0	
		Other	1.3%		0		0	
		TOTAL	***100.0%***		***19***	***9***	***1***	***1***
Out of Region	1.8%	Auto	47.8%	1.50	1	1	0	0
		Transit	50.0%		1		0	
		Walk	0.0%		0		0	
		Other	2.2%		0		0	
		TOTAL	***100.0%***		***2***	***1***	***0***	***0***
TOTAL	100.0%	Auto	38.9%	1.56	51	33	3	2
		Transit	51.7%		68		5	
		Walk	6.9%		9		1	
		Other	2.5%		3		0	
		TOTAL	***100.0%***		***131***	***33***	***9***	***2***

Notes:
[1] Estimated 4 trips per employee per day (2 work, and 2 non-work)
[2] 100 percent work trips
[3] SF Guidelines, Appendix E - Table E-3: Work Trips to SD 1- All

Hall of Justice - Net-new Visitors
PROJECT TRIP GENERATION - WEEKDAY
LAND USE: RDF (NON-WORK TRIPS)

Proposed Size:	**net-new**	**201 beds**			
DAILY			**PM PEAK HOUR**		
Person-trip Generation Rate [1]:		0.50 trips/bed	Person-trip Generation Rate [1]:	10.0%	0.05 trips/bed
Total Person-trips:		101 person-trips	Total Person-trips:		10 person-trips
Non-Work Trips [2]:	100%	101 person-trips	Non-Work Trips [2]:	100%	10 person-trips

Origins	Distribution [3]	Mode	Percent [3]	AVO [3]	Daily		PM Peak Hour	
					Person Trips	Vehicle-Trips	Person Trips	Vehicle-Trips
Superdistrict 1	22.0%	Auto	12.9%	2.29	3	1	0	0
		Transit	17.1%		4		0	
		Walk	65.3%		14		1	
		Other	4.7%		1		0	
		TOTAL	***100.0%***		***22***	***1***	***2***	***0***
Superdistrict 2	14.0%	Auto	31.9%	2.07	4	2	0	0
		Transit	35.0%		5		0	
		Walk	26.7%		4		0	
		Other	6.4%		1		0	
		TOTAL	***100.0%***		***14***	***2***	***1***	***0***
Superdistrict 3	13.0%	Auto	38.8%	2.39	5	2	1	0
		Transit	36.8%		5		0	
		Walk	17.4%		2		0	
		Other	7.0%		1		0	
		TOTAL	***100.0%***		***13***	***2***	***1***	***0***
Superdistrict 4	7.0%	Auto	42.5%	1.93	3	2	0	0
		Transit	32.7%		2		0	
		Walk	17.7%		1		0	
		Other	7.1%		0		0	
		TOTAL	***100.0%***		***7***	***2***	***1***	***0***
East Bay	11.0%	Auto	47.4%	2.43	5	2	1	0
		Transit	24.9%		3		0	
		Walk	25.4%		3		0	
		Other	2.3%		0		0	
		TOTAL	***100.0%***		***11***	***2***	***1***	***0***
North Bay	5.0%	Auto	71.1%	1.91	4	2	0	0
		Transit	9.6%		0		0	
		Walk	15.8%		1		0	
		Other	3.5%		0		0	
		TOTAL	***100.0%***		***5***	***2***	***1***	***0***
South Bay	7.0%	Auto	59.5%	2.46	4	2	0	0
		Transit	24.6%		2		0	
		Walk	13.5%		1		0	
		Other	2.4%		0		0	
		TOTAL	***100.0%***		***7***	***2***	***1***	***0***
Out of Region	21.0%	Auto	35.9%	3.17	8	2	1	0
		Transit	24.1%		5		1	
		Walk	27.7%		6		1	
		Other	12.3%		3		0	
		TOTAL	***100.0%***		***21***	***2***	***2***	***0***
TOTAL	100.0%	Auto	35.8%	2.37	36	15	4	2
		Transit	25.7%		26		3	
		Walk	32.0%		32		3	
		Other	6.5%		7		1	
		TOTAL	***100.0%***		***101***	***15***	***10***	***2***

Notes:
[1] 1 visitor per day estimated = 2 visitor trips per bed, 10 percent during PM peak hour
[2] 100 percent visitor trips
[3] SF Guidelines, Appendix E - Table E-11: Visitor Trips to SD1 All Other

Hall of Justice - Trip Generation for 480-484 Sixth Street Building
PROJECT TRIP GENERATION - WEEKDAY
LAND USE: OFFICE (WORK TRIPS)

Proposed Size:		**4,770 gsf**			
DAILY			**PM PEAK HOUR**		
Person-trip Generation Rate [1]:		18.1 trips/1,000 gsf	Person-trip Generation Rate [1]:	8.5%	1.54 trips/1,000 gsf
Total Person-trips:		86 person-trips	Total Person-trips:		7 person-trips
Work Trips [2]:	36%	31 person-trips	Work Trips [2]:	83%	6 person-trips

Origins	Distribution [3]	Mode	Percent [3]	AVO [3]	Daily		PM Peak Hour	
					Person Trips	Vehicle-Trips	Person Trips	Vehicle-Trips
Superdistrict 1	12.8%	Auto	13.8%	1.54	1	0	0	0
		Transit	36.0%		1		0	
		Walk	47.5%		2		0	
		Other	2.7%		0		0	
		TOTAL	***100.0%***		***4***	***0***	***1***	***0***
Superdistrict 2	14.4%	Auto	31.6%	1.23	1	1	0	0
		Transit	65.8%		3		1	
		Walk	1.3%		0		0	
		Other	1.3%		0		0	
		TOTAL	***100.0%***		***4***	***1***	***1***	***0***
Superdistrict 3	17.0%	Auto	39.5%	1.29	2	2	0	0
		Transit	54.4%		3		1	
		Walk	3.8%		0		0	
		Other	2.3%		0		0	
		TOTAL	***100.0%***		***5***	***2***	***1***	***0***
Superdistrict 4	11.2%	Auto	41.7%	1.53	1	1	0	0
		Transit	54.5%		2		0	
		Walk	0.0%		0		0	
		Other	3.8%		0		0	
		TOTAL	***100.0%***		***3***	***1***	***1***	***0***
East Bay	22.4%	Auto	39.4%	3.33	3	1	1	0
		Transit	57.0%		4		1	
		Walk	0.0%		0		0	
		Other	3.6%		0		0	
		TOTAL	***100.0%***		***7***	***1***	***1***	***0***
North Bay	6.1%	Auto	52.8%	1.70	1	1	0	0
		Transit	45.3%		1		0	
		Walk	0.0%		0		0	
		Other	1.9%		0		0	
		TOTAL	***100.0%***		***2***	***1***	***0***	***0***
South Bay	14.3%	Auto	58.0%	1.23	3	2	1	0
		Transit	40.7%		2		0	
		Walk	0.0%		0		0	
		Other	1.3%		0		0	
		TOTAL	***100.0%***		***4***	***2***	***1***	***0***
Out of Region	1.8%	Auto	47.8%	1.50	0	0	0	0
		Transit	50.0%		0		0	
		Walk	0.0%		0		0	
		Other	2.2%		0		0	
		TOTAL	***100.0%***		***1***	***0***	***0***	***0***
TOTAL	100.0%	Auto	38.9%	1.56	12	8	2	2
		Transit	51.7%		16		3	
		Walk	6.9%		2		0	
		Other	2.5%		1		0	
		TOTAL	***100.0%***		***31***	***8***	***6***	***2***

Notes:
[1] SF Guidelines, Appendix C - Other Office
[2] SF Guidelines, Appendix C - C-3 Primary/Back Office
[3] SF Guidelines, Appendix E - Table E-3: Work Trips to SD 1- All

Hall of Justice - Trip Generation for 480-484 Sixth Street Building
PROJECT TRIP GENERATION - WEEKDAY
LAND USE: OFFICE (NON-WORK TRIPS)

Proposed Size:	**4,770 gsf**				
DAILY			**PM PEAK HOUR**		
Person-trip Generation Rate [1]:	18.1 trips/1,000 gsf		Person-trip Generation Rate [1]:	8.5%	1.54 trips/1,000 gsf
Total Person-trips:	86 person-trips		Total Person-trips:		7 person-trips
Non-Work Trips [2]: 64.0%	55 person-trips		Non-Work Trips [2]:	17%	1 person-trips

Origins	Distribution [3]	Mode	Percent [3]	AVO [3]	Daily		PM Peak Hour	
					Person Trips	Vehicle-Trips	Person Trips	Vehicle-Trips
Superdistrict 1	22.0%	Auto	12.9%	2.29	2	1	0	0
		Transit	17.1%		2		0	
		Walk	65.3%		8		0	
		Other	4.7%		1		0	
		TOTAL	***100.0%***		***12***	***1***	***0***	***0***
Superdistrict 2	14.0%	Auto	31.9%	2.07	2	1	0	0
		Transit	35.0%		3		0	
		Walk	26.7%		2		0	
		Other	6.4%		0		0	
		TOTAL	***100.0%***		***8***	***1***	***0***	***0***
Superdistrict 3	13.0%	Auto	38.8%	2.39	3	1	0	0
		Transit	36.8%		3		0	
		Walk	17.4%		1		0	
		Other	7.0%		1		0	
		TOTAL	***100.0%***		***7***	***1***	***0***	***0***
Superdistrict 4	7.0%	Auto	42.5%	1.93	2	1	0	0
		Transit	32.7%		1		0	
		Walk	17.7%		1		0	
		Other	7.1%		0		0	
		TOTAL	***100.0%***		***4***	***1***	***0***	***0***
East Bay	11.0%	Auto	47.4%	2.43	3	1	0	0
		Transit	24.9%		2		0	
		Walk	25.4%		2		0	
		Other	2.3%		0		0	
		TOTAL	***100.0%***		***6***	***1***	***0***	***0***
North Bay	5.0%	Auto	71.1%	1.91	2	1	0	0
		Transit	9.6%		0		0	
		Walk	15.8%		0		0	
		Other	3.5%		0		0	
		TOTAL	***100.0%***		***3***	***1***	***0***	***0***
South Bay	7.0%	Auto	59.5%	2.46	2	1	0	0
		Transit	24.6%		1		0	
		Walk	13.5%		1		0	
		Other	2.4%		0		0	
		TOTAL	***100.0%***		***4***	***1***	***0***	***0***
Out of Region	21.0%	Auto	35.9%	3.17	4	1	0	0
		Transit	24.1%		3		0	
		Walk	27.7%		3		0	
		Other	12.3%		1		0	
		TOTAL	***100.0%***		***12***	***1***	***0***	***0***
TOTAL	100.0%	Auto	35.8%	2.37	20	8	0	0
		Transit	25.7%		14		0	
		Walk	32.0%		18		0	
		Other	6.5%		4		0	
		TOTAL	***100.0%***		***55***	***8***	***1***	***0***

Notes:
[1] SF Guidelines, Appendix C - Other Office
[2] SF Guidelines, Appendix C - C-3 Primary/Back Office
[3] SF Guidelines, Appendix E - Table E-11: Visitor Trips to SD1 All Other

Hall of Justice - Trip Generation for 480-484 Sixth Street Building
PROJECT TRIP GENERATION - WEEKDAY
LAND USE: RESTAURANT (WORK TRIPS)

Proposed Size:		**2,380 sq.ft.**			
DAILY			**PM PEAK HOUR**		
Person-trip Generation Rate [1]:		600.0 trips/1,000 gsf	Person-trip Generation Rate [1]:	13.5%	81.00 trips/1,000 gsf
Total Person-trips:		1,428 person-trips	Total Person-trips:		193 person-trips
Work Trips [2]:	4%	57 person-trips	Work Trips [2]:	4%	8 person-trips

Origins	Distribution [3]	Mode	Percent [3]	AVO [3]	Daily		PM Peak Hour	
					Person Trips	Vehicle-Trips	Person Trips	Vehicle-Trips
Superdistrict 1	12.8%	Auto	13.8%	1.54	1	1	0	0
		Transit	36.0%		3		0	
		Walk	47.5%		3		0	
		Other	2.7%		0		0	
		TOTAL	***100.0%***		***7***	***1***	***1***	***0***
Superdistrict 2	14.4%	Auto	31.6%	1.23	3	2	0	0
		Transit	65.8%		5		1	
		Walk	1.3%		0		0	
		Other	1.3%		0		0	
		TOTAL	***100.0%***		***8***	***2***	***1***	***0***
Superdistrict 3	17.0%	Auto	39.5%	1.29	4	3	1	0
		Transit	54.4%		5		1	
		Walk	3.8%		0		0	
		Other	2.3%		0		0	
		TOTAL	***100.0%***		***10***	***3***	***1***	***0***
Superdistrict 4	11.2%	Auto	41.7%	1.53	3	2	0	0
		Transit	54.5%		3		0	
		Walk	0.0%		0		0	
		Other	3.8%		0		0	
		TOTAL	***100.0%***		***6***	***2***	***1***	***0***
East Bay	22.4%	Auto	39.4%	3.33	5	2	1	0
		Transit	57.0%		7		1	
		Walk	0.0%		0		0	
		Other	3.6%		0		0	
		TOTAL	***100.0%***		***13***	***2***	***2***	***0***
North Bay	6.1%	Auto	52.8%	1.70	2	1	0	0
		Transit	45.3%		2		0	
		Walk	0.0%		0		0	
		Other	1.9%		0		0	
		TOTAL	***100.0%***		***3***	***1***	***0***	***0***
South Bay	14.3%	Auto	58.0%	1.23	5	4	1	1
		Transit	40.7%		3		0	
		Walk	0.0%		0		0	
		Other	1.3%		0		0	
		TOTAL	***100.0%***		***8***	***4***	***1***	***1***
Out of Region	1.8%	Auto	47.8%	1.50	0	0	0	0
		Transit	50.0%		1		0	
		Walk	0.0%		0		0	
		Other	2.2%		0		0	
		TOTAL	***100.0%***		***1***	***0***	***0***	***0***
TOTAL	100.0%	Auto	38.9%	1.56	22	14	3	2
		Transit	51.7%		30		4	
		Walk	6.9%		4		1	
		Other	2.5%		1		0	
		TOTAL	***100.0%***		***57***	***14***	***8***	***2***

Notes:
[1] SF Guidelines, Appendix C - Composite Rate; PM peak = 13.5% of daily
[2] SF Guidelines, Appendix C - C-3 District, Retail
[3] SF Guidelines, Appendix E - Table E-3: Work Trips to SD 1- All

Hall of Justice - Trip Generation for 480-484 Sixth Street Building
PROJECT TRIP GENERATION - WEEKDAY
LAND USE: RESTAURANT (NON-WORK TRIPS)

Proposed Size:		**2,380 sq.ft.**			
DAILY			**PM PEAK HOUR**		
Person-trip Generation Rate [1]:		600.0 trips/1,000 gsf	Person-trip Generation Rate [1]:	13.5%	81.00 trips/1,000 gsf
Total Person-trips:		1,428 person-trips	Total Person-trips:		193 person-trips
Non-Work Trips [2]:	96%	1,371 person-trips	Non-Work Trips [2]:	96%	185 person-trips

Origins	Distribution [3]	Mode	Percent [3]	AVO [3]	Daily		PM Peak Hour	
					Person Trips	Vehicle-Trips	Person Trips	Vehicle-Trips
Superdistrict 1	22.0%	Auto	12.9%	2.29	39	17	5	2
		Transit	17.1%		52		7	
		Walk	65.3%		197		27	
		Other	4.7%		14		2	
		TOTAL	***100.0%***		***302***	***17***	***41***	***2***
Superdistrict 2	14.0%	Auto	31.9%	2.07	61	30	8	4
		Transit	35.0%		67		9	
		Walk	26.7%		51		7	
		Other	6.4%		12		2	
		TOTAL	***100.0%***		***192***	***30***	***26***	***4***
Superdistrict 3	13.0%	Auto	38.8%	2.39	69	29	9	4
		Transit	36.8%		66		9	
		Walk	17.4%		31		4	
		Other	7.0%		12		2	
		TOTAL	***100.0%***		***178***	***29***	***24***	***4***
Superdistrict 4	7.0%	Auto	42.5%	1.93	41	21	6	3
		Transit	32.7%		31		4	
		Walk	17.7%		17		2	
		Other	7.1%		7		1	
		TOTAL	***100.0%***		***96***	***21***	***13***	***3***
East Bay	11.0%	Auto	47.4%	2.43	71	29	10	4
		Transit	24.9%		38		5	
		Walk	25.4%		38		5	
		Other	2.3%		3		0	
		TOTAL	***100.0%***		***151***	***29***	***20***	***4***
North Bay	5.0%	Auto	71.1%	1.91	49	26	7	3
		Transit	9.6%		7		1	
		Walk	15.8%		11		1	
		Other	3.5%		2		0	
		TOTAL	***100.0%***		***69***	***26***	***9***	***3***
South Bay	7.0%	Auto	59.5%	2.46	57	23	8	3
		Transit	24.6%		24		3	
		Walk	13.5%		13		2	
		Other	2.4%		2		0	
		TOTAL	***100.0%***		***96***	***23***	***13***	***3***
Out of Region	21.0%	Auto	35.9%	3.17	103	33	14	4
		Transit	24.1%		69		9	
		Walk	27.7%		80		11	
		Other	12.3%		35		5	
		TOTAL	***100.0%***		***288***	***33***	***39***	***4***
TOTAL	100.0%	Auto	35.8%	2.37	491	207	66	28
		Transit	25.7%		353		48	
		Walk	32.0%		438		59	
		Other	6.5%		89		12	
		TOTAL	***100.0%***		***1,371***	***207***	***185***	***28***

Notes:
[1] SF Guidelines, Appendix C - Composite Rate; PM peak = 13.5% of daily
[2] SF Guidelines, Appendix C - C-3 District Retail
[3] SF Guidelines, Appendix E - Table E-11: Visitor Trips to SD1 All Other

Hall of Justice - Trip Generation for 480-484 Sixth Street Building
PARKING DEMAND

PROJECT

Office:	4,750	sqft
Restaurant:	2,400	sqft

DEMAND

Office:

Short-Term	10	daily non-work vehicle-trips
	5.5	turnover rate
	1	**spaces**
Long-Term	276	sqft per employee
	17	employees
	4	**spaces**

Restaurant:

Short-Term	211	daily non-work vehicle-trips
	5.5	turnover rate
	19	**spaces**
Long-Term	350	sqft per employee
	7	employees
	2	**spaces**

Total

Short-Term	23	
Long-Term	6	
Total:	**30**	**spaces**

General Parking Demand Equations

Long-term:	# of employees on a daily basis x % that drive / average vehicle occupancy
	# of hotel rooms x 0.25 for guests
	# of residential units x 1.1 (for 1-bedroom) or 1.5 (for 2+ bedroom)
Short-term:	# of daily visitor vehicle-trips / 2 / turnover rate

Hall of Justice - Trip Generation for 480-484 Sixth Street Building
LOADING DEMAND

PROJECT

Office:	4,750	gsf
Restaurant	2,400	gsf

DEMAND

Office:	R =	0.21
Daily Trips	1.0	trips
Average Hour	0.0	spaces
Peak Hour	0.0	spaces
Restaurant:	R=	3.6
Daily Trips	8.6	trips
Average Hour	0.3	spaces
Peak Hour	0.4	spaces

Total

Daily Trips	**9.7**	**trips**
Average Hour	**0.3**	**spaces**
Peak Hour	**0.4**	**spaces**

General Loading Demand Equations

Daily Trips = (GSF / 1,000) * R
Average Hour = (GSF / 1,000) * R / 14 / 2.4
Peak Hour = (GSF / 1,000) * (R * 1.25) / 14 / 2.4

Note that deliveries would be scheduled and managed for all uses on the 5M Project site. Therefore, the hours of loading activity were extended from a 9-hour period to a 12-hour period.

APPENDIX E
Orion Environmental Associates
Noise Measurement Output_Locations 1 and 2
September 18, 2014

Noise Measurement Location #1

Session Report

9/18/2014

Information Panel

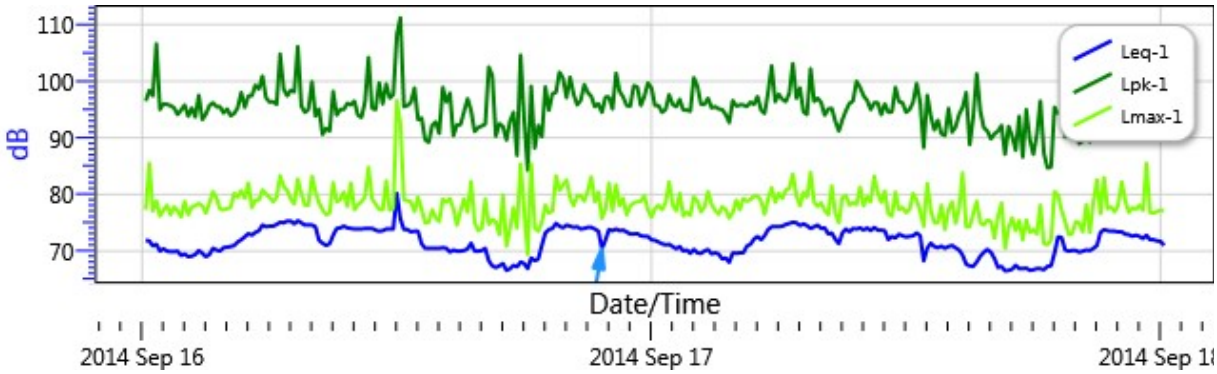
Name	HOJ RDF CJ 1&2 Roof (134' from Freeway Centerline) (S020_BGF100003_19092014_114356)
Start Time	9/16/2014 12:00:00 AM
Stop Time	9/18/2014 12:10:00 AM
Device Name	BGF100003
Model Type	SoundPro DL
Device Firmware Rev	R.12L

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	72.2 dB	CNEL	1	78.9 dB
Lmax	1	96.6 dB	Lmin	1	54.4 dB
L90	1	66.7 dB	L50	1	71.4 dB
LDN	1	78.6 dB			
Weighting	1	A	Response	1	SLOW

Logged Data Chart

S020_BGF100003_19092014_114356: Logged Data Chart



Noise Measurement Location #2

Session Report

9/18/2014

Information Panel

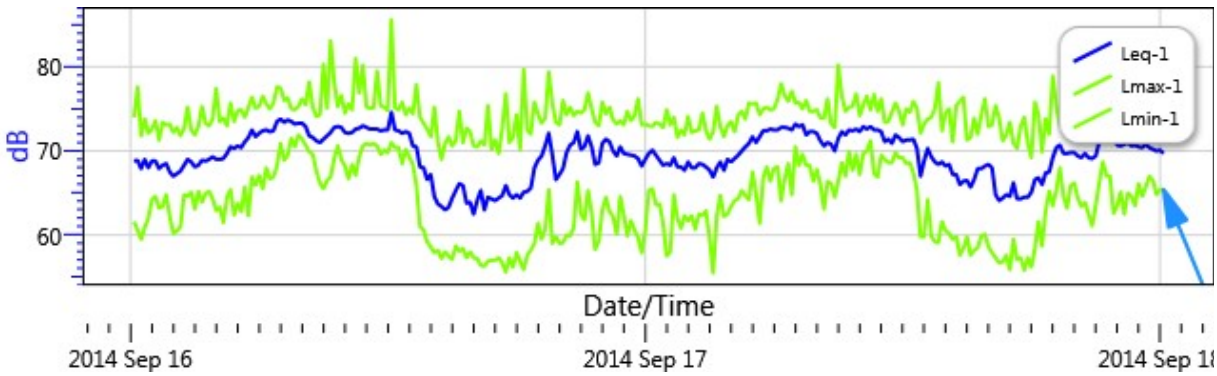
Name	HOJ RDF HOJ Roof (228' from Freeway Centerline) (S042_BGF100004_19092014_112742) 9/16/2014 12:00:00
Start Time	AM
Stop Time	9/18/2014 12:10:00 AM
Device Name	BGF100004
Model Type	SoundPro DL
Device Firmware Rev	R.12L

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	70.2 dB	CNEL	1	76.8 dB
L50	1	69.7 dB	L90	1	64.2 dB
LDN	1	76.6 dB	Lmax	1	85.6 dB
Lmin	1	55.5 dB			
Weighting	1	A	Response	1	SLOW

Logged Data Chart

S042_BGF100004_19092014_112742: Logged Data Chart



APPENDIX F
Orion Environmental Associates
CalEEMod Output
April 2, 2015

HOJ Construction

San Francisco Bay Area Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	200.00	1000sqft	1.00	200,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2020
Utility Company	City and County of San Francisco				
CO2 Intensity (lb/MWhr)	76.28	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 200,000 sf structure, 330 x 126 sf area

Construction Phase - Construction Start mid 2017 (duration 30 months)

Demo: 60 days, Grading: 60 days, Construction: 400 days, Paving: 60 days, Paint: 60 days

Off-road Equipment - Construction: 1 crane, 3 forklifts, 1 gen set, 1 loader/backhoe, 3 welders

Off-road Equipment - Demo: 1 concrete saw, 2 dozers, 3 loader/backhoes

Off-road Equipment - Grading: 1 grader, 1 dozer, 1 loader/backhoe, 1 excavator

Off-road Equipment - Paving: 1 cement mixer, 1 paver, 1 paving equipment, 1 roller, 1 loader/backhoe

Trips and VMT - Demo: 13workers, Grading: 8 workers, Construction: 64 workers, Paving: 13 workers, Paint: 13 workers

Grading: 1780 haul truck trips, Demo: 309 haul truck trips

Demolition - 67946 sf demo

Grading - 18,000 CY earthworks export

Vehicle Trips - No mobile source emission (Operational)

Construction Off-road Equipment Mitigation - Tier 2 plus Level 3 VDECS assumed in compliance with Clean Construction Ordinance

Off-road Equipment - Paint: 1 air compressor

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	5.00	60.00
tblConstructionPhase	NumDays	100.00	400.00
tblConstructionPhase	NumDays	10.00	60.00
tblConstructionPhase	NumDays	2.00	60.00
tblConstructionPhase	NumDays	5.00	60.00
tblConstructionPhase	PhaseEndDate	6/28/2019	7/12/2019
tblConstructionPhase	PhaseStartDate	12/16/2017	1/1/2018
tblConstructionPhase	PhaseStartDate	7/13/2019	7/15/2019
tblGrading	AcresOfGrading	22.50	0.75
tblGrading	MaterialExported	0.00	18,000.00
tblLandUse	LotAcreage	4.59	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	10.18	0.00
tblVehicleTrips	SU_TR	8.91	0.00
tblVehicleTrips	WD_TR	16.50	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.1631	1.6747	1.3078	2.0100e-003	0.1927	0.0838	0.2765	0.0859	0.0778	0.1638	0.0000	181.4736	181.4736	0.0297	0.0000	182.0982
2018	0.4411	2.9555	2.9535	5.0900e-003	0.1035	0.1678	0.2713	0.0281	0.1607	0.1888	0.0000	420.2531	420.2531	0.0604	0.0000	421.5222
2019	2.5623	1.7708	1.8617	3.2800e-003	0.0622	0.0972	0.1593	0.0169	0.0926	0.1095	0.0000	269.6624	269.6624	0.0427	0.0000	270.5588
Total	**3.1664**	**6.4009**	**6.1230**	**0.0104**	**0.3583**	**0.3487**	**0.7071**	**0.1309**	**0.3311**	**0.4620**	**0.0000**	**871.3890**	**871.3890**	**0.1329**	**0.0000**	**874.1792**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.0760	1.2708	1.0214	2.0100e-003	0.1927	0.0167	0.2094	0.0859	0.0165	0.1024	0.0000	181.4735	181.4735	0.0297	0.0000	182.0981
2018	0.3240	2.9271	3.0325	5.0900e-003	0.1035	0.0602	0.1637	0.0281	0.0598	0.0879	0.0000	420.2527	420.2527	0.0604	0.0000	421.5218
2019	2.5057	1.9345	1.9541	3.2800e-003	0.0622	0.0385	0.1007	0.0169	0.0380	0.0548	0.0000	269.6621	269.6621	0.0427	0.0000	270.5586
Total	**2.9058**	**6.1324**	**6.0079**	**0.0104**	**0.3583**	**0.1155**	**0.4738**	**0.1309**	**0.1142**	**0.2451**	**0.0000**	**871.3883**	**871.3883**	**0.1329**	**0.0000**	**874.1785**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**8.23**	**4.20**	**1.88**	**0.00**	**0.00**	**66.88**	**32.99**	**0.00**	**65.50**	**46.95**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.0130	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.5700e-003	3.5700e-003	1.0000e-005	0.0000	3.7700e-003
Energy	0.1091	0.9914	0.8328	5.9500e-003		0.0753	0.0753		0.0753	0.0753	0.0000	1,195.3473	1,195.3473	0.0648	0.0289	1,205.6738
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	438.4605	0.0000	438.4605	25.9123	0.0000	982.6182
Water						0.0000	0.0000		0.0000	0.0000	7.9618	5.2774	13.2392	0.8198	0.0197	36.5687
Total	**1.1221**	**0.9914**	**0.8346**	**5.9500e-003**	**0.0000**	**0.0754**	**0.0754**	**0.0000**	**0.0754**	**0.0754**	**446.4223**	**1,200.6283**	**1,647.0506**	**26.7969**	**0.0486**	**2,224.8645**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.0130	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.5700e-003	3.5700e-003	1.0000e-005	0.0000	3.7700e-003
Energy	0.1091	0.9914	0.8328	5.9500e-003		0.0753	0.0753		0.0753	0.0753	0.0000	1,195.3473	1,195.3473	0.0648	0.0289	1,205.6738
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	438.4605	0.0000	438.4605	25.9123	0.0000	982.6182
Water						0.0000	0.0000		0.0000	0.0000	7.9618	5.2774	13.2392	0.8196	0.0197	36.5560
Total	**1.1221**	**0.9914**	**0.8346**	**5.9500e-003**	**0.0000**	**0.0754**	**0.0754**	**0.0000**	**0.0754**	**0.0754**	**446.4223**	**1,200.6283**	**1,647.0506**	**26.7967**	**0.0486**	**2,224.8518**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.06**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2017	9/22/2017	5	60	
2	Grading	Grading	9/23/2017	12/15/2017	5	60	
3	Building Construction	Building Construction	1/1/2018	7/12/2019	5	400	
4	Paving	Paving	7/15/2019	10/4/2019	5	60	
5	Architectural Coating	Architectural Coating	10/5/2019	12/27/2019	5	60	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 300,000; Non-Residential Outdoor: 100,000 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	3	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	309.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	1,780.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	64.00	33.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0334	0.0000	0.0334	5.0600e-003	0.0000	5.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0817	0.7976	0.6261	7.3000e-004		0.0482	0.0482		0.0451	0.0451	0.0000	66.8813	66.8813	0.0170	0.0000	67.2377
Total	**0.0817**	**0.7976**	**0.6261**	**7.3000e-004**	**0.0334**	**0.0482**	**0.0816**	**5.0600e-003**	**0.0451**	**0.0501**	**0.0000**	**66.8813**	**66.8813**	**0.0170**	**0.0000**	**67.2377**

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3700e-003	0.0415	0.0379	1.2000e-004	2.6000e-003	5.3000e-004	3.1300e-003	7.2000e-004	4.9000e-004	1.2000e-003	0.0000	10.4186	10.4186	8.0000e-005	0.0000	10.4202
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3100e-003	1.9200e-003	0.0185	4.0000e-005	3.5400e-003	3.0000e-005	3.5700e-003	9.4000e-004	3.0000e-005	9.7000e-004	0.0000	3.0882	3.0882	1.6000e-004	0.0000	3.0916
Total	**4.6800e-003**	**0.0434**	**0.0564**	**1.6000e-004**	**6.1400e-003**	**5.6000e-004**	**6.7000e-003**	**1.6600e-003**	**5.2000e-004**	**2.1700e-003**	**0.0000**	**13.5068**	**13.5068**	**2.4000e-004**	**0.0000**	**13.5118**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0334	0.0000	0.0334	5.0600e-003	0.0000	5.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0370	0.6224	0.4636	7.3000e-004		0.0116	0.0116		0.0116	0.0116	0.0000	66.8813	66.8813	0.0170	0.0000	67.2376
Total	**0.0370**	**0.6224**	**0.4636**	**7.3000e-004**	**0.0334**	**0.0116**	**0.0450**	**5.0600e-003**	**0.0116**	**0.0166**	**0.0000**	**66.8813**	**66.8813**	**0.0170**	**0.0000**	**67.2376**

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3700e-003	0.0415	0.0379	1.2000e-004	2.6000e-003	5.3000e-004	3.1300e-003	7.2000e-004	4.9000e-004	1.2000e-003	0.0000	10.4186	10.4186	8.0000e-005	0.0000	10.4202
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3100e-003	1.9200e-003	0.0185	4.0000e-005	3.5400e-003	3.0000e-005	3.5700e-003	9.4000e-004	3.0000e-005	9.7000e-004	0.0000	3.0882	3.0882	1.6000e-004	0.0000	3.0916
Total	**4.6800e-003**	**0.0434**	**0.0564**	**1.6000e-004**	**6.1400e-003**	**5.6000e-004**	**6.7000e-003**	**1.6600e-003**	**5.2000e-004**	**2.1700e-003**	**0.0000**	**13.5068**	**13.5068**	**2.4000e-004**	**0.0000**	**13.5118**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1359	0.0000	0.1359	0.0745	0.0000	0.0745	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0565	0.5937	0.3954	4.2000e-004		0.0320	0.0320		0.0294	0.0294	0.0000	39.1683	39.1683	0.0120	0.0000	39.4203
Total	**0.0565**	**0.5937**	**0.3954**	**4.2000e-004**	**0.1359**	**0.0320**	**0.1679**	**0.0745**	**0.0294**	**0.1039**	**0.0000**	**39.1683**	**39.1683**	**0.0120**	**0.0000**	**39.4203**

3.3 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0194	0.2389	0.2186	6.7000e-004	0.0150	3.0600e-003	0.0181	4.1200e-003	2.8100e-003	6.9300e-003	0.0000	60.0167	60.0167	4.4000e-004	0.0000	60.0259
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	1.1800e-003	0.0114	3.0000e-005	2.1800e-003	2.0000e-005	2.1900e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9004	1.9004	1.0000e-004	0.0000	1.9025
Total	**0.0203**	**0.2401**	**0.2299**	**7.0000e-004**	**0.0172**	**3.0800e-003**	**0.0202**	**4.7000e-003**	**2.8300e-003**	**7.5300e-003**	**0.0000**	**61.9171**	**61.9171**	**5.4000e-004**	**0.0000**	**61.9284**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1359	0.0000	0.1359	0.0745	0.0000	0.0745	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0141	0.3650	0.2715	4.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	39.1683	39.1683	0.0120	0.0000	39.4203
Total	**0.0141**	**0.3650**	**0.2715**	**4.2000e-004**	**0.1359**	**1.5600e-003**	**0.1375**	**0.0745**	**1.5600e-003**	**0.0761**	**0.0000**	**39.1683**	**39.1683**	**0.0120**	**0.0000**	**39.4203**

3.3 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0194	0.2389	0.2186	6.7000e-004	0.0150	3.0600e-003	0.0181	4.1200e-003	2.8100e-003	6.9300e-003	0.0000	60.0167	60.0167	4.4000e-004	0.0000	60.0259
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	1.1800e-003	0.0114	3.0000e-005	2.1800e-003	2.0000e-005	2.1900e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9004	1.9004	1.0000e-004	0.0000	1.9025
Total	**0.0203**	**0.2401**	**0.2299**	**7.0000e-004**	**0.0172**	**3.0800e-003**	**0.0202**	**4.7000e-003**	**2.8300e-003**	**7.5300e-003**	**0.0000**	**61.9171**	**61.9171**	**5.4000e-004**	**0.0000**	**61.9284**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3719	2.5681	2.0427	3.1600e-003		0.1620	0.1620		0.1554	0.1554	0.0000	266.6201	266.6201	0.0566	0.0000	267.8078
Total	**0.3719**	**2.5681**	**2.0427**	**3.1600e-003**		**0.1620**	**0.1620**		**0.1554**	**0.1554**	**0.0000**	**266.6201**	**266.6201**	**0.0566**	**0.0000**	**267.8078**

3.4 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0441	0.3504	0.5573	1.0200e-003	0.0277	5.1600e-003	0.0329	7.9500e-003	4.7400e-003	0.0127	0.0000	89.9514	89.9514	7.0000e-004	0.0000	89.9660
Worker	0.0251	0.0370	0.3536	9.0000e-004	0.0758	5.8000e-004	0.0763	0.0202	5.4000e-004	0.0207	0.0000	63.6815	63.6815	3.1800e-003	0.0000	63.7483
Total	**0.0692**	**0.3873**	**0.9109**	**1.9200e-003**	**0.1035**	**5.7400e-003**	**0.1092**	**0.0281**	**5.2800e-003**	**0.0334**	**0.0000**	**153.6329**	**153.6329**	**3.8800e-003**	**0.0000**	**153.7144**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2549	2.5397	2.1216	3.1600e-003		0.0545	0.0545		0.0545	0.0545	0.0000	266.6198	266.6198	0.0566	0.0000	267.8075
Total	**0.2549**	**2.5397**	**2.1216**	**3.1600e-003**		**0.0545**	**0.0545**		**0.0545**	**0.0545**	**0.0000**	**266.6198**	**266.6198**	**0.0566**	**0.0000**	**267.8075**

3.4 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0441	0.3504	0.5573	1.0200e-003	0.0277	5.1600e-003	0.0329	7.9500e-003	4.7400e-003	0.0127	0.0000	89.9514	89.9514	7.0000e-004	0.0000	89.9660
Worker	0.0251	0.0370	0.3536	9.0000e-004	0.0758	5.8000e-004	0.0763	0.0202	5.4000e-004	0.0207	0.0000	63.6815	63.6815	3.1800e-003	0.0000	63.7483
Total	**0.0692**	**0.3873**	**0.9109**	**1.9200e-003**	**0.1035**	**5.7400e-003**	**0.1092**	**0.0281**	**5.2800e-003**	**0.0334**	**0.0000**	**153.6329**	**153.6329**	**3.8800e-003**	**0.0000**	**153.7144**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1740	1.2528	1.0593	1.6800e-003		0.0749	0.0749		0.0718	0.0718	0.0000	140.9613	140.9613	0.0288	0.0000	141.5662
Total	**0.1740**	**1.2528**	**1.0593**	**1.6800e-003**		**0.0749**	**0.0749**		**0.0718**	**0.0718**	**0.0000**	**140.9613**	**140.9613**	**0.0288**	**0.0000**	**141.5662**

3.4 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0217	0.1704	0.2829	5.4000e-004	0.0148	2.5500e-003	0.0173	4.2300e-003	2.3500e-003	6.5800e-003	0.0000	47.0810	47.0810	3.6000e-004	0.0000	47.0887
Worker	0.0122	0.0179	0.1709	4.8000e-004	0.0404	3.0000e-004	0.0407	0.0107	2.8000e-004	0.0110	0.0000	32.6954	32.6954	1.5800e-003	0.0000	32.7285
Total	**0.0339**	**0.1883**	**0.4538**	**1.0200e-003**	**0.0551**	**2.8500e-003**	**0.0580**	**0.0150**	**2.6300e-003**	**0.0176**	**0.0000**	**79.7764**	**79.7764**	**1.9400e-003**	**0.0000**	**79.8171**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1239	1.3405	1.1191	1.6800e-003		0.0261	0.0261		0.0261	0.0261	0.0000	140.9611	140.9611	0.0288	0.0000	141.5660
Total	**0.1239**	**1.3405**	**1.1191**	**1.6800e-003**		**0.0261**	**0.0261**		**0.0261**	**0.0261**	**0.0000**	**140.9611**	**140.9611**	**0.0288**	**0.0000**	**141.5660**

3.4 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0217	0.1704	0.2829	5.4000e-004	0.0148	2.5500e-003	0.0173	4.2300e-003	2.3500e-003	6.5800e-003	0.0000	47.0810	47.0810	3.6000e-004	0.0000	47.0887
Worker	0.0122	0.0179	0.1709	4.8000e-004	0.0404	3.0000e-004	0.0407	0.0107	2.8000e-004	0.0110	0.0000	32.6954	32.6954	1.5800e-003	0.0000	32.7285
Total	**0.0339**	**0.1883**	**0.4538**	**1.0200e-003**	**0.0551**	**2.8500e-003**	**0.0580**	**0.0150**	**2.6300e-003**	**0.0176**	**0.0000**	**79.7764**	**79.7764**	**1.9400e-003**	**0.0000**	**79.8171**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0268	0.2715	0.2634	4.0000e-004		0.0155	0.0155		0.0143	0.0143	0.0000	35.5314	35.5314	0.0110	0.0000	35.7629
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0268**	**0.2715**	**0.2634**	**4.0000e-004**		**0.0155**	**0.0155**		**0.0143**	**0.0143**	**0.0000**	**35.5314**	**35.5314**	**0.0110**	**0.0000**	**35.7629**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0700e-003	1.5700e-003	0.0150	4.0000e-005	3.5400e-003	3.0000e-005	3.5600e-003	9.4000e-004	2.0000e-005	9.7000e-004	0.0000	2.8667	2.8667	1.4000e-004	0.0000	2.8696
Total	**1.0700e-003**	**1.5700e-003**	**0.0150**	**4.0000e-005**	**3.5400e-003**	**3.0000e-005**	**3.5600e-003**	**9.4000e-004**	**2.0000e-005**	**9.7000e-004**	**0.0000**	**2.8667**	**2.8667**	**1.4000e-004**	**0.0000**	**2.8696**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0203	0.3474	0.2960	4.0000e-004		5.6100e-003	5.6100e-003		5.3000e-003	5.3000e-003	0.0000	35.5314	35.5314	0.0110	0.0000	35.7629
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0203**	**0.3474**	**0.2960**	**4.0000e-004**		**5.6100e-003**	**5.6100e-003**		**5.3000e-003**	**5.3000e-003**	**0.0000**	**35.5314**	**35.5314**	**0.0110**	**0.0000**	**35.7629**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0700e-003	1.5700e-003	0.0150	4.0000e-005	3.5400e-003	3.0000e-005	3.5600e-003	9.4000e-004	2.0000e-005	9.7000e-004	0.0000	2.8667	2.8667	1.4000e-004	0.0000	2.8696
Total	**1.0700e-003**	**1.5700e-003**	**0.0150**	**4.0000e-005**	**3.5400e-003**	**3.0000e-005**	**3.5600e-003**	**9.4000e-004**	**2.0000e-005**	**9.7000e-004**	**0.0000**	**2.8667**	**2.8667**	**1.4000e-004**	**0.0000**	**2.8696**

3.6 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.3175					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9900e-003	0.0551	0.0552	9.0000e-005		3.8600e-003	3.8600e-003		3.8600e-003	3.8600e-003	0.0000	7.6598	7.6598	6.5000e-004	0.0000	7.6734
Total	**2.3255**	**0.0551**	**0.0552**	**9.0000e-005**		**3.8600e-003**	**3.8600e-003**		**3.8600e-003**	**3.8600e-003**	**0.0000**	**7.6598**	**7.6598**	**6.5000e-004**	**0.0000**	**7.6734**

3.6 Architectural Coating - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0700e-003	1.5700e-003	0.0150	4.0000e-005	3.5400e-003	3.0000e-005	3.5600e-003	9.4000e-004	2.0000e-005	9.7000e-004	0.0000	2.8667	2.8667	1.4000e-004	0.0000	2.8696
Total	**1.0700e-003**	**1.5700e-003**	**0.0150**	**4.0000e-005**	**3.5400e-003**	**3.0000e-005**	**3.5600e-003**	**9.4000e-004**	**2.0000e-005**	**9.7000e-004**	**0.0000**	**2.8667**	**2.8667**	**1.4000e-004**	**0.0000**	**2.8696**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.3175					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9900e-003	0.0551	0.0552	9.0000e-005		3.8600e-003	3.8600e-003		3.8600e-003	3.8600e-003	0.0000	7.6598	7.6598	6.5000e-004	0.0000	7.6733
Total	**2.3255**	**0.0551**	**0.0552**	**9.0000e-005**		**3.8600e-003**	**3.8600e-003**		**3.8600e-003**	**3.8600e-003**	**0.0000**	**7.6598**	**7.6598**	**6.5000e-004**	**0.0000**	**7.6733**

3.6 Architectural Coating - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0700e-003	1.5700e-003	0.0150	4.0000e-005	3.5400e-003	3.0000e-005	3.5600e-003	9.4000e-004	2.0000e-005	9.7000e-004	0.0000	2.8667	2.8667	1.4000e-004	0.0000	2.8696
Total	**1.0700e-003**	**1.5700e-003**	**0.0150**	**4.0000e-005**	**3.5400e-003**	**3.0000e-005**	**3.5600e-003**	**9.4000e-004**	**2.0000e-005**	**9.7000e-004**	**0.0000**	**2.8667**	**2.8667**	**1.4000e-004**	**0.0000**	**2.8696**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	9.50	7.30	7.30	64.90	16.10	19.00	73	25	2

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546690	0.063179	0.174273	0.121979	0.033815	0.004830	0.015501	0.025302	0.002100	0.003252	0.006757	0.000658	0.001666

5.0 Energy Detail

4.4 Fleet

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	116.1177	116.1177	0.0442	9.1300e-003	119.8761
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	116.1177	116.1177	0.0442	9.1300e-003	119.8761
NaturalGas Mitigated	0.1091	0.9914	0.8328	5.9500e-003		0.0753	0.0753		0.0753	0.0753	0.0000	1,079.2297	1,079.2297	0.0207	0.0198	1,085.7977
NaturalGas Unmitigated	0.1091	0.9914	0.8328	5.9500e-003		0.0753	0.0753		0.0753	0.0753	0.0000	1,079.2297	1,079.2297	0.0207	0.0198	1,085.7977

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	2.0224e+007	0.1091	0.9914	0.8328	5.9500e-003		0.0753	0.0753		0.0753	0.0753	0.0000	1,079.2297	1,079.2297	0.0207	0.0198	1,085.7977
Total		**0.1091**	**0.9914**	**0.8328**	**5.9500e-003**		**0.0753**	**0.0753**		**0.0753**	**0.0753**	**0.0000**	**1,079.2297**	**1,079.2297**	**0.0207**	**0.0198**	**1,085.7977**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	2.0224e+007	0.1091	0.9914	0.8328	5.9500e-003		0.0753	0.0753		0.0753	0.0753	0.0000	1,079.2297	1,079.2297	0.0207	0.0198	1,085.7977
Total		**0.1091**	**0.9914**	**0.8328**	**5.9500e-003**		**0.0753**	**0.0753**		**0.0753**	**0.0753**	**0.0000**	**1,079.2297**	**1,079.2297**	**0.0207**	**0.0198**	**1,085.7977**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	3.356e+006	116.1177	0.0442	9.1300e-003	119.8761
Total		**116.1177**	**0.0442**	**9.1300e-003**	**119.8761**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	3.356e+006	116.1177	0.0442	9.1300e-003	119.8761
Total		**116.1177**	**0.0442**	**9.1300e-003**	**119.8761**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0130	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.5700e-003	3.5700e-003	1.0000e-005	0.0000	3.7700e-003
Unmitigated	1.0130	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.5700e-003	3.5700e-003	1.0000e-005	0.0000	3.7700e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2318					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7811					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.5700e-003	3.5700e-003	1.0000e-005	0.0000	3.7700e-003
Total	**1.0130**	**2.0000e-005**	**1.8500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.5700e-003**	**3.5700e-003**	**1.0000e-005**	**0.0000**	**3.7700e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2318					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7811					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.5700e-003	3.5700e-003	1.0000e-005	0.0000	3.7700e-003
Total	**1.0130**	**2.0000e-005**	**1.8500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.5700e-003**	**3.5700e-003**	**1.0000e-005**	**0.0000**	**3.7700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	13.2392	0.8196	0.0197	36.5560
Unmitigated	13.2392	0.8198	0.0197	36.5687

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	25.0961 / 4.78021	13.2392	0.8198	0.0197	36.5687
Total		**13.2392**	**0.8198**	**0.0197**	**36.5687**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	25.0961 / 4.78021	13.2392	0.8196	0.0197	36.5560
Total		**13.2392**	**0.8196**	**0.0197**	**36.5560**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	438.4605	25.9123	0.0000	982.6182
Unmitigated	438.4605	25.9123	0.0000	982.6182

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	2160	438.4605	25.9123	0.0000	982.6182
Total		**438.4605**	**25.9123**	**0.0000**	**982.6182**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	2160	438.4605	25.9123	0.0000	982.6182
Total		**438.4605**	**25.9123**	**0.0000**	**982.6182**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

APPENDIX G

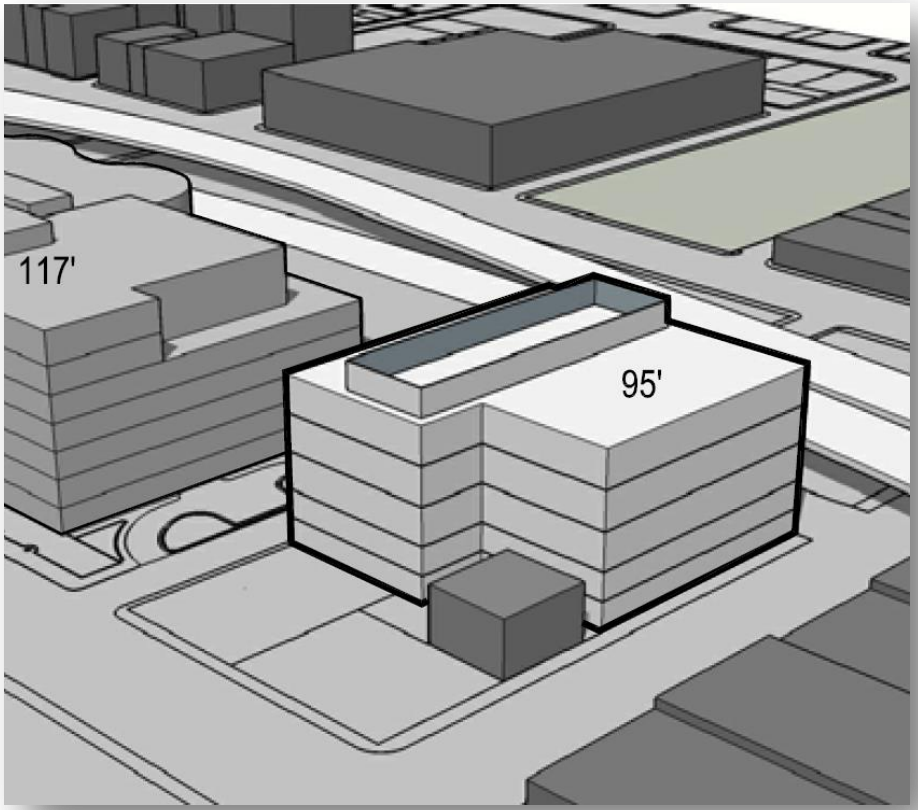
Rowan, Williams, & Irwin, Inc.
Rehabilitation and Detention Facility Replacement Jail Screening
Level Wind Analysis
February 25, 2015

Rehabilitation and Detention Facility Replacement Jail

San Francisco, CA

Screening-Level Wind Analysis

RWDI # 1500206
February 25, 2015



SUBMITTED TO

Julie Tilley Barlow, AICP
Turnstone Consulting
A Division of SWCA, Inc.
330 Townsend Street, Suite 216
San Francisco, CA 94107
jbarlow@swca.com

SUBMITTED BY

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West
Guelph, Ontario, Canada N1K 1B8
519.823.1311

Hanqing Wu, Ph.D., P.Eng.
Technical Director / Principal
Hanqing.Wu@rwdi.com

Dan Bacon
Senior Project Manager / Associate
Dan.Bacon@rwdi.com

Frank Kriksic, BES, CET, LEED AP
Project Director / Principal
Frank.Kriksic@rwdi.com

1. INTRODUCTION

Rowan Williams Davies & Irwin Inc. (RWDI) was retained by Turnstone Consulting to conduct a screening-level pedestrian wind analysis for the proposed Rehabilitation and Detention Facility Replacement Jail in San Francisco, CA.

The objective of this analysis is to provide a qualitative evaluation of the potential wind impact of the proposed development. This qualitative analysis is based on the following:

- a review of regional long-term meteorological data for San Francisco;
- design drawings received by RWDI on February 3, 2015;
- our engineering judgment and knowledge of wind flows around buildings;
- our experience of wind-tunnel testing of various buildings[1-3], including many projects in the San Francisco area; and,
- use of software developed by RWDI (*WindEstimator*[2]) for estimating the potential wind conditions around generalized building forms.

This qualitative approach provides a screening-level estimation of the potential wind impact. To quantify these conditions or refine any conceptual wind control measures, physical scale model tests in a wind tunnel would typically be required.

Other wind issues associated with wind loads, door operability and air quality are not considered within the scope of this assessment.

Image 1 - Aerial Photograph of Project Site and Surroundings

1. C.J. Williams, H. Wu, W.F. Waechter and H.A. Baker (1999), "Experience with Remedial Solutions to Control Pedestrian Wind Problems", *10th International Conference on Wind Engineering*, Copenhagen, Denmark.
2. H. Wu, C.J. Williams, H.A. Baker and W.F. Waechter (2004), "Knowledge-based Desk-Top Analysis of Pedestrian Wind Conditions", *ASCE Structure Congress 2004,* Nashville, Tennessee.
3. H. Wu and F. Kriksic (2012). "Designing for Pedestrian Comfort in Response to Local Climate", *Journal of Wind Engineering and Industrial Aerodynamics*, vol.104-106, pp.397-407.

2. BUILDING AND SITE INFORMATION

The proposed project would be five stories or 95 feet in height (see Images 2 and 3). It would be located on a street block bordered by Harriet Street, Bryant Street, 6th Street and Ahern Way. The development site is currently occupied by several low buildings, which would all be demolished, except for two square buildings at 480-484 Sixth Street and 800-804 Bryant Street/498 Sixth Street. The plans of the existing and proposed buildings are highlighted in Image 1.

The adjacent buildings around the development site are generally low, except the existing 117 ft Hall of Justice Building across Harriet Street. To the west and northwest of the site are raised highways. Further away from the site, buildings are also relatively low in all directions. Dense, tall buildings exist to the distant west along Van Ness Avenue, to the northwest along Market Street and to the north and northeast in the San Francisco downtown.

Primary pedestrian areas would include building entrances and sidewalks around the proposed building.

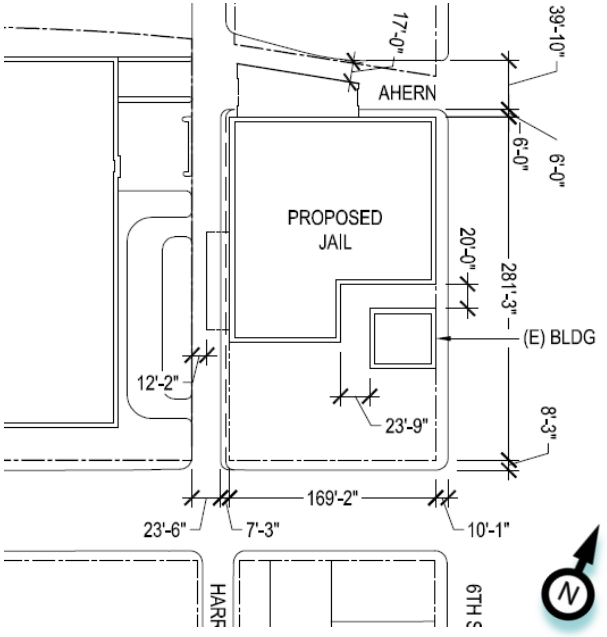


Image 2 – Site Plan

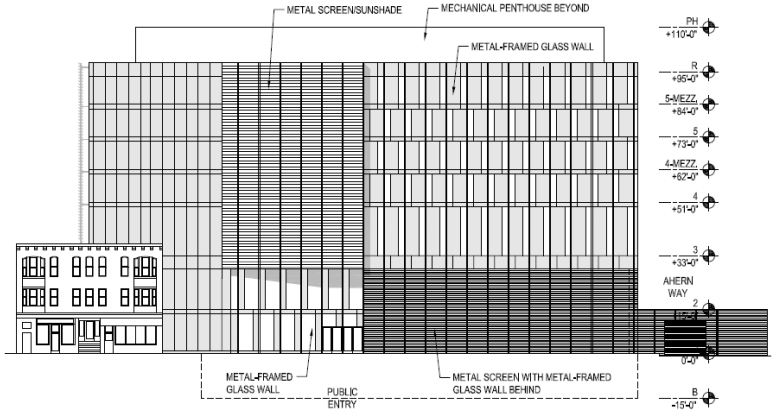


Image 3a – 6th Street (East) Elevation

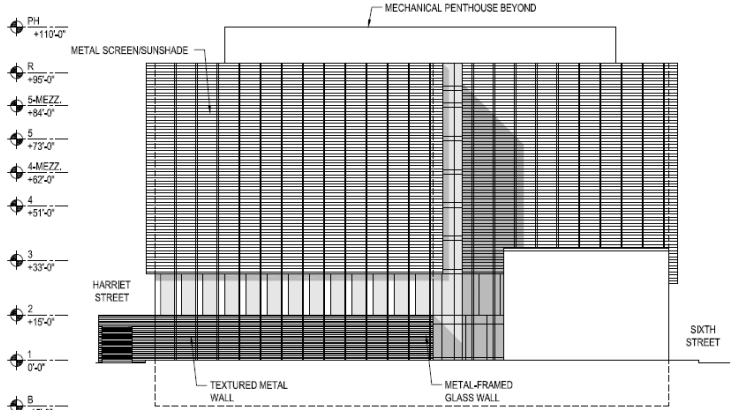


Image 3b – Bryan Street (South) Elevation

3. METEOROLOGICAL DATA

Long-term wind data recorded at a height of 33 feet at San Francisco International Airport between 1948 and 2012 are used as a reference for this wind assessment. They are presented as an annual wind rose in Image 4.

Of the primary wind directions, four have the greatest frequency of occurrence and make up the majority of the strong winds that occur. These wind directions are west-northwest, west, northwest and west-southwest.

Another set of wind data is often used in San Francisco. It was gathered at the old San Francisco Federal Building at 50 United Nations Plaza (at a height of 132 feet above grade) during the period of 1945 to 1950. Image 5 shows a similar distribution of wind speeds and directions as that in Image 4.

Based on the above wind data, winds from these four directions are most important for the current project, due to their speeds and frequencies as well as exposure. Winds from other directions are also considered in our analysis.

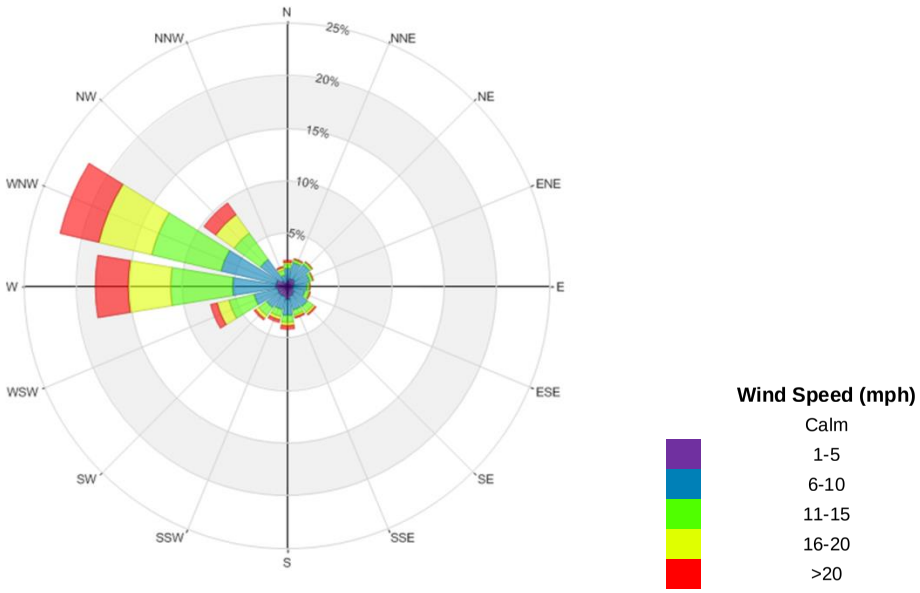


Image 4 - Annual Directional Distribution (%) of Winds (Blowing from) San Francisco International Airport (1948 to 2012)

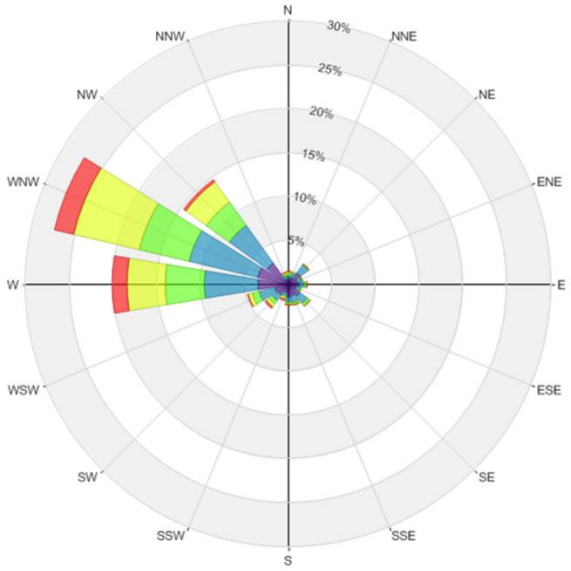


Image 5 - Annual Directional Distribution (%) of Winds (Blowing from) San Francisco Downtown Station (6:00 to 20:00, 1945 to 1950)

4. SAN FRANCISCO PLANNING CODE REQUIREMENTS

The San Francisco Planning Code Section 148, *Reduction of Ground-level Wind Currents in C-3 Districts*, requires buildings to be shaped so as not to cause ground-level wind currents to exceed defined comfort and hazard criteria.

The **comfort** criteria are that wind speeds will not exceed, more than 10% of the time, 11 mph in substantial pedestrian use areas, and 7 mph in public seating areas. Similarly, the hazard criterion of the Code requires that buildings not cause equivalent wind speeds to reach or exceed the **hazard** level of 26 mph as averaged from a single full hour of the year. The hazard criterion is based on winds that are measured for one hour and averaged corresponding to a one-minute average of 36 mph, to distinguish between the wind comfort conditions and hazardous winds.

The Planning Code defines these wind speeds in terms of equivalent wind speeds, which are average wind speed (mean velocity), adjusted to include the level of gustiness and turbulence.

These wind requirements are often used for other zoning districts in San Francisco.

For the purposes of environmental review under the California Environmental Quality Act, the wind hazard criterion is used to determine if a proposed project would have significant impacts.

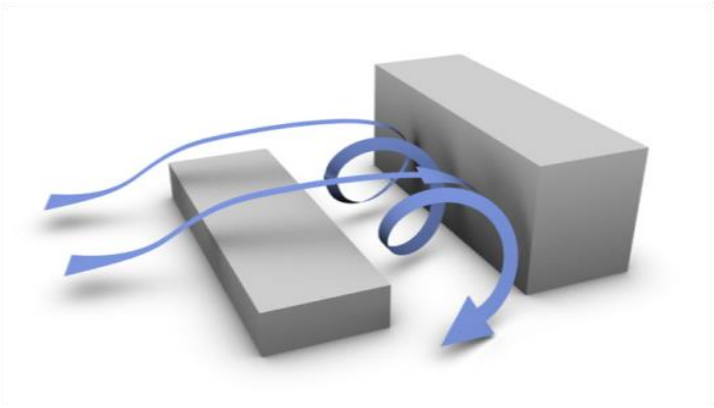
5. PEDESTRIAN WIND CONDITIONS

Predicting wind speeds and occurrence frequencies is complicated. It involves building geometry, orientation, position and height of surrounding buildings, upstream terrain and the local wind climate. RWDI has conducted more than 2,500 wind-tunnel model studies on pedestrian wind conditions around buildings, yielding a broad knowledge base. This knowledge has been incorporated into RWDI's proprietary software that allows, in many situations, for a qualitative, screening-level numerical estimation of pedestrian wind conditions without wind tunnel testing.

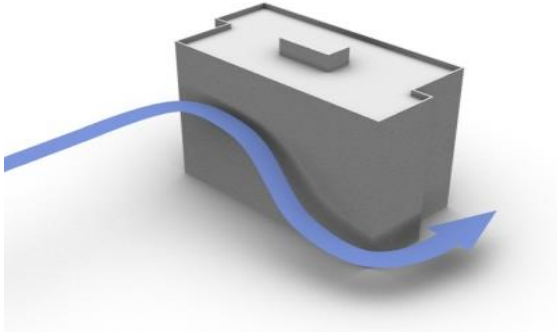
The massing of a building can affect wind speeds. In general, slab-shaped buildings have the greatest potential to accelerate ground-level winds, while buildings that have unusual shapes or are more geometrically complex tend to have lesser effects.

The orientation of a building is another factor that can affect wind speeds. When the wide face of a building, as opposed to its narrow face, is oriented toward the prevailing wind direction, the building has more surface area to intercept and redirect winds down to ground level, thus increasing the probability of strong and turbulent winds at ground level.

When a building is taller than those around it, rather than similar in height, it can intercept and redirect winds downward (see Image 6a on the next page). The winds can be directed down the vertical face of the building to ground level, and these redirected winds can be relatively strong and turbulent, especially around the downwind building corner (Image 6b).



(a) Downwashing



(b) Flow Accelerations at Downwind Corner

Image 6 – General Wind Flow Phenomena

Considering the low status of the existing buildings on the site and in the surrounding areas, the existing wind conditions on the site are expected to be suitable throughout the year at building entrances, along sidewalks and in parking spaces.

Given the size and location of the proposed project, it is unlikely that the project will cause any significant wind impact on the surrounding pedestrian areas. **It is our opinion that the wind hazard criterion would not be exceeded after the construction of the proposed development.** Most pedestrian areas around the proposed building would comply with the wind comfort criteria.

The following discussions compare the wind conditions with and without the proposed project, focusing on select key pedestrian areas. Wind control measures are provided, where necessary, should there be a desire to improve the wind conditions.

Building Entrances

The public entry would be located on the east building façade (Image 7), well sheltered by the proposed development from the prevailing winds from the west-southwest through to northwest directions. As a result, suitable wind conditions are expected in this area.

The service entry and jail transport entry would be located at the southwest and northeast building corners, respectively. Increased wind speeds are expected in these areas due to the prevailing winds being deflected down and accelerating around the building corners (Images 6a and 6b).

However, this is not considered to be an issue because these areas are intended primarily for vehicular usage. In addition, the two areas enclosed by tall metal walls (A and B in Image 7) would most likely catch the winds downwashing off the proposed building. In order to reduce the wind speeds at the building corners and on adjacent sidewalks, the design team may consider using perforated screen walls (approximately 20 to 30% porous, which would be more effective than solid walls for wind control) and moving the jail transport entry toward the east to be closer to 6th Street, if feasible.

Existing Building

The existing building at 480-484 Sixth Street (C in Image 7) is three stories and fully sheltered by the proposed project from the prevailing winds. Although not shown on Image 7, there is an existing three-story building immediately to the south of 480-484 Sixth Street building that would remain (see Image 1). Wind conditions around these buildings are expected to be improved from those that currently exist.

Adjacent Sidewalks

The existing sidewalks along Ahern Way and Harriet Street would see limited public use after the construction of the proposed project. Bryant Street, located to the south of the project, would be sheltered by the project and by the existing Hall of Justice Building and no negative wind impact is anticipated.

The public access to the project would be from the west sidewalk along 6th Street , where reduced wind speeds and suitable wind conditions are expected.

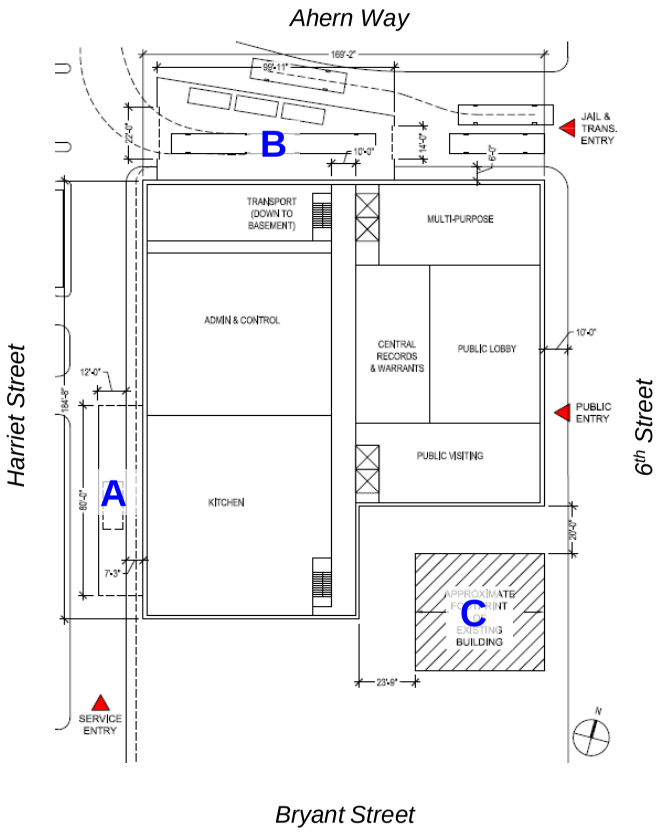


Image 7 – Building Entrances and Sidewalks

On the east sidewalk along 6th Street, however, increased wind speeds are predicted due to the prevailing winds being re-directed down by the proposed building. The resultant wind conditions may exceed the wind comfort threshold from time to time, but are expected to meet the wind hazard criterion.

6. SUMMARY

Given the size and location of the proposed project and its surroundings, wind conditions are predicted to comply with the wind hazard criterion at all pedestrian areas around the project. Wind speeds at the public entrance and most sidewalks are expected to be suitable for the intended usages in general and meet the hazard wind criterion.

Increased wind speeds are predicted around the northeast and southwest building corners and on the east sidewalk along 6th Street. For wind control purposes, the design team may consider using perforated materials (rather than solid walls) around the service entry and the jail transport entry, and moving the jail transport entry east to be close to 6th Street, if feasible.

7. APPLICABILITY OF RESULTS

In the event of any other significant changes to the design, construction or operation of the building or addition of surroundings in the future, RWDI could provide an assessment of their impact on the design considered in this report. It is the responsibility of others to contact RWDI to initiate this process.

APPENDIX H

PreVision Design
Shadow Analysis Report for the Proposed Hall of Justice Rehabilitation and Detention Facility Per SF Planning Section 295 Standards
March 13, 2015

PREVISION DESIGN

MAY 8, 2015

SHADOW ANALYSIS REPORT FOR THE PROPOSED HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY PER SF PLANNING SECTION 295 STANDARDS

FROM:
ADAM PHILLIPS
PRINCIPAL
PREVISION DESIGN

TO:
CHRIS ESPIRITU, SAN FRANCISCO PLANNING DEPT.
1650 MISSION STREET, SUITE 400
SAN FRANCISCO, CA 94103

CONTENTS

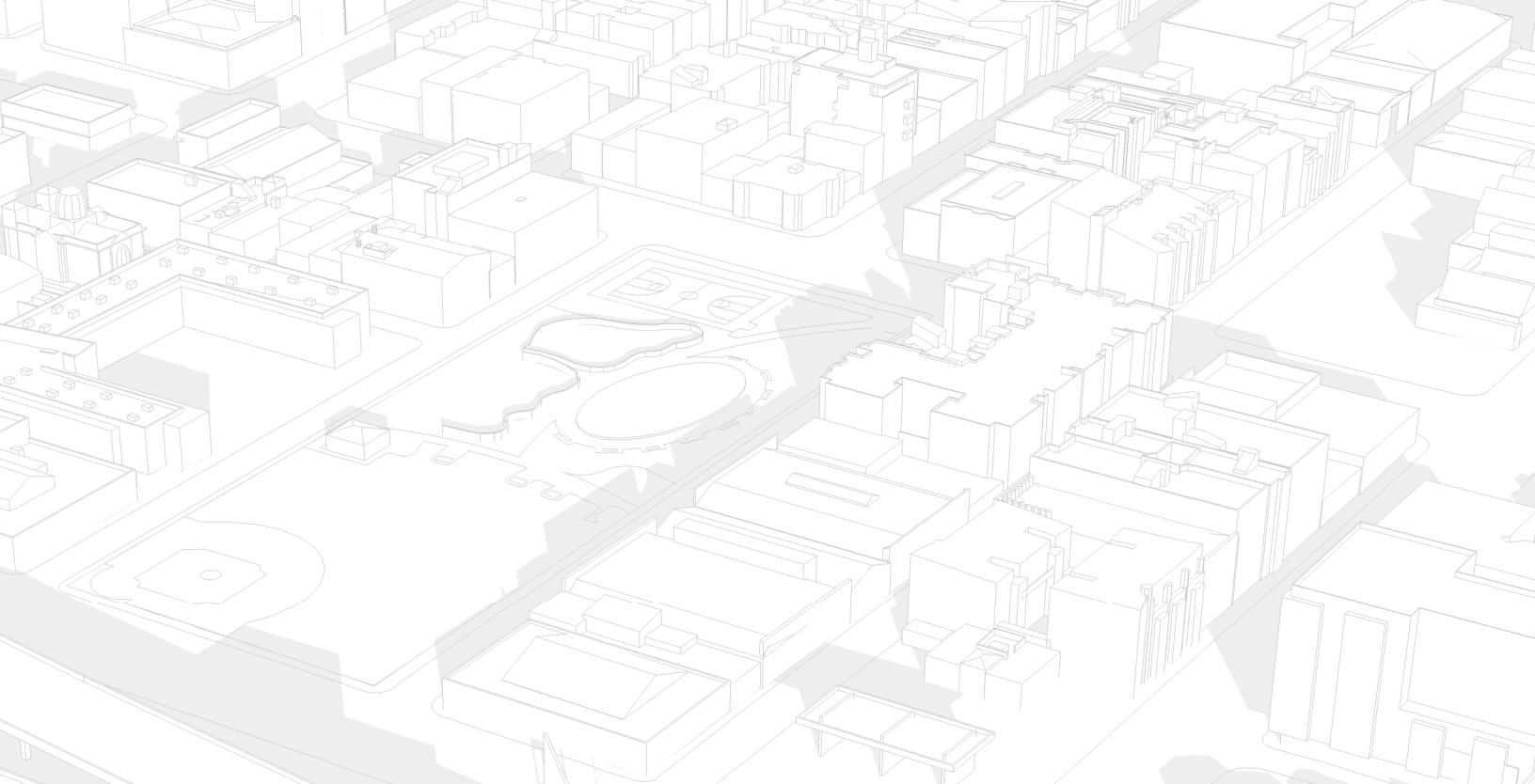
EXECUTIVE SUMMARY

This report describes the results of an analysis conducted by PreVision Design to identify the potential shadowing effects on Victoria Manalo Draves Park ("VMD Park" or "the park") that would be caused by the construction of a 95' tall + 15' parapet Adult Detention Facility ("the proposed project") proposed as a joint-agency effort between the City and County of San Francisco Department of Public Works (SFDPW) and the City and County of San Francisco Sheriff's Department. The project would be located at what is currently 444/450 6th Street and 265 Harriet Street in the South of Market (SOMA) neighborhood of San Francisco. The analysis was conducted in accordance with requirements established by the 1989 Sunlight Ordinance (Proposition K) and encoded in the San Francisco Planning Code, along with associated standards of review established by the San Francisco Recreation and Park Department (RPD) and the San Francisco Planning Department.

The analysis found that the proposed project would cast new shadow on the park, and that shading would represent an increase of 0.03% in annual square-foot-hours (sfh) over current levels of shading. The current percentage of annual shadow coverage is 6.63%. The addition of proposed project shading would result in a new total annual shading on the park of 6.66%. New shadows cast by nearby proposed projects at 280 7th Street, 190 Russ Street, 345 6th Street and 363 6th Street were analyzed as an addition to proposed project shading to determine the foreseeable cumulative shadow impacts on the park. When shading from these cumulative projects was combined with new shadow generated by the proposed project, the total of shadow on the park would be 6.72%, representing an increase of 0.06% compared to the shading generated by the proposed project alone, or 0.09% over current conditions.

The new shadow generated by the proposed project would be present 165 days a year during the morning hours in the spring and fall, with new shadows falling on the southern corner. New shadowing would occur on a portion of the baseball diamond and approximately half of the baseball field. The aggregate extent of all new shading throughout the year is shown in Exhibit A, and snapshots of shading conditions on the Summer Solstice, Vernal and Autumnal Equinoxes, Winter Solstice, and on the days of Maximum Shading are shown in Exhibits B-E.

In order to evaluate how new shading might affect existing patterns of park use, PreVision Design conducted six site visits to the park on various days of the week at differing times of day to record the number of users and observe the nature of park use. It was observed that the intensity of park use was highest weekdays during the midday period, and lowest weekday mornings. Observed park use included user eating lunch and resting on benches, visitors walking dogs, children playing in the playground area, and users playing basketball. ■



I. INTRODUCTION AND OVERVIEW

This report details the results of an analysis conducted by PreVision Design identifying the shadow effects that would be caused by the proposed construction of a 95' tall Adult Detention Facility ("the proposed project") on Victoria Manalo Draves Park ("VMD park"), a public park protected under Section 295 of the San Francisco Planning Code. The project sponsor is San Francisco Department of Public Works (SFDPW), and the project architects are Mark Cavagnero Associates and Cary Bernstein Architect.

The analysis was conducted pursuant to criteria described in (1) the February 3, 1989 memorandum titled "Proposition K – The Sunlight Ordinance" prepared by the San Francisco Recreation and Park Department (RPD) and the San Francisco Planning Department ("the 1989 Proposition K memorandum"), and (2) the July 2014 memorandum titled "Shadow Analysis Procedures and Scope Requirements" issued by the Planning Department.

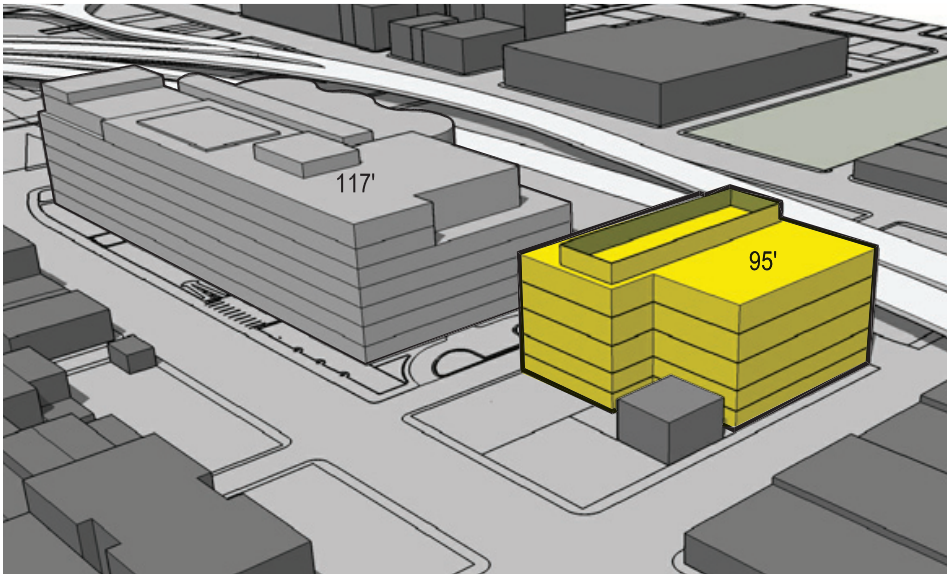
This report includes a discussion of all criteria which factored into the analysis: quantitative and qualitative reporting of new shading generated by the project (including graphical detail of the location and extent of the project's shading), discussion of what modifications to the project would be required to eliminate all new shading impacts, and a description the project's public good.

This report does not present conclusions about whether or not the project's shading would or should be considered significant or acceptable. These determinations shall be made by the San Francisco Planning Commission with input and recommendations from the RPD. ■

- Proposed Hall of Justice RDF
- RPD parks
  - 1 Victoria Manalo Draves Park
  - 2 Gene Friend Recreation Center
- Cumulative Projects
  - 1 280 7th street
  - 2 190 Russ Street
  - 3 345 6th Street
  - 4 363 6th street

FIGURE 1: Area Map

II. PROPOSED PROJECT



The proposed Hall of Justice (HOJ) Rehabilitation and Detention Facility (RDF) project involves construction of a new, approximately 200,000 gsf, 110 foot-tall (95 feet tall to the roof top, plus an additional 15-foot-tall mechanical penthouse) building on the block directly east of the existing HOJ building located at 850 Bryant Street.

The new RDF would replace existing city jail facilities, currently located on the 6th and 7th floors of the existing HOJ building. The new RDF would be constructed as a maximum security facility, compliant with adult detention facility codes and standards, with a capacity of up to 640 beds, space for administrative offices, staff support, exercise, programs and classroom space, and mental and medical health services for the inmates.

The project site is slightly less than an acre in size (40,276 sf) and encompasses Lots 009 through 012, 014, 043, and 045 in Block 3759. It is bounded by Ahern Way to the north, Sixth Street to the east, Bryant Street to the south, and Harriet Street to the west. The existing site contains two vacant lots, areas of surface parking, and five existing buildings, four of would will be demolished in order to construct the project (the multi-family building at 480-484 Sixth Street) would remain:

The project building site is in the Service/Arts/Light Industrial (SALI) Zoning District and a 30-X Height and Bulk District within the Western SoMa Special Use District (SUD).

Figure 2 shows the proposed project site plan and Figures 3 and 4 shows show the proposed building elevations. ■

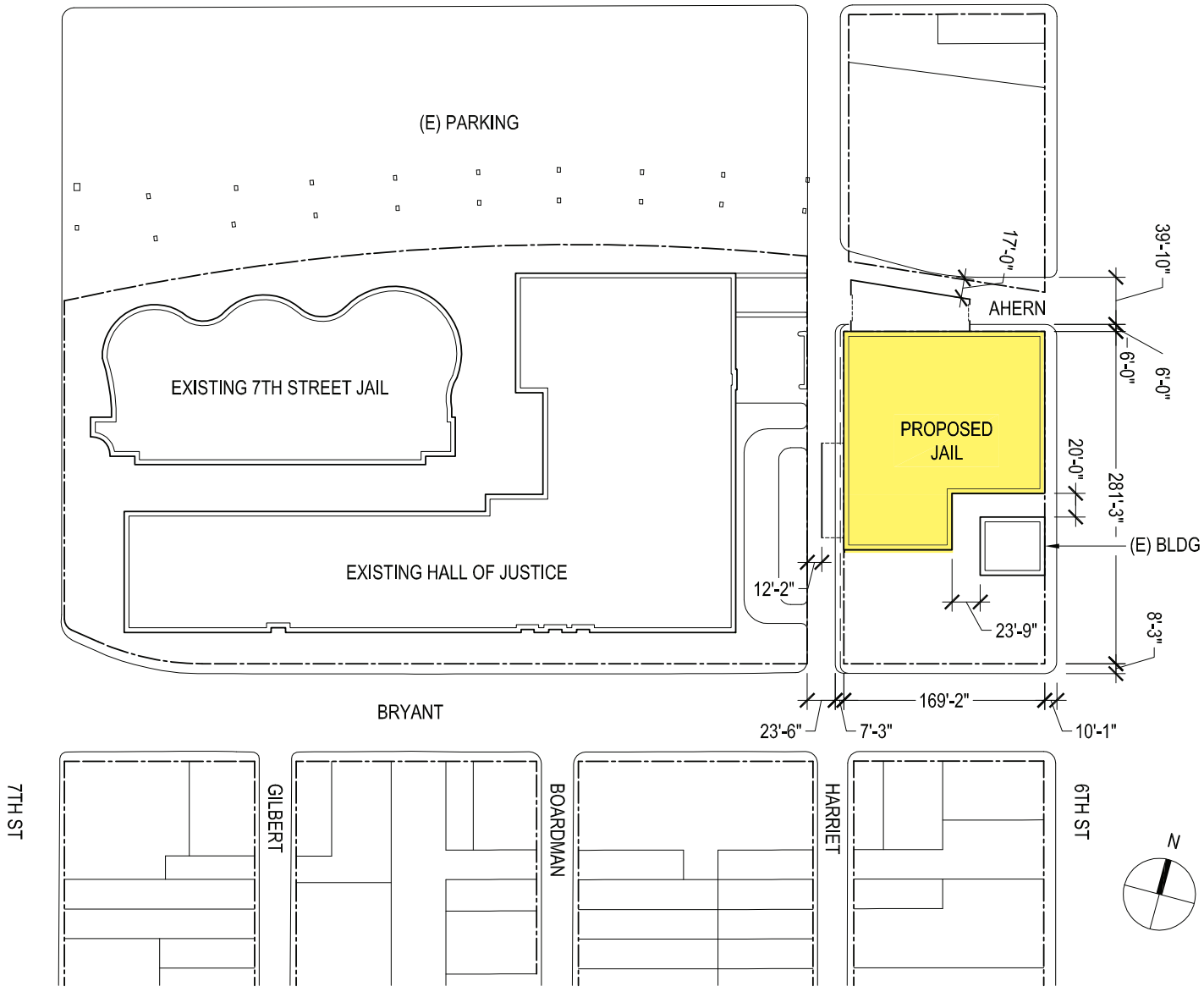


FIGURE 2: Site Plan

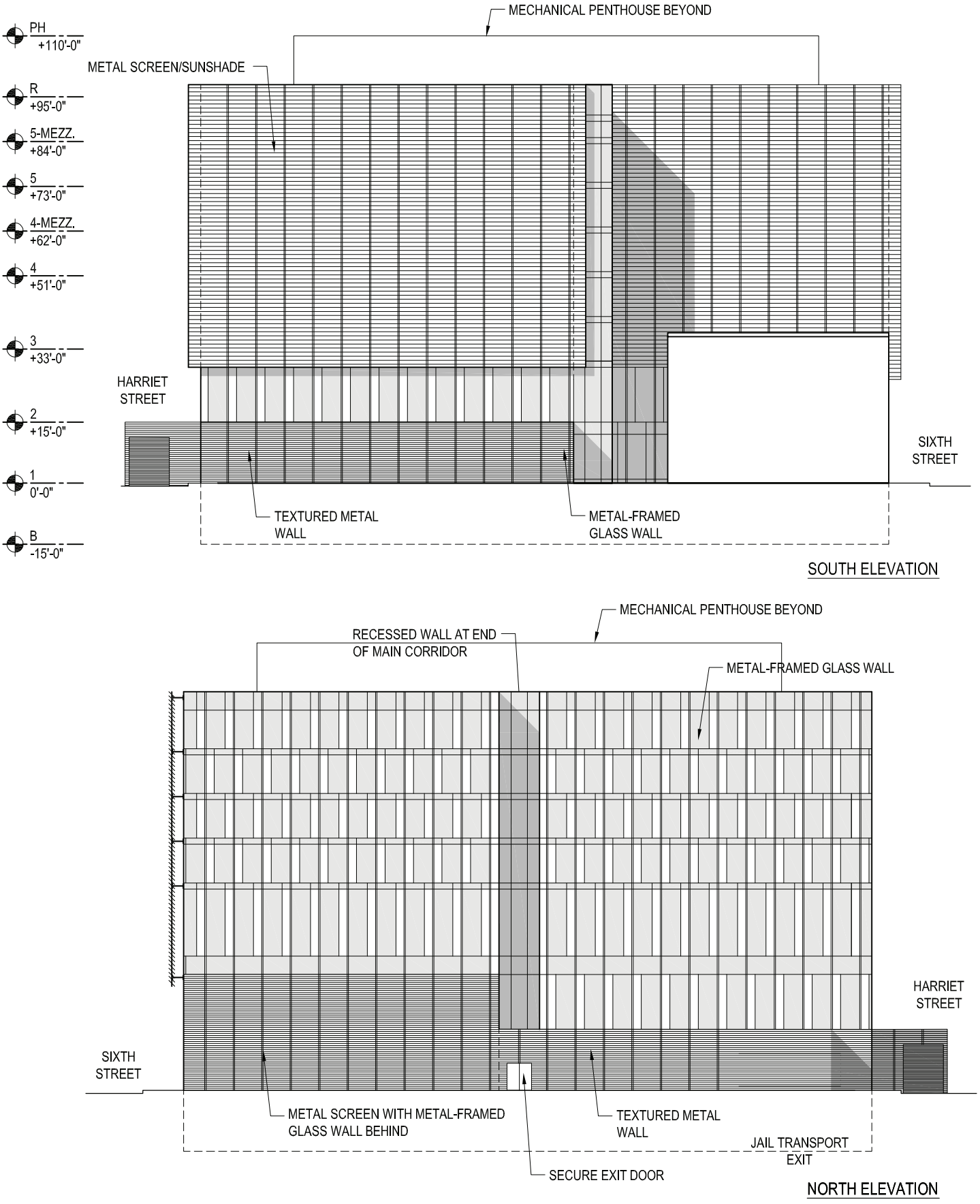


FIGURE 3: Project Elevations

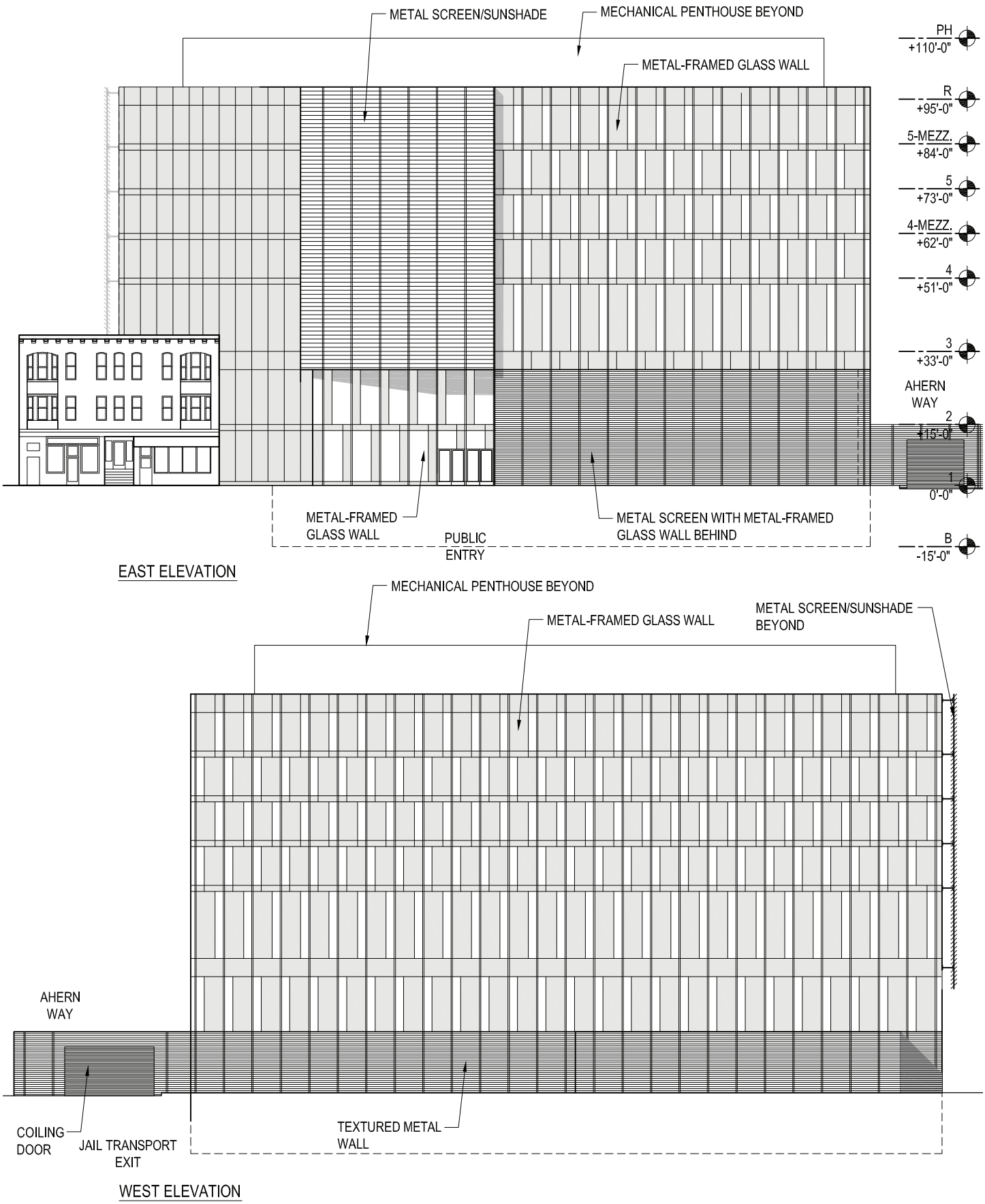


FIGURE 4: Project Elevations

Victoria Manalo Draves Park Entry

III. POTENTIALLY AFFECTED PARKS AND OPEN SPACES

Ball Field

Victoria Manalo Draves Park

Victoria Manalo Draves (VMD) Park is a public park under the jurisdiction of the RPD. It is a highly developed 2.53-acre urban park located in the SOMA neighborhood of San Francisco on Assessor's Block 3754/Lot 016. The park is bounded by Folsom Street to the northwest, Harrison Street to the southeast, Columbia Square to the northeast, and Sherman Street to the southwest. The park is enclosed by a 5-foot tall fence and locked at night. The stated hours of operation for Victoria Manalo Draves Park are from sunrise to sunset, 365 days per year (http://www.sfrecpark.org/destination/victoria-manalo-draves-park/).

Children's Play Areas

The park contains landscaped areas, walkways and areas for active and passive uses. VMD park's primary public entrance is located on the corner of Folsom Street and Columbia Square. The entry diagonally bisects the northeast area of the park and is flanked on either side by grassy areas. The walkway branches off towards the center of the park, paths lead to the basketball court, a community garden, and 2 children's play areas to the south of the community garden with a variety of play structures. The northern play area is designed for younger children while the southern area has larger play equipment for older kids. To the east is an oval-shaped mounded grassy area

1. Park Entry
2. Basketball Court
3. Community Garden
4. Children's Play Areas
5. Restrooms
6. Grass Areas
7. Picnic Areas
8. Ball field
9. Bessie Carmichael School Playground

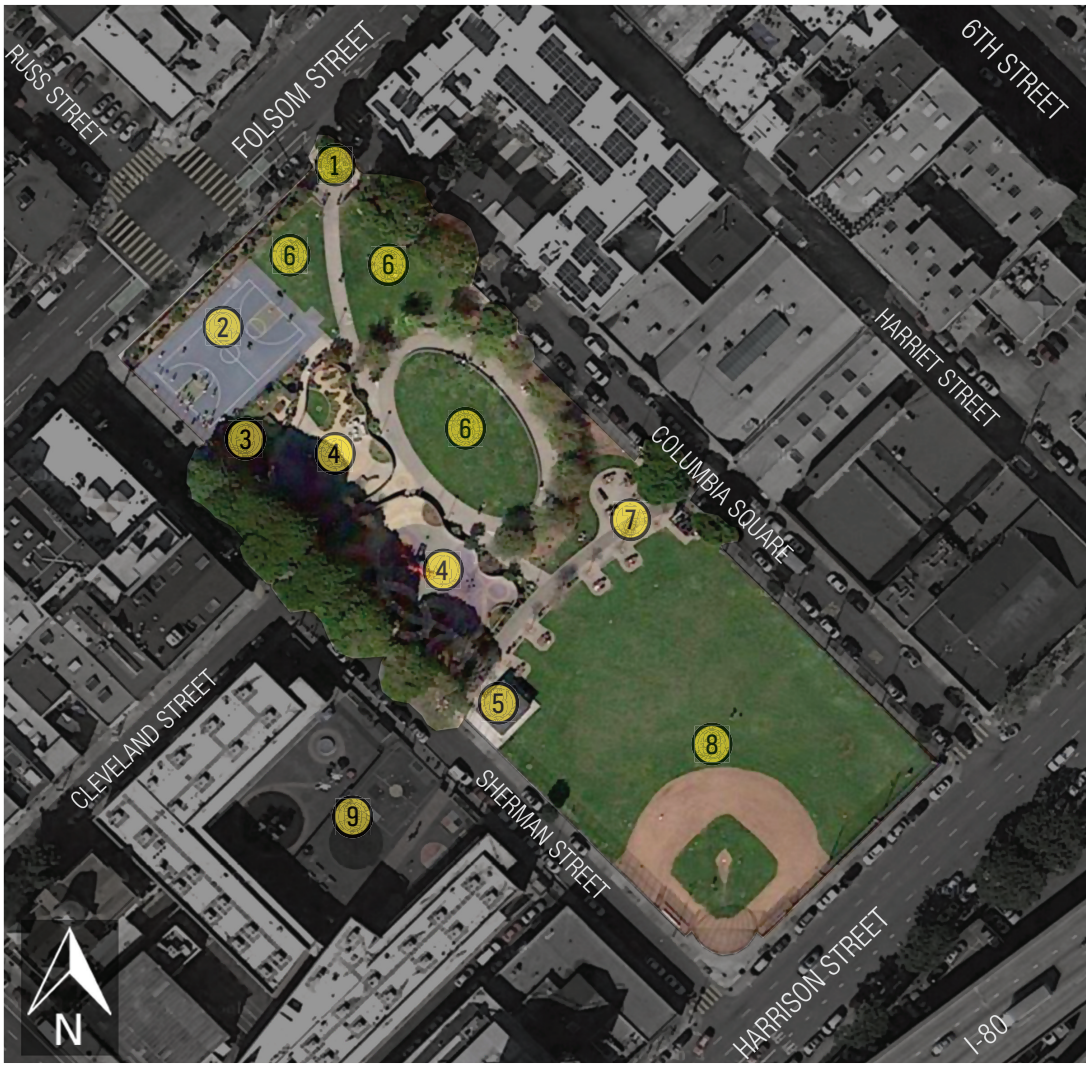


FIGURE 5: Victoria Manalo Draves Park

which is ringed by fixed benches on the north/east/south sides. The walk continues to south/southeast along a walled playground and terminates in an east-west running transverse walkway which borders the ball field. This walkway connects a restroom structure and secondary public entrance at Sherman Street at the western edge to a third public entrance from Columbia Square to the east. South of the walkway are fixed picnic tables and the ball field.

Other Parks and Open Spaces

The proposed project does not have the potential to affect any other public parks in the vicinity including the nearby South of Market (aka Gene Friend) Recreation Center, nor would new shadows be cast the outdoor play areas of the nearby Bessie Carmichael School. ■

IV. SECTION 295 EVALUATION CRITERIA

Proposed projects more than 40 feet in height and that have the potential to cast new shading on parks under the control of the RPD are subject to review under Section 295 of the San Francisco Planning Code. Compliance with Section 295 of the Planning Code requires that a proposed project not adversely affect public use and enjoyment of existing or proposed parks under the control of the RPD. An adverse effect is defined as the addition of new shading from any development over 40 feet in height at any time throughout the year at times between one hour after sunrise through one hour before sunset, unless the Planning Commission, with input from the general manager of the RPD and the Recreation and Park Commission, determines that the new shading would be insignificant.

Quantitative Evaluation Criteria

To guide the RPD and the Planning Department in determining what levels of new shading may be permissible, the 1989 Proposition K memorandum establishes tolerance level limits for new shading. Certain parks have specifically assigned shadow increase limits, while other parks are covered by generic standards tied to park size and the existing amount of annual shade that currently falls on the park.

PARK SIZE	CURRENT ANNUAL SHADING PERCENTAGE	POTENTIALLY PERMISSIBLE SHADING INCREASE
Parks smaller than 2 acres	20% or less	no standard established
	20% or more	0.0% (no increase)
Parks larger than 2 acres	20% or less	1.0%
	20%-40%	0.1%
	40% or more	no standard established

FIGURE 6: Potentially Permissible Shading Increases

VMD Park is 2.53 acres and is currently shaded 6.63% of the year. As such, it is considered a larger park under the 1989 Proposition K memorandum. Since the park is shaded less than 20% of the year, the 1989 Proposition K memorandum states a potentially permissible increase in shading of 1.0%.

Qualitative Evaluation Criteria

The 1989 Proposition K memorandum establishes qualitative evaluation criteria for each park based on existing shadow profiles, important times of the day, important seasons in the year, size and duration of new shadows, and the service of public good by buildings that would cast new shadows. In particular, in order to be considered not significant, new shadows must not adversely affect existing patterns of use in the park when evaluated by factors such as the value of sunlight and shadow characteristics (size, duration, and location). ■

V. ANALYSIS METHODOLOGY

Quantitative Analysis

The shadow analysis completed by PreVision Design used an accurately Geo-located 3D computer model of the proposed project, the park, and the surrounding urban environment to simulate and calculate both existing amounts of shading and levels of shading that would be present with the addition of the proposed project starting one hour after sunrise through one hour before sunset. Between these boundary times, the model performed snapshot analyses at 15-minute intervals and repeated this process for every seven days between the Summer Solstice and Winter Solstice. This half-year is referred to as a "solar year" for purposes of this report, and the data taken from these 27 sample dates throughout the course of the solar year are then mirrored with interim times and dates extrapolated to arrive at the full-year shading calculation. The difference between the current levels of shading and the levels of shading that would be present with the addition of the proposed project yields the total annual increase, measured in square-foot-hours (sfh) of shade. This increase is taken as a percentage of total theoretical square-foot-hours of sun in the park (the amount of sun that would fall on the park throughout the year if there were no shading present at any time) to determine whether the new shadows created by the proposed project would fall within or outside the potentially permissible limits of increased shading. The findings of this quantitative analysis are discussed in Section VI.

Qualitative Analysis

To evaluate whether and how new shading might affect existing patterns of park use, PreVision Design conducted six site visits to VMD park to observe park use(s). Two site visits were performed in the morning, two at midday, and two late in the day, all within Section 295 hours, with one set of visits on a weekday and one on a weekend. The findings of this qualitative analysis are discussed in Section VIII.

Cumulative Shadow Analysis

This report also analyzes and discusses shadows from other projects in the vicinity of the proposed project that have undergone design review with the Planning Department such that their final form and massing have been reasonably established. Developments included in this study were 280 7th street, 190 Russ Street, 345 6th Street and 363 6th street. Nearby projects at 377 6th Street and 510 Townsend Street were not included in the cumulative analysis as their final form has not yet been sufficiently established, and projects at 350 8th Street and 598 Brannan Street were excluded due to the fact that their longest shadows would fall short VMD park.

The cumulative condition projects are reviewed in this report in order to determine the future shading impact on VMD Park that would result from these projects combined with the proposed project. The impact is discussed quantitatively in Section VII, and shadow profiles are displayed graphically in Exhibits B through D. ■

VI. QUANTITATIVE SHADOW MODELING FINDINGS

Existing Shading Conditions

The park has a total area of 2.53 acres (109,997 square feet) and currently has 27,152,546 sfh of shade annually. Based on a theoretical annual available sunlight (TAAS) of 409,342,836 sfh, the park is currently shaded 6.63% of the year.

Increase in Shadow Due to Proposed Project

The proposed project would result in new shadows falling on the park, adding approximately 106,510 sfh net new shadow and increasing square-foot-hours of shadow by 0.03% above current levels, resulting in a new cumulative annual total shading of 6.66%. The project-generated increase of 0.03% falls within the potentially permissible shading increase of 1.0% as established by the 1989 Memorandum.

Cumulative Shadow Increase

The cumulative shading from the proposed project combined with other foreseeable projects in the vicinity would result in an increase of 27,520,726 sfh of shading on the park, compared to an increase of 27,259,056 sfh from the proposed project alone. This cumulative shading increase would bring the annual shading total to 6.72%, an increase of 0.09%. The increase in shading from the proposed project plus other projects would be 0.06% more than the increase in shading from the proposed project alone. The

THEORETICAL ANNUAL AVAILABLE SUNLIGHT	
Area of Victoria Manolo Draves Park	2.53 acres
Hours of annual available sunlight	3721.4 hrs
TAAS for Victoria Manolo Draves Park	409,342,836 sfh

EXISTING (CURRENT) SHADING CONDITIONS	
Existing annual total shading on park (sfh)	27,152,546 sfh
Existing shading as percentage of TAAS	6.63%

SHADING DETAILS	HALL OF JUSTICE
New annual shading from Project only (sfh)	106,510 sfh
Shading from Project only as percentage of TAAS	0.03%
Total annual shading Existing + Project (sfh)	27,259,056 sfh
Shading from Existing + Project as percentage of TAAS	6.66%
Number of days when new Project shading occurs	165 days annually
Dates when new Project shading occurs	Feb 3-Apr 25 and Aug 17-Nov 7
Range in size of new shadow (sf)	Zero to 10,954 sf
Annual range of duration of new shadows	Zero to Approx. 34 min
Average daily duration of new shadow (when present)	Approx. 19 min
DAY(S) OF MAXIMUM SHADING	HALL OF JUSTICE
Date(s) where maximum new shading occurs	March 8 & October 4
Largest new shadow on date(s) of maximum impact (sf)	10,954 sf
Duration of shading on date(s) of maximum shading	Approx. 22 min
Total New Shading on date(s) of maximum impact	1,406,128.32 sfh

CUMULATIVE SHADING DETAILS	HALL OF JUSTICE + CUMULATIVE
New annual shading from Cumulative only (sfh)	368,180 sfh
Shading from Cumulative only as percentage of TAAS	0.09%
Total annual shading Existing + Cumulative (sfh)	27,520,726 sfh
Shading from Existing + Cumulative as percentage of	6.72%
Number of days when new Cumulative shading occurs	278 days annually
Dates when new Cumulative shading occurs	Jan12 - Nov 29
Range in size of new shadow (sf)	Zero to 10,954 sf
Annual range of duration of new shadows	Zero to Approx. 50 min
Average daily duration of new shadow (when present)	Approx. 33 min
CUMULATIVE DAYS OF MAX SHADING	HALL OF JUSTICE + CUMULATIVE
Dates where maximum new shading occurs	June 21
Largest new shadow on dates of maximum impact (sf)	10,282 sf
Duration of shading on dates of maximum shading	Approx. 49 min
Total New Shading on dates of maximum impact	1,399,057.08 sf/hrs

FIGURE 7: Project quantitative shading breakdown for VMD Park

cumulative increase of 0.09% falls within the potentially permissible shading increase of 1.0% as established by the 1989 Memorandum.

Figure 7 summarizes the existing condition data and quantitative shadow impacts of the proposed project on the park as well as the shading that would be present in the cumulative scenario. The full quantitative calculations for shading conditions on the park on all 27 analysis dates are included as Exhibit E.

Timing and Location of New Shadow

New shadows from the proposed project would occur within the first 35 minutes after sunrise plus one hour specified by Section 295 between February 3rd and April 25, then again between August 17 and November 7. New shading, when present would be cast southern corner of the park. Exhibit A graphically represents the aggregate shadow boundary of areas receiving new shading from the proposed project throughout the year.

The days of maximum shading on the park due to the proposed project would occur on March 8 and October 4, when the proposed project would shade a portion of southern part of the park at the Section 295 start time of 8:08 a.m. Pacific Daylight Time (PDT) and be present for approximately 35 minutes. The duration of proposed project-generated new shading would vary from zero to approximately 35 minutes throughout the year, lasting an average of 19 minutes during the affected shading .

In the cumulative condition, additional new shading would occur on at the northern side of VMD park late in the day during summer due to shading from the proposed project at 190 Russ Street. Shadows cast by cumulative projects on VMD park would not interact at any time with shadows from the proposed project. ■

VII. QUALITATIVE ANALYSIS

Observed Park Uses

Within the six 30-minute observation periods conducted by PreVision Design between June 26 and July 7, 2013, the number of users in the park ranged from 25 to 125, with uses that varied at different times of day and days of the week. Observed park use included users eating lunch and resting on benches, walking dogs, playing basketball and children playing in the playground area. See Figure 8 for an observation summary.

OBSERVATION TIME	DATE OF VISIT	PARK USERS	TEMP - WEATHER
Weekday Morning	6/26/13	43	66° F - Mostly Cloudy
Weekday Midday	7/3/13	125	73° F - Mostly Cloudy
Weekday Afternoon	6/27/13	33	76° F - Clear
Weekend Morning	7/7/13	25	63° F - Scattered Clouds
Weekend Midday	6/29/13	56	84° F - Clear
Weekend Afternoon	6/30/13	50	70° F - Scattered Clouds

FIGURE 8: Park Use Observations

Overall, observed peak use at the park occurred during weekday noontime hours. The observed intensity of use varied between the various observation times but could be characterized as moderate given the park's size. Observed peak use on July 3 corresponded to a ratio of 880 square feet of park area per user.

The Value of Sunlight

The value of sunlight varies depending on the nature of features being shaded as well as their intensity of use. Benches, picnic tables, play areas, and other similar features at which users are usually stationary for periods of time are typically considered more sensitive than transitional spaces (such as walkways), or wooded areas where shade is already a predominant and expected condition. Additionally, open areas of sufficient size that are substantially unshaded (large grassy areas, etc.) may be considered less affected by new shadow if the areas also have low use intensity and if users seeking sunshine would be able to navigate to a sunny spot with minimal inconvenience. Finally, the value of sunlight varies with the abundance or scarcity of features relative to demand. For example, new shade affecting 10 benches in a little-used park that has a total of 25 benches would have less impact than new shade affecting 5 benches in a heavily used park that has only 10 benches. In the latter case, the value of a sunny bench is elevated due to its relative scarcity.

Shadow Characteristics

The ball field is VMD Park's largest single feature with respect to area and the only one to receive new shadow from the proposed project On the days of maximum shading (March 8 and October 4) at the moment of the largest new shadowing (8:08 a.m.), the proposed project would overshadow the approximately 1/3rd of the currently available sunlight on the field (see Figure E1.1), but the shadow would move to the east and diminish in size retreat over the next 22 minutes so that the field would not be shaded by the proposed project by 8:30 a.m. (see Figure E1.3). This shading condition would occur at a time when no weekday nor weekend users were observed using this area of the park.

Exhibits B through D graphically illustrate shading conditions at hourly intervals throughout the day between the Section 295 cutoff times at the Summer Solstice (June 21), the Vernal/Autumnal Equinoxes (March 20/September 22), the Winter Solstice (December 21), and the Days of Maximum Shading (March 8 and October 4). ■

VIII. DEVELOPMENT ALTERNATIVES

Project Alternative Resulting in No New Shadow on VMD Park

The proposed project is 95' to the roof line with a 15' mechanical parapet. If the proposed project were reduced in height by approximately 30', it would cast no new shadow at any time throughout the year on VMD park. A 30' height reduction would require the elimination of 3-4 levels of the project as currently proposed. ■

IX. PROJECT-RELATED PUBLIC GOOD

In order to assist decision-makers in evaluating whether new shading generated by the proposed project might be acceptable, consideration of the public benefits associated with the proposed project must be weighed against effects of new shadows on the park. Preceding sections of this report detail the quantitative and qualitative effects of new shading. This section describes some key benefits of the proposed project, as outlined by the project sponsor.

Civic Need

The Hall of Justice (HOJ) Rehabilitation and Detention Facility fulfills a critical and necessary ongoing function within the city, and the existing facility has been deemed seismically deficient. In providing a new, secure facility on an adjacent lot SFDPW and San Francisco Sheriff's Department propose to fulfill the following objectives:

- To provide a maximum security jail facility within the City and County of San Francisco;
- To provide a jail facility resistant to suicide and contraband concealment;
- To provide a durable jail facility, requiring low maintenance;
- To construct a jail facility capable of providing all services to fully and efficiently meet the needs of inmates;
- To construct a jail facility capable of implementing latest efficient technologies and to improve electrical system performance within the Sheriff Department's facilities;

- To construct a design-efficient jail facility that is supportive of staffing needs and which operates efficiently for employees;
- To construct an energy efficient and environmentally responsible jail facility; To construct a jail facility compliant with adult detention facility codes and standards, including requirements of the San Francisco Sheriff's Department;
- To construct a jail facility capable of providing secure local area networks and Internet communication;
- To construct a jail facility which is civic minded and mindful of law enforcement's institutional image;
- To offer a jail facility free of life-safety seismic hazards;
- To construct a new jail facility adjacent to the existing courts building and County Jail #1, which serve as the intake and processing stations for all inmates entering the San Francisco County jail system, in order to increase safety of staff and inmates, minimize risks associated with transporting inmates, and reduce transportation costs for the San Francisco Sheriff's Department; and
- To construct a new jail that allows convenient public transportation access for visitors of inmates.

Design & Public Safety

It is anticipated that the new RDF would be constructed to meet or exceed basic Leadership in Energy and Environmental Design (LEED) Silver or GreenPoint Rated standards established in the San Francisco Green Building Ordinance with respect to energy and water use for City-owned buildings. The new facility would include podular housing units that allow for direct supervision of inmates, increasing the safety of inmates and staff, and efficient provision of services. Program space for classrooms, computer and vocational training to foster Sheriff's Department rehabilitative programs, and medical and mental health units for inmates would also be constructed.

The proposed project would include improvements within the Harriet Street and Ahern Way rights-of-way. Portions of Harriet Street and Ahern Way would be reconfigured to accommodate designated, secure service and jail transport areas (a loading dock on Harriet Street and a sally port on Ahern Way) constructed as part of the RDF. A proposed pedestrian tunnel connection would be constructed under the Harriet Street roadway and sidewalks to connect the proposed RDF with the existing HOJ basement level. Inmates and in-custody defendants would be transferred between facilities and the courts via this tunnel as a secure path of travel. The proposed project also includes renovations to the existing HOJ basement access point to serve as a secure in-custody corridor for jail inmate transport. These renovations would include changes to the existing basement parking access entrance. ■

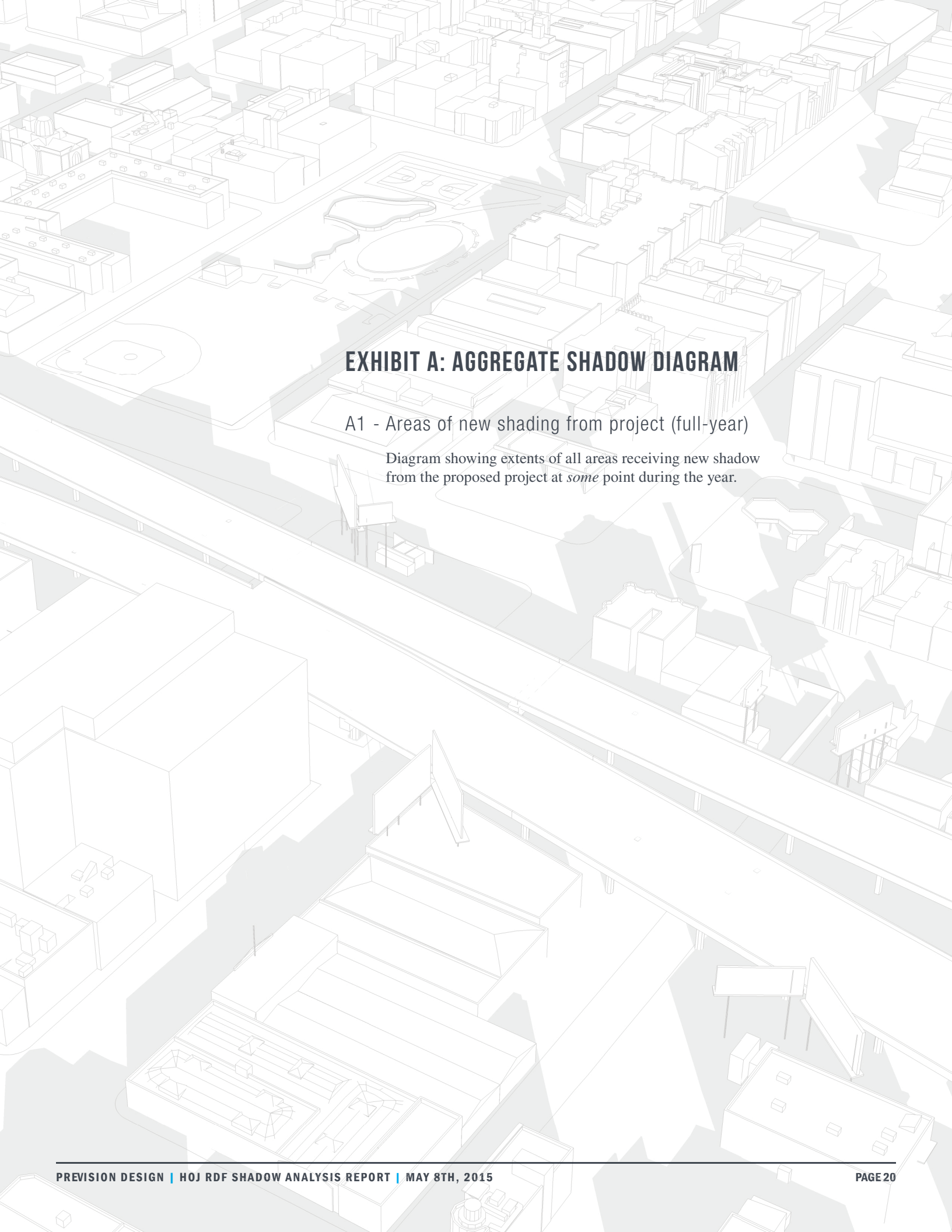


EXHIBIT A: AGGREGATE SHADOW DIAGRAM

A1 - Areas of new shading from project (full-year)

Diagram showing extents of all areas receiving new shadow from the proposed project at *some* point during the year.

A1.1 HALL OF JUSTICE ADULT DETENTION FACILITY

Aggregate annual new project shadows

AGGREGATE ANNUAL SHADOWS CAST DURING SECTION 295 HOURS ANNUALLY **FULL YEAR**

Proposed project
Shadow fan of proposed project

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

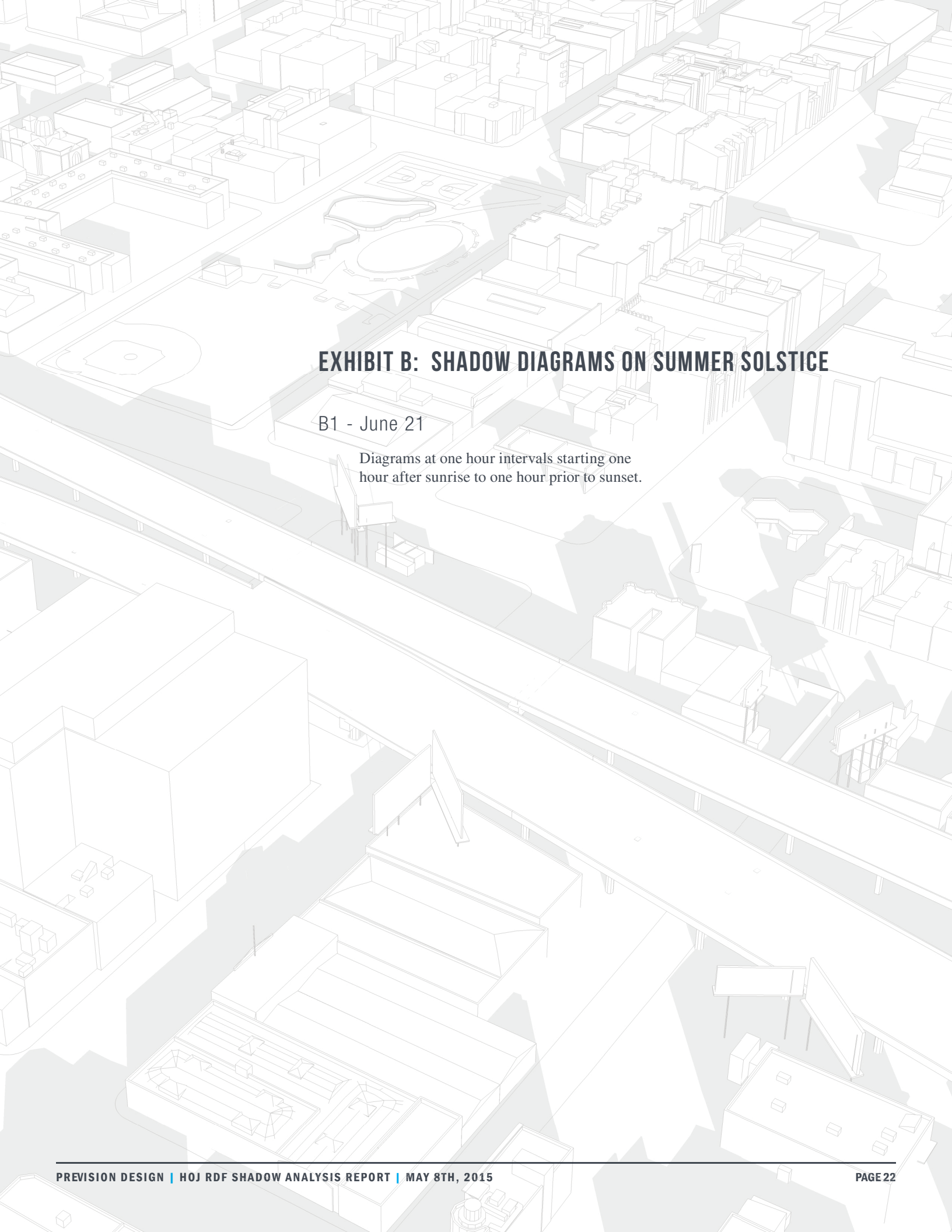


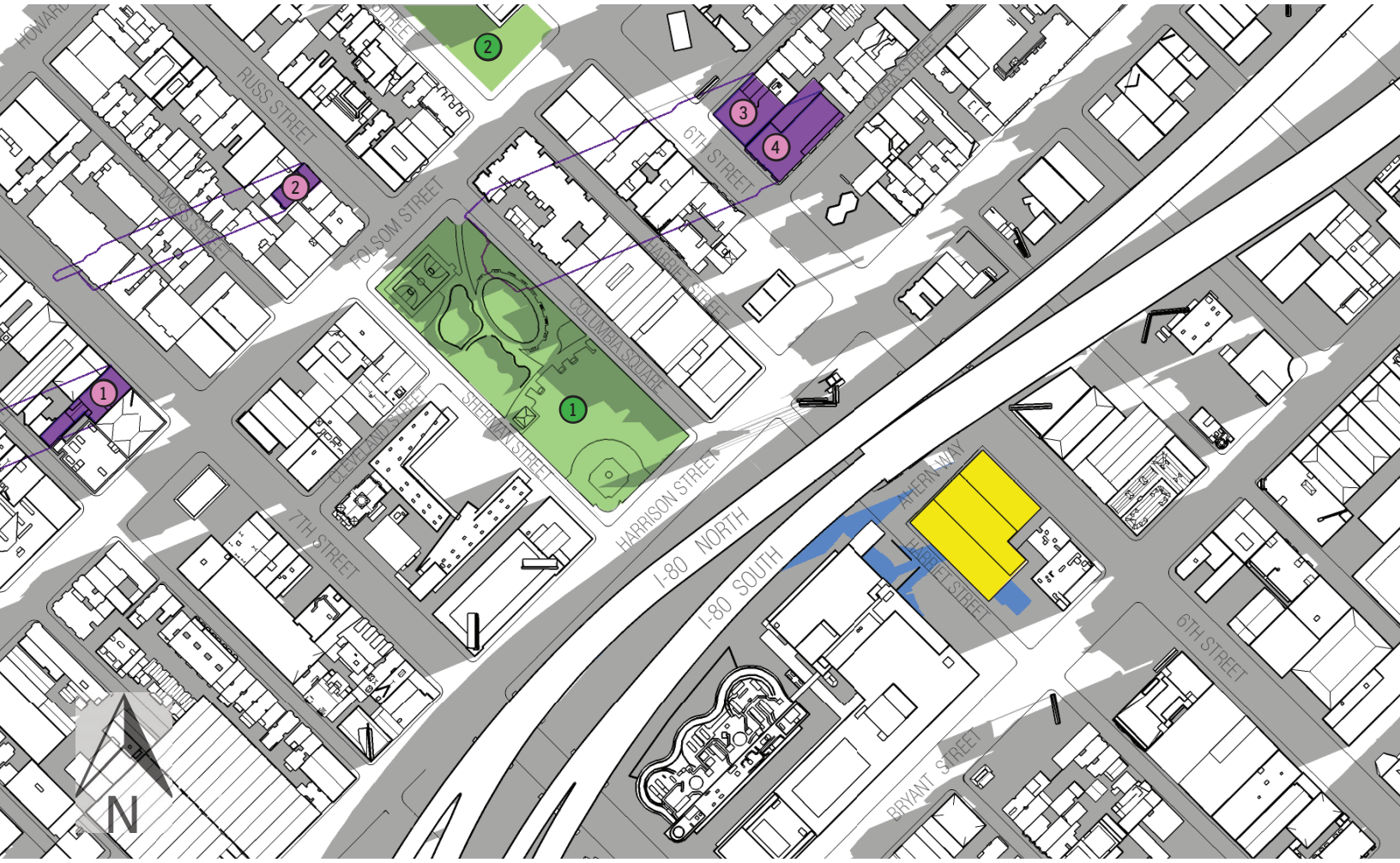
EXHIBIT B: SHADOW DIAGRAMS ON SUMMER SOLSTICE

B1 - June 21

Diagrams at one hour intervals starting one hour after sunrise to one hour prior to sunset.

B1.1 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Summer Solstice



SUMMER SOLSTICE
JUNE 21

6:48 AM

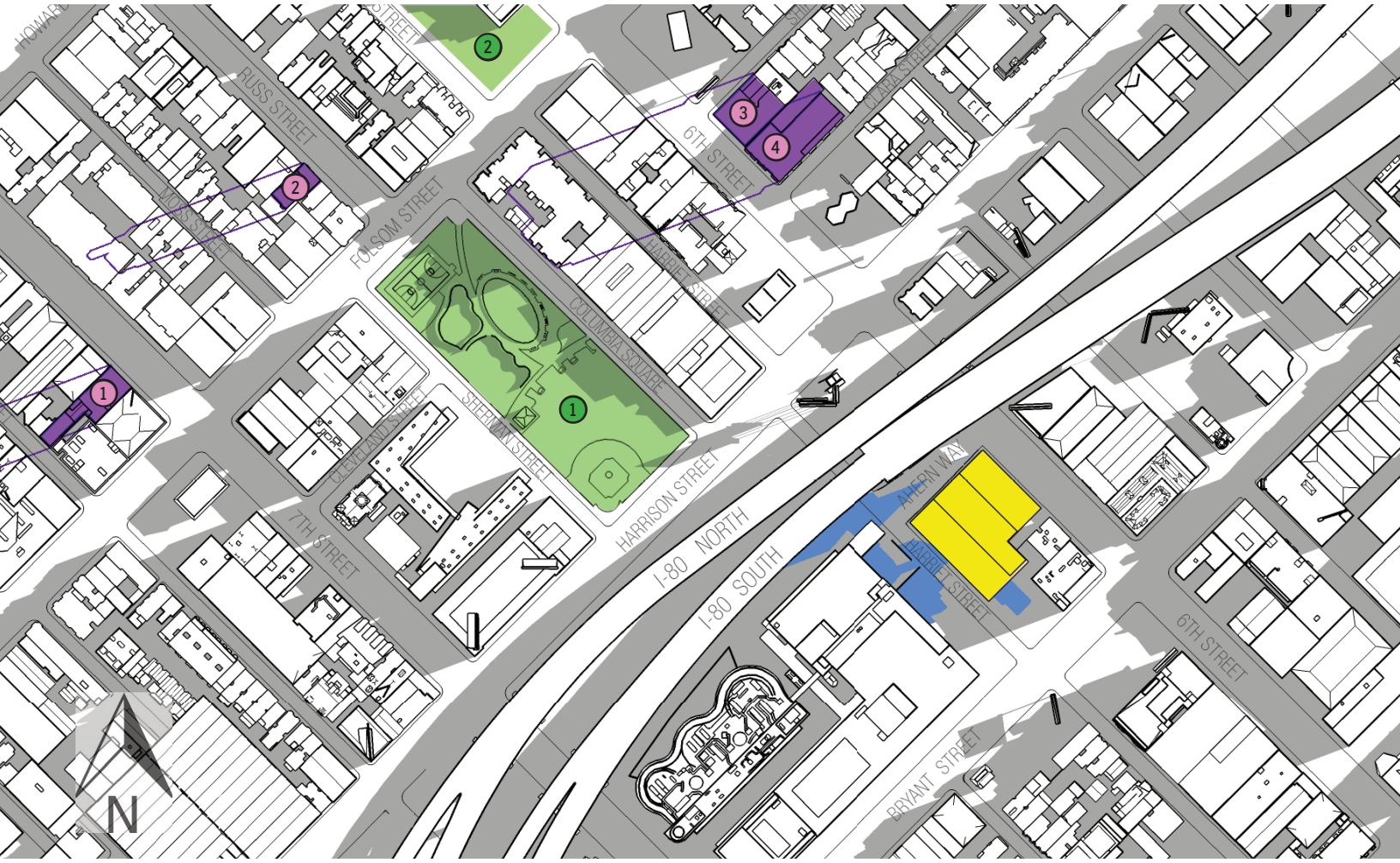
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

B1.2 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Summer Solstice



SUMMER SOLSTICE
JUNE 21

7:00 AM

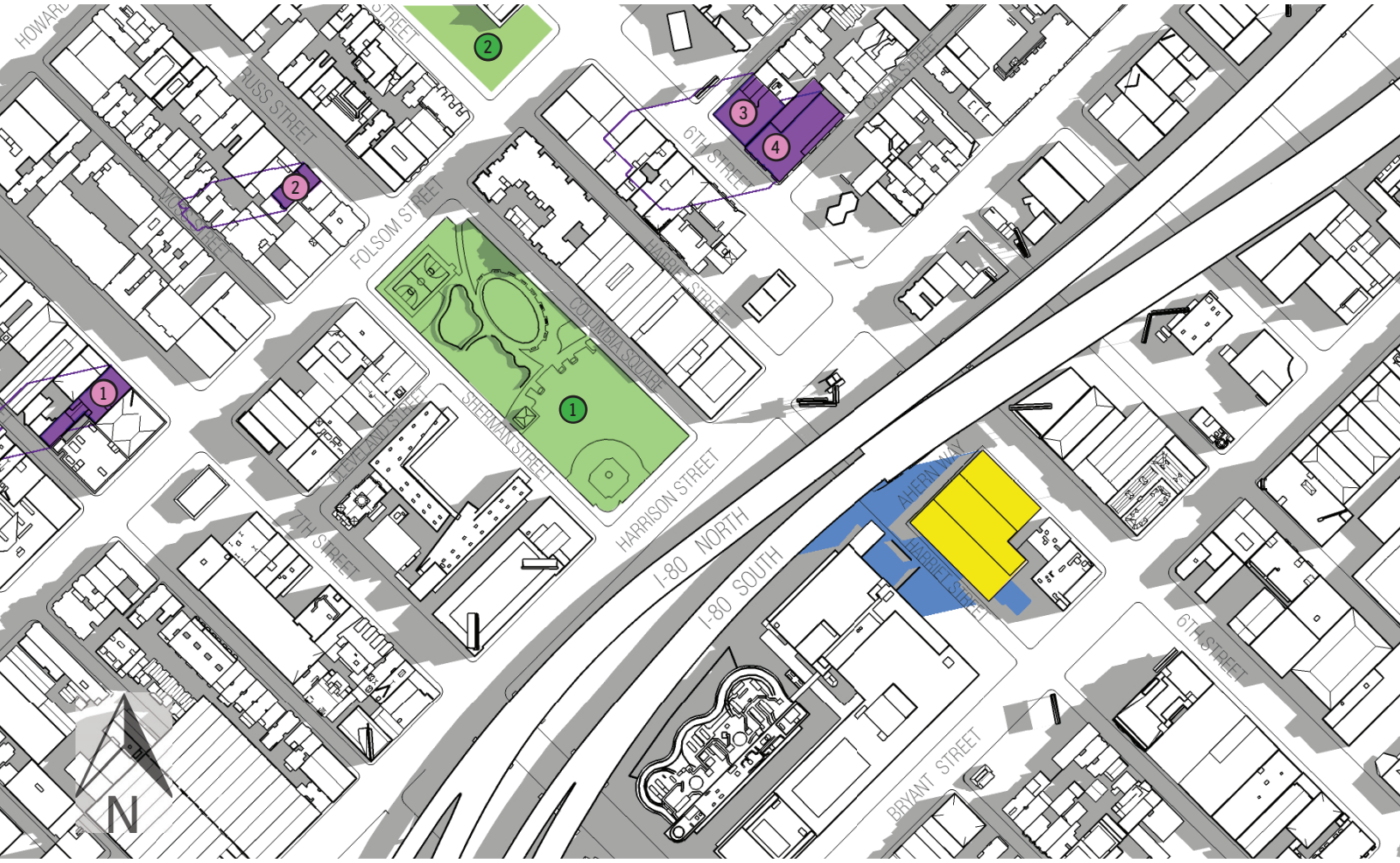
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

B1.3 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Summer Solstice



SUMMER SOLSTICE
JUNE 21

8:00 AM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

B1.4 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Summer Solstice

SUMMER SOLSTICE
JUNE 21

9:00 AM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

B1.5 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Summer Solstice

SUMMER SOLSTICE
JUNE 21

10:00 AM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

B1.6 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Summer Solstice

SUMMER SOLSTICE
JUNE 21

11:00 AM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

B1.7 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Summer Solstice

SUMMER SOLSTICE
JUNE 21

12:00 PM

Proposed project
Existing (current) shading
New shading by proposed project
Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

B1.8 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Summer Solstice

SUMMER SOLSTICE
JUNE 21

1:00 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

B1.9 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Summer Solstice

SUMMER SOLSTICE
JUNE 21

2:00 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

B1.10 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Summer Solstice

SUMMER SOLSTICE
JUNE 21

3:00 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

B1.11 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Summer Solstice

SUMMER SOLSTICE
JUNE 21

4:00 PM

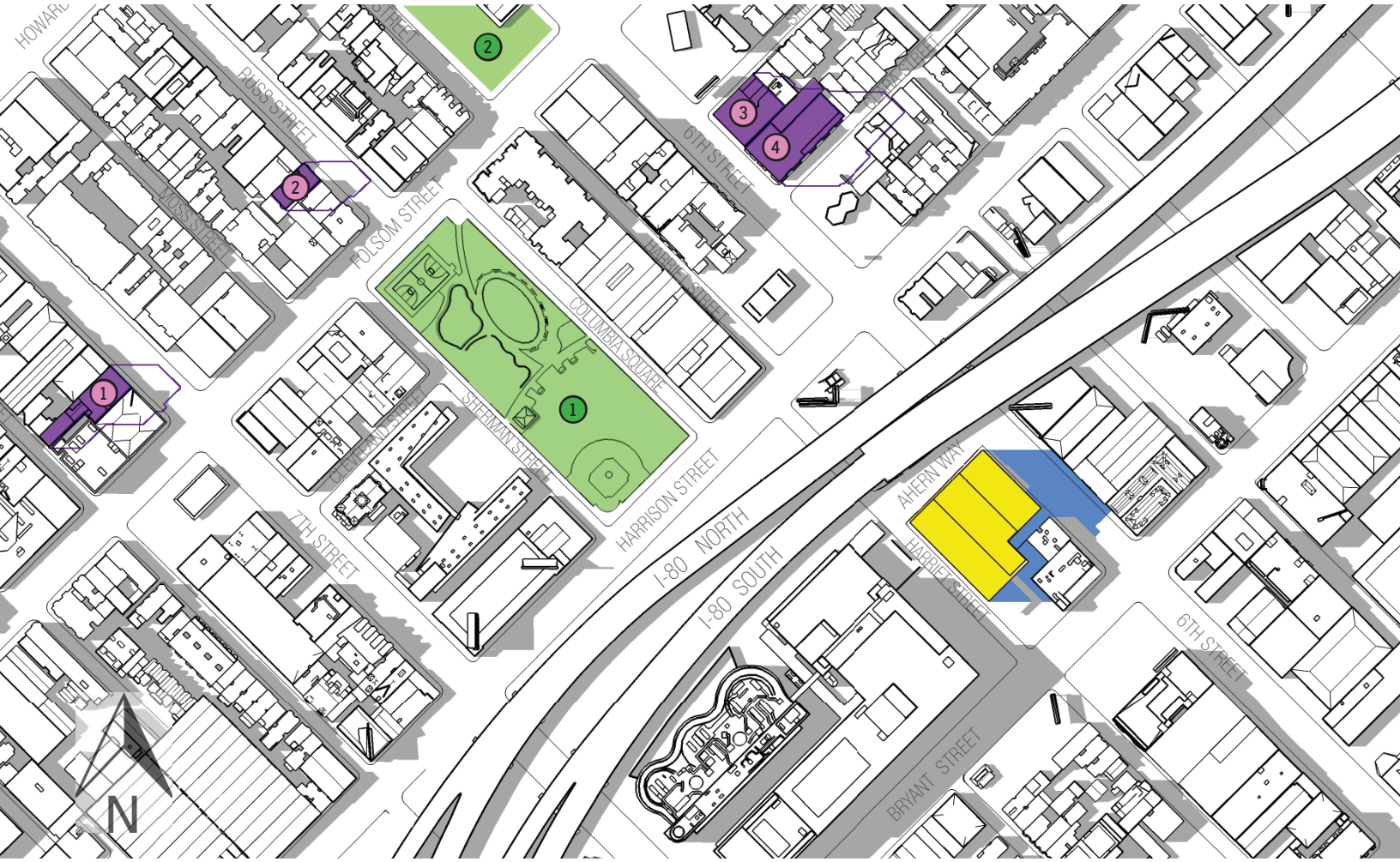
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

B1.12 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Summer Solstice



SUMMER SOLSTICE
JUNE 21

5:00 PM

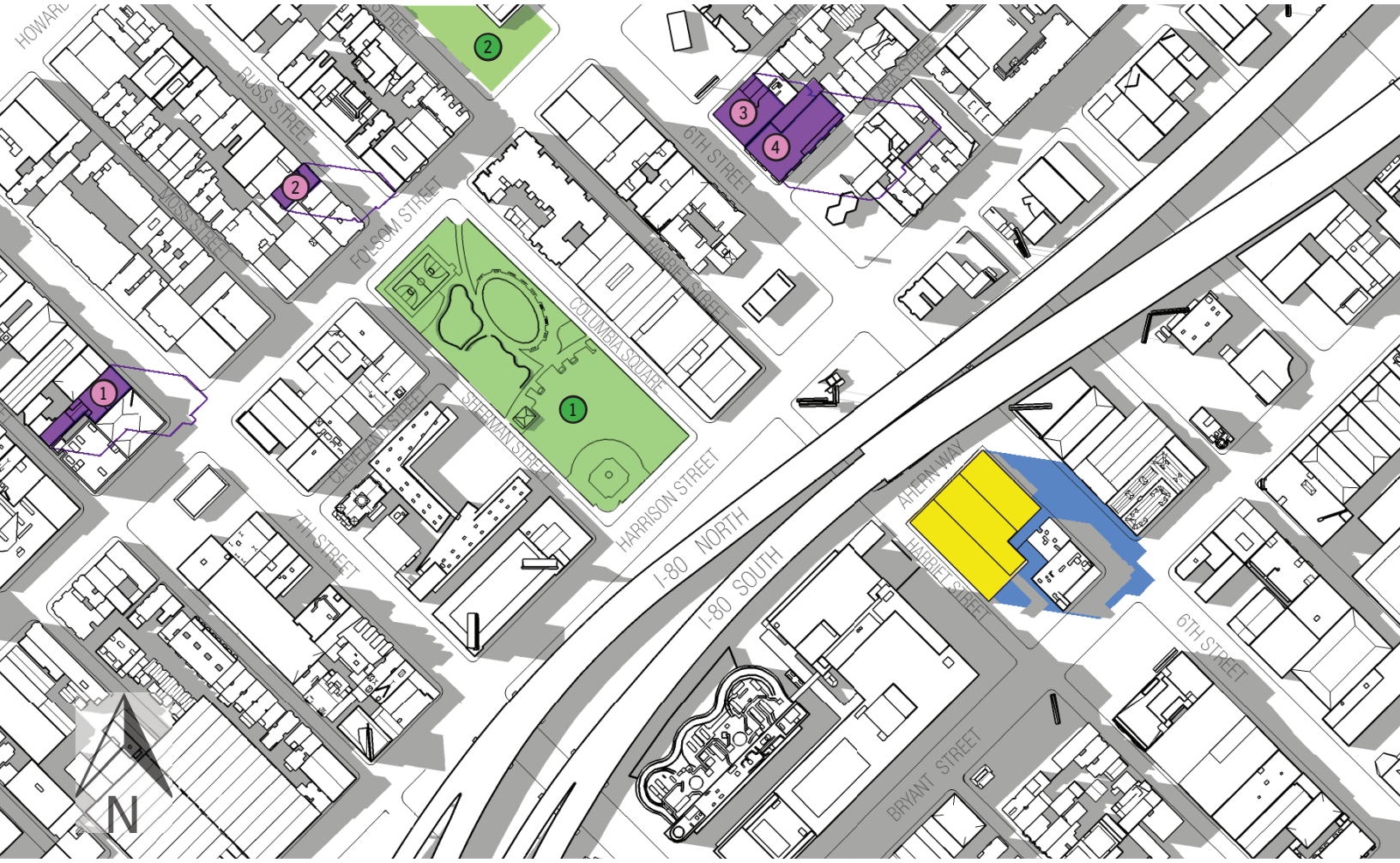
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

B1.13 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Summer Solstice



SUMMER SOLSTICE
JUNE 21

6:00 PM

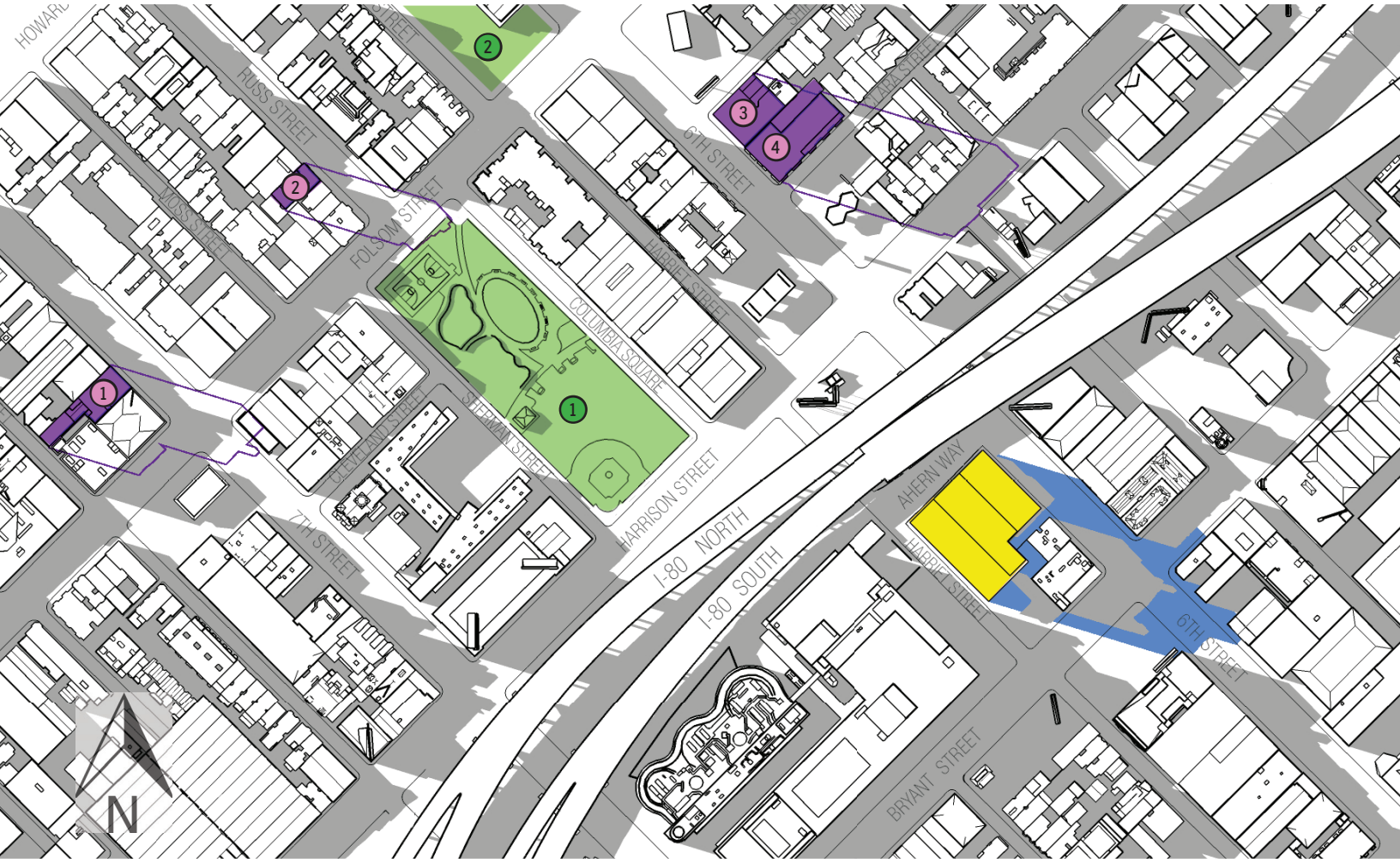
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

B1.14 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Summer Solstice



SUMMER SOLSTICE
JUNE 21

7:00 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

B1.15 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Summer Solstice

SUMMER SOLSTICE
JUNE 21

7:35 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

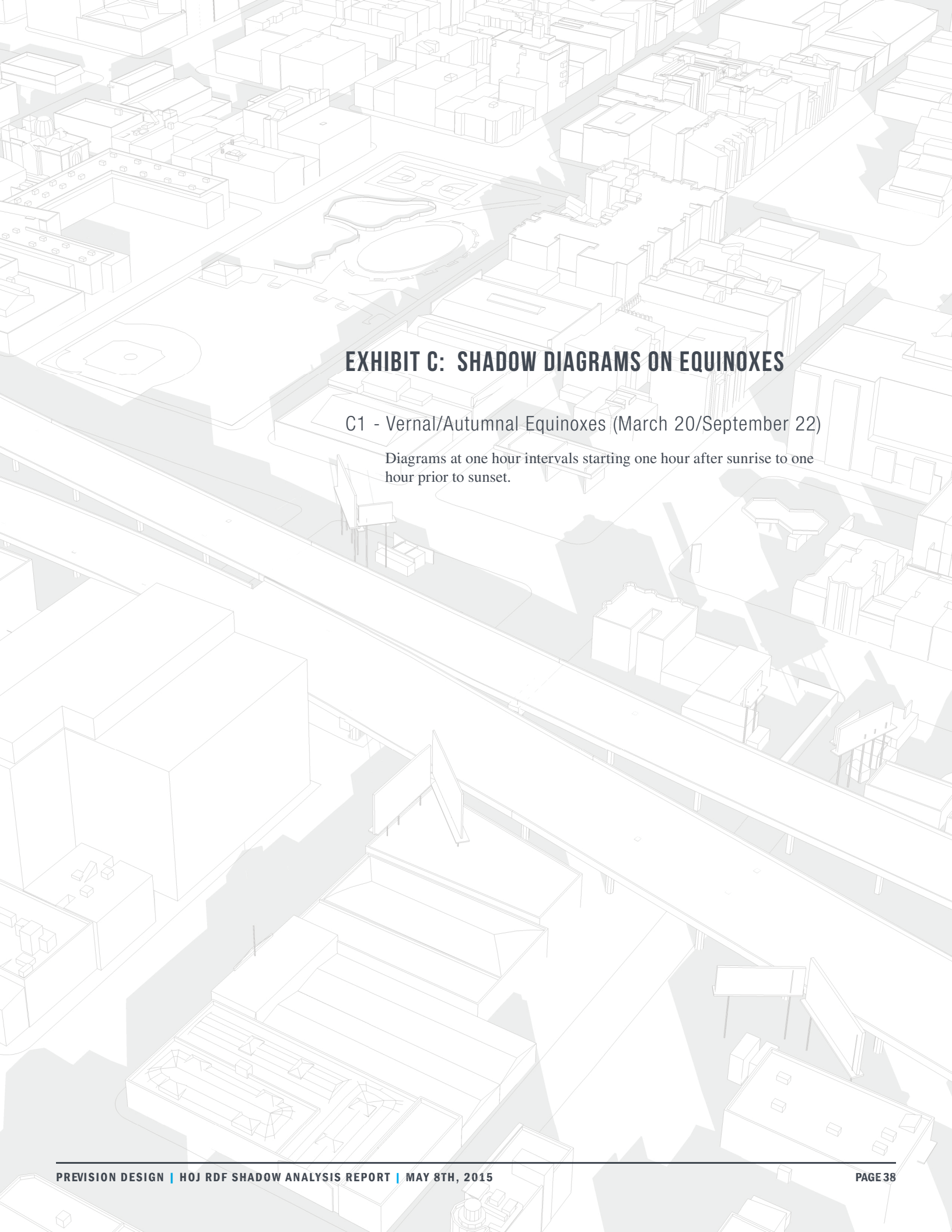


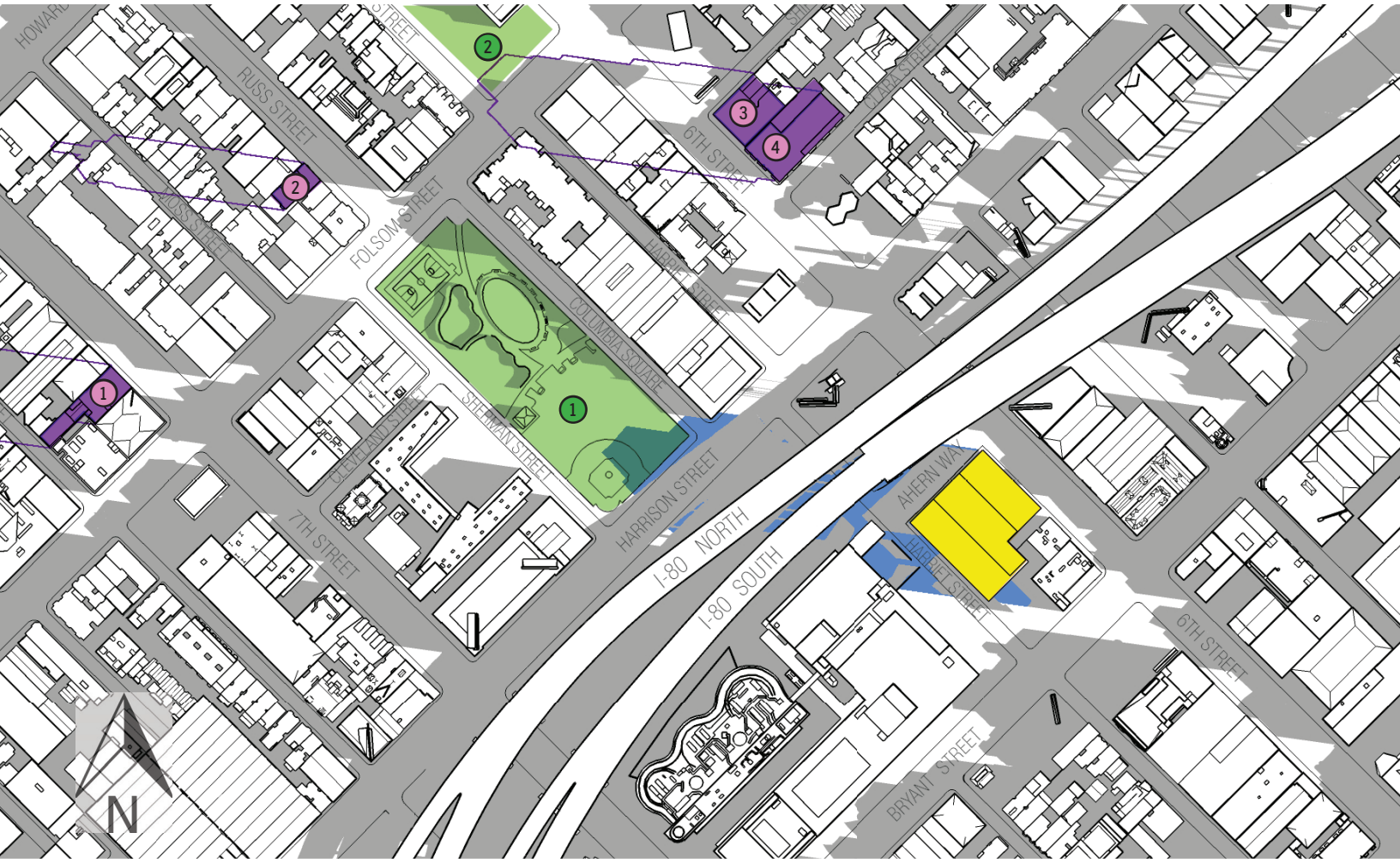
EXHIBIT C: SHADOW DIAGRAMS ON EQUINOXES

C1 - Vernal/Autumnal Equinoxes (March 20/September 22)

Diagrams at one hour intervals starting one hour after sunrise to one hour prior to sunset.

C1.1 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on Vernal/Autumnal Equinox



VERNAL/AUTUMNAL EQUINOX
MARCH 20 / SEPTEMBER 22

7:58 AM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

C1.2 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on Vernal/Autumnal Equinox

VERNAL/AUTUMNAL EQUINOX
MARCH 20 / SEPTEMBER 22

8:00 AM

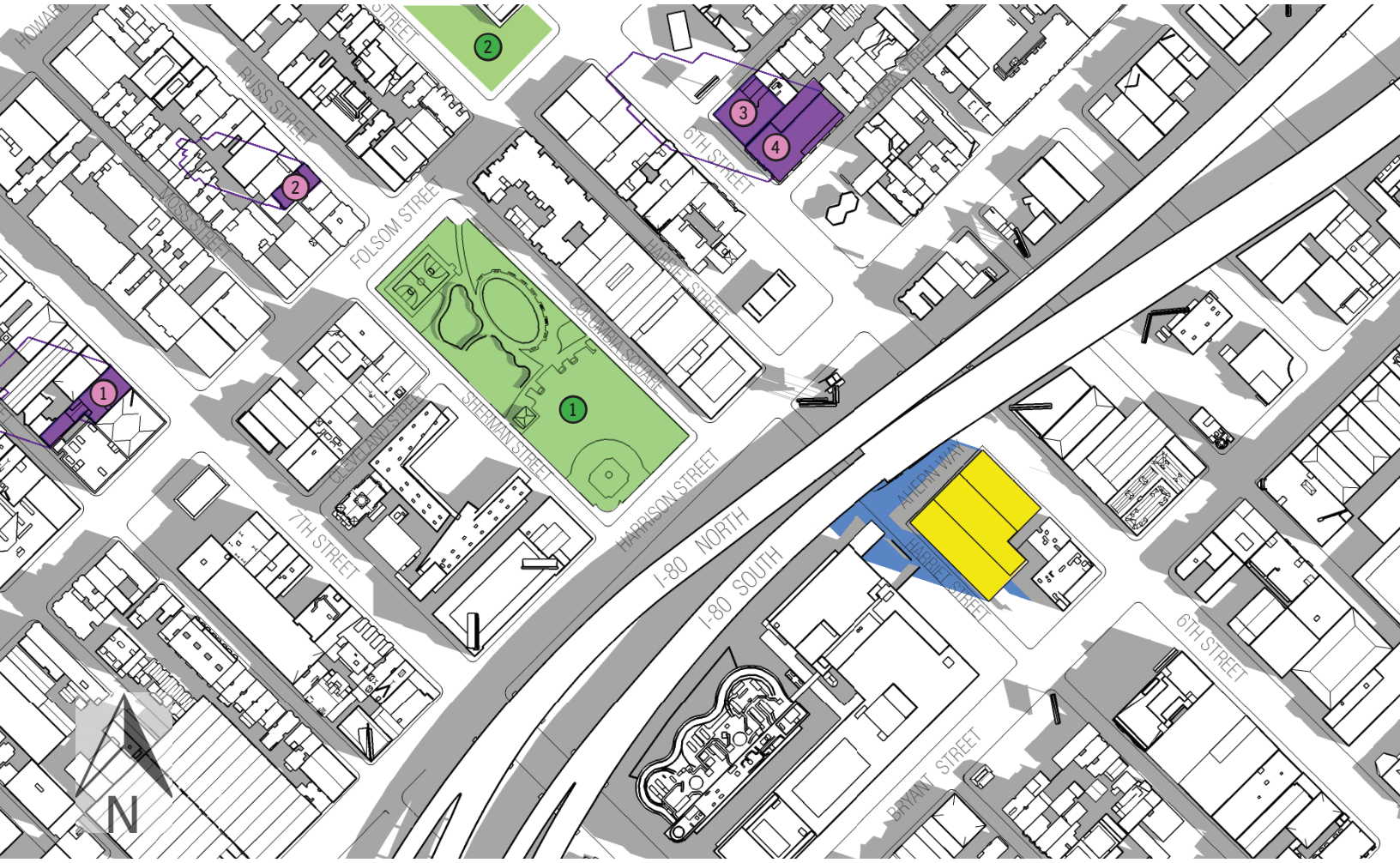
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

C1.3 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on Vernal/Autumnal Equinox



VERNAL/AUTUMNAL EQUINOX
MARCH 20 / SEPTEMBER 22

9:00 AM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

C1.4 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on Vernal/Autumnal Equinox

VERNAL/AUTUMNAL EQUINOX
MARCH 20 / SEPTEMBER 22

10:00 AM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

C1.5 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on Vernal/Autumnal Equinox

VERNAL/AUTUMNAL EQUINOX
MARCH 20 / SEPTEMBER 22

11:00 AM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

C1.6 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on Vernal/Autumnal Equinox

VERNAL/AUTUMNAL EQUINOX
MARCH 20 / SEPTEMBER 22

12:00 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

C1.7 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on Vernal/Autumnal Equinox

VERNAL/AUTUMNAL EQUINOX
MARCH 20 / SEPTEMBER 22

1:00 PM

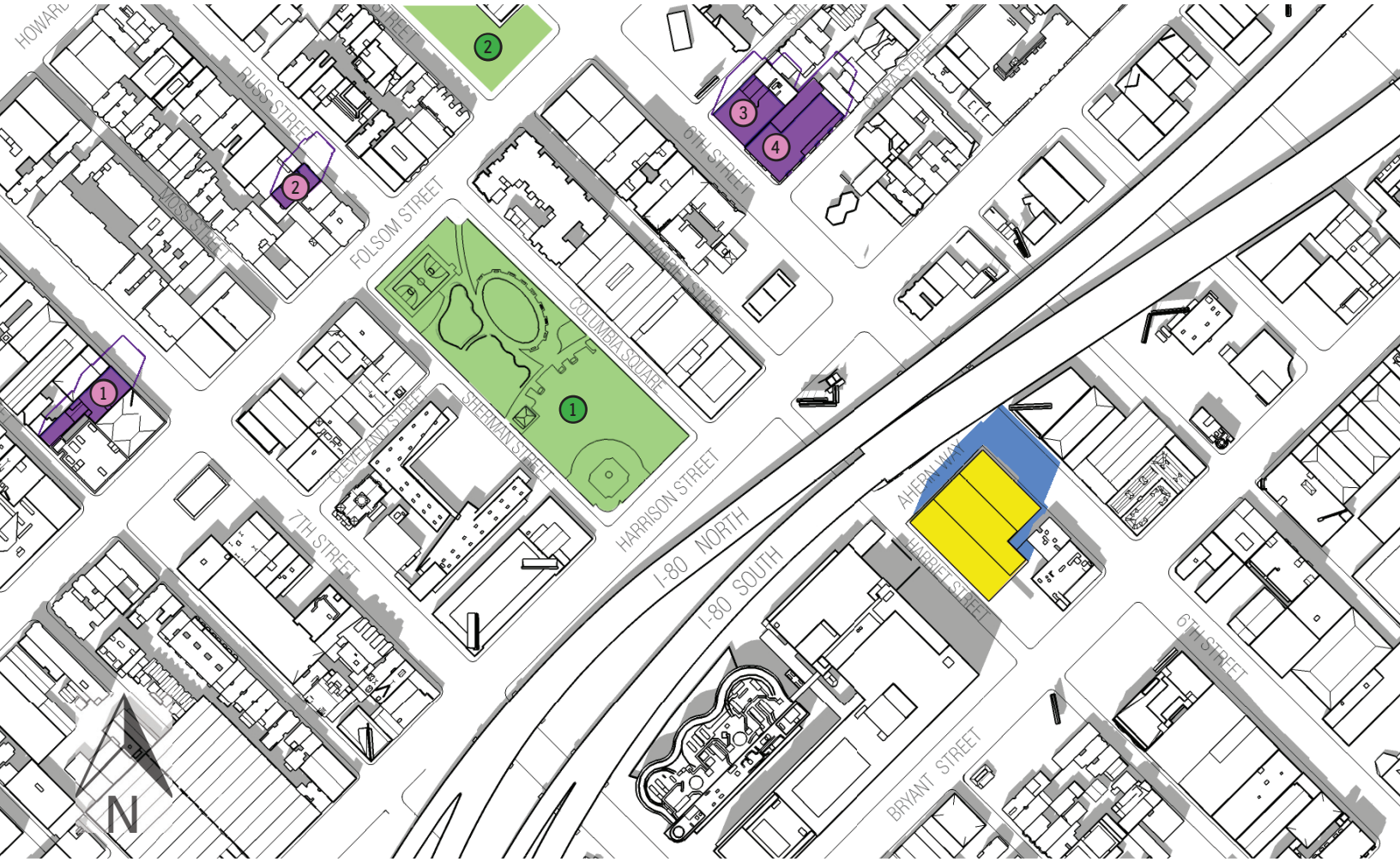
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

C1.8 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on Vernal/Autumnal Equinox



VERNAL/AUTUMNAL EQUINOX
MARCH 20 / SEPTEMBER 22

2:00 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

C1.9 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on Vernal/Autumnal Equinox

VERNAL/AUTUMNAL EQUINOX
MARCH 20 / SEPTEMBER 22

3:00 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

C1.10 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on Vernal/Autumnal Equinox

VERNAL/AUTUMNAL EQUINOX
MARCH 20 / SEPTEMBER 22

4:00 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

C1.11 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on Vernal/Autumnal Equinox

VERNAL/AUTUMNAL EQUINOX
MARCH 20 / SEPTEMBER 22

5:00 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

C1.12 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on Vernal/Autumnal Equinox

VERNAL/AUTUMNAL EQUINOX
MARCH 20 / SEPTEMBER 22

6:00 PM

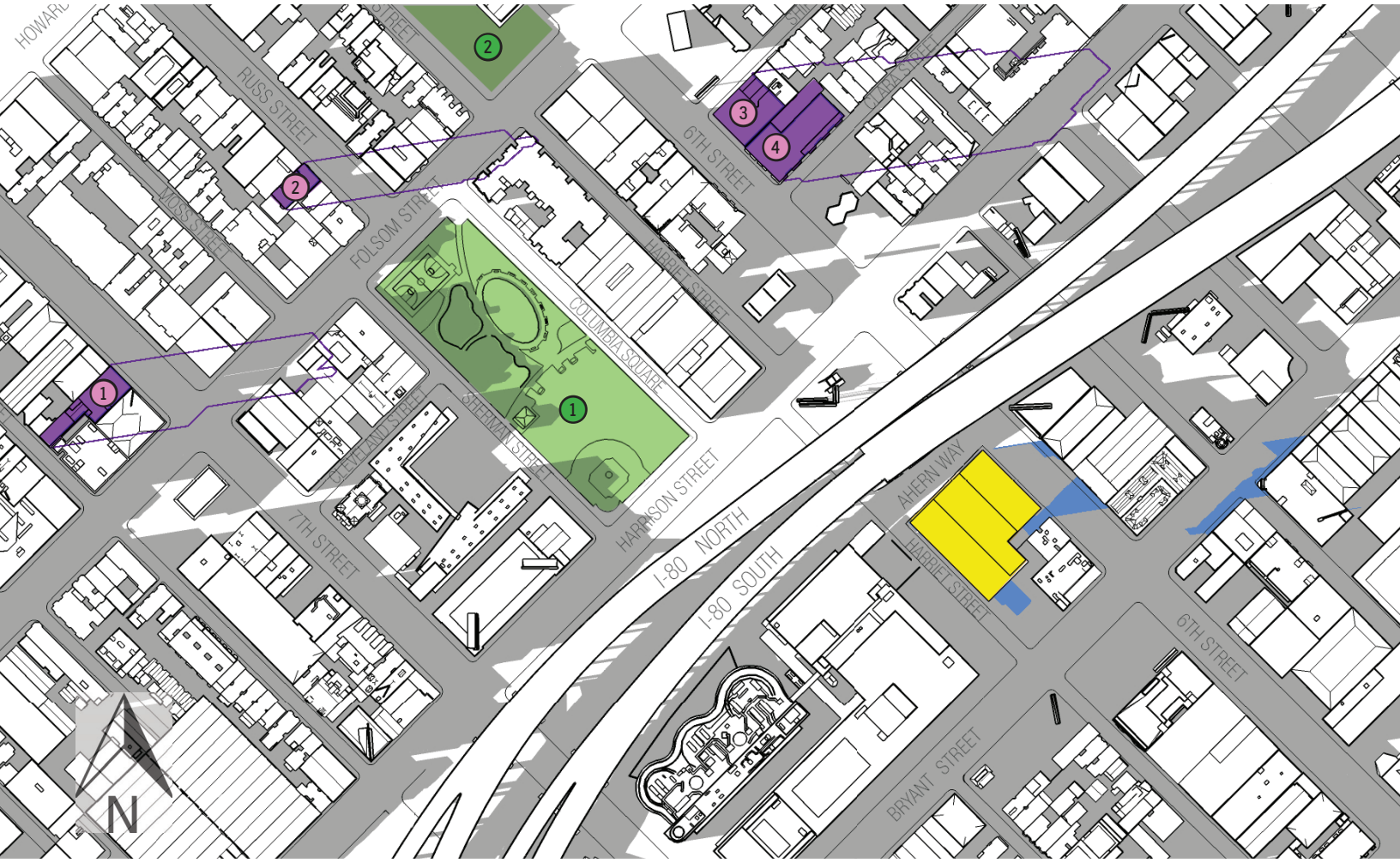
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

C1.13 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on Vernal/Autumnal Equinox



VERNAL/AUTUMNAL EQUINOX
MARCH 20 / SEPTEMBER 22

6:06 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

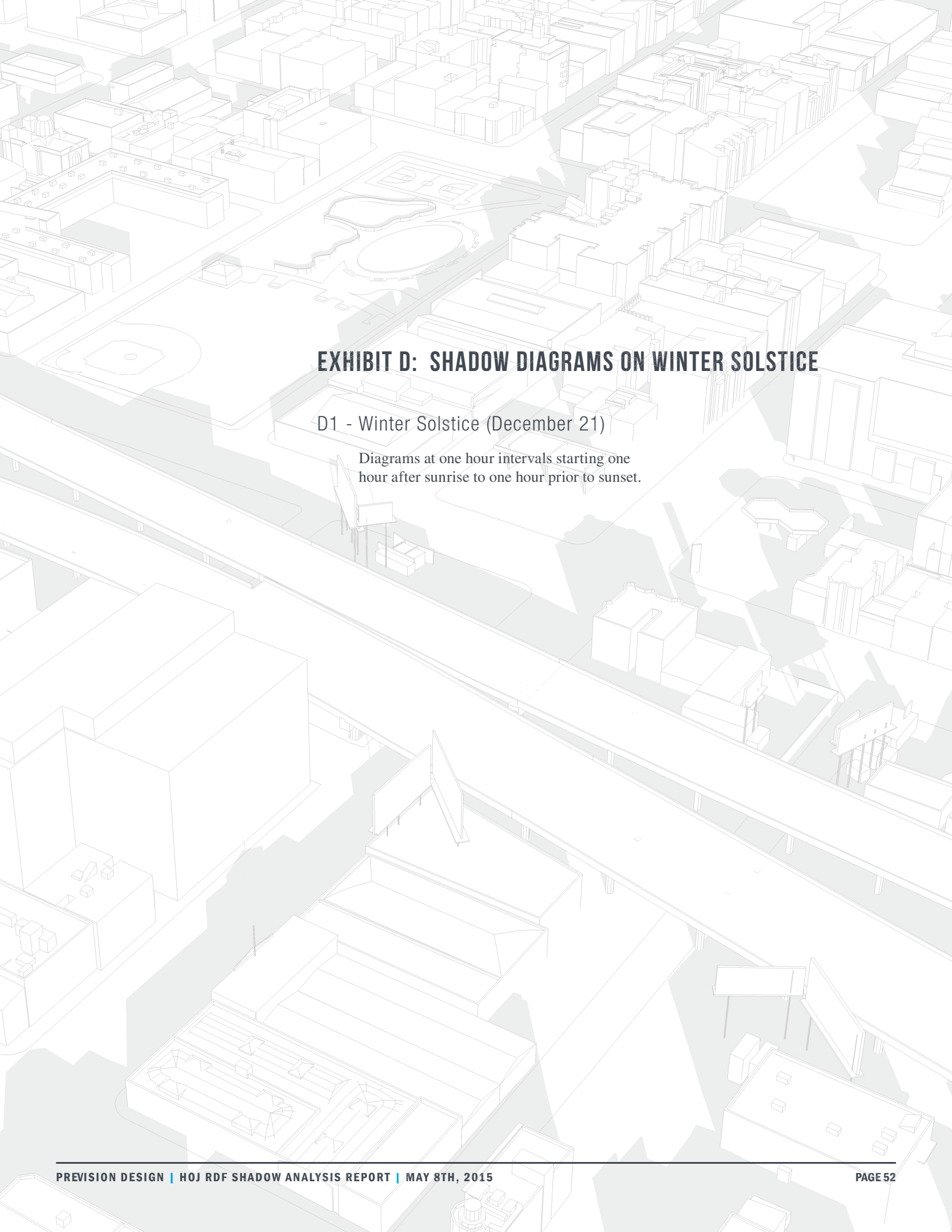


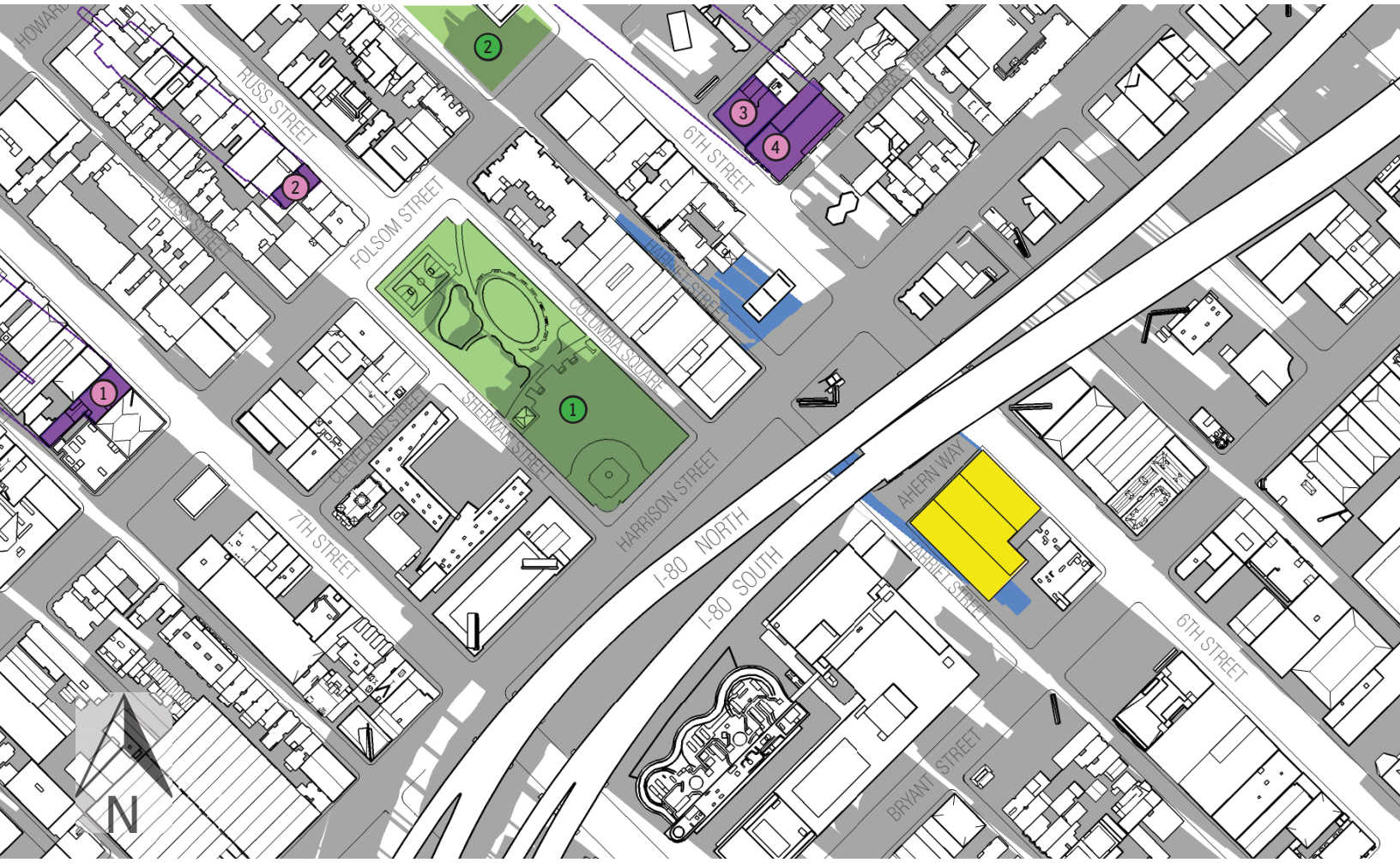
EXHIBIT D: SHADOW DIAGRAMS ON WINTER SOLSTICE

D1 - Winter Solstice (December 21)

Diagrams at one hour intervals starting one hour after sunrise to one hour prior to sunset.

D1.1 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Winter Solstice



WINTER SOLSTICE
DECEMBER 21

8:22 AM

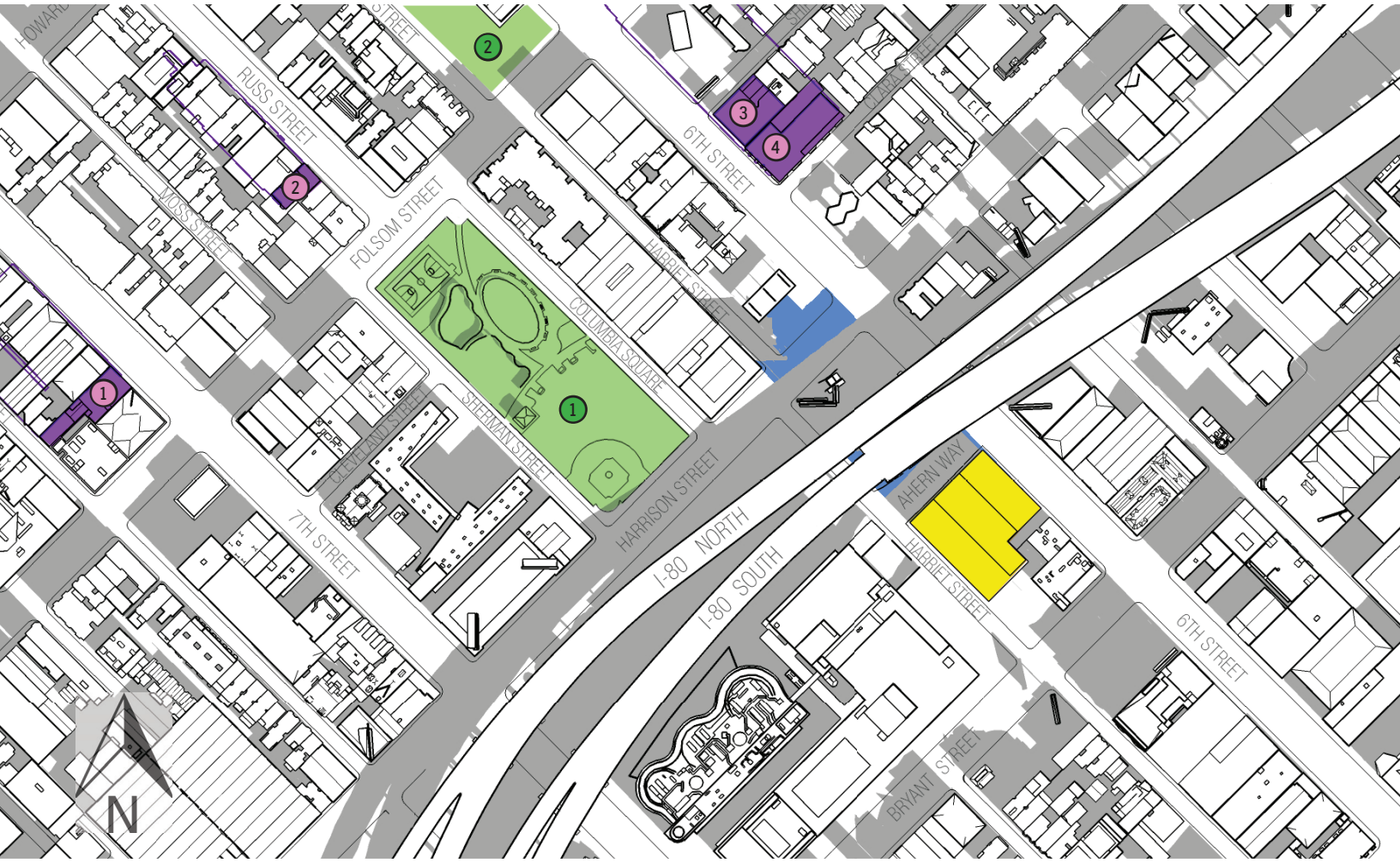
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

D1.2 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Winter Solstice



WINTER SOLSTICE
DECEMBER 21

9:00 AM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

D1.3 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Winter Solstice

WINTER SOLSTICE
DECEMBER 21

10:00 AM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

D1.4 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Winter Solstice

WINTER SOLSTICE
DECEMBER 21

11:00 AM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

D1.5 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Winter Solstice

WINTER SOLSTICE
DECEMBER 21

12:00 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

D1.6 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Winter Solstice

WINTER SOLSTICE
DECEMBER 21

1:00 PM

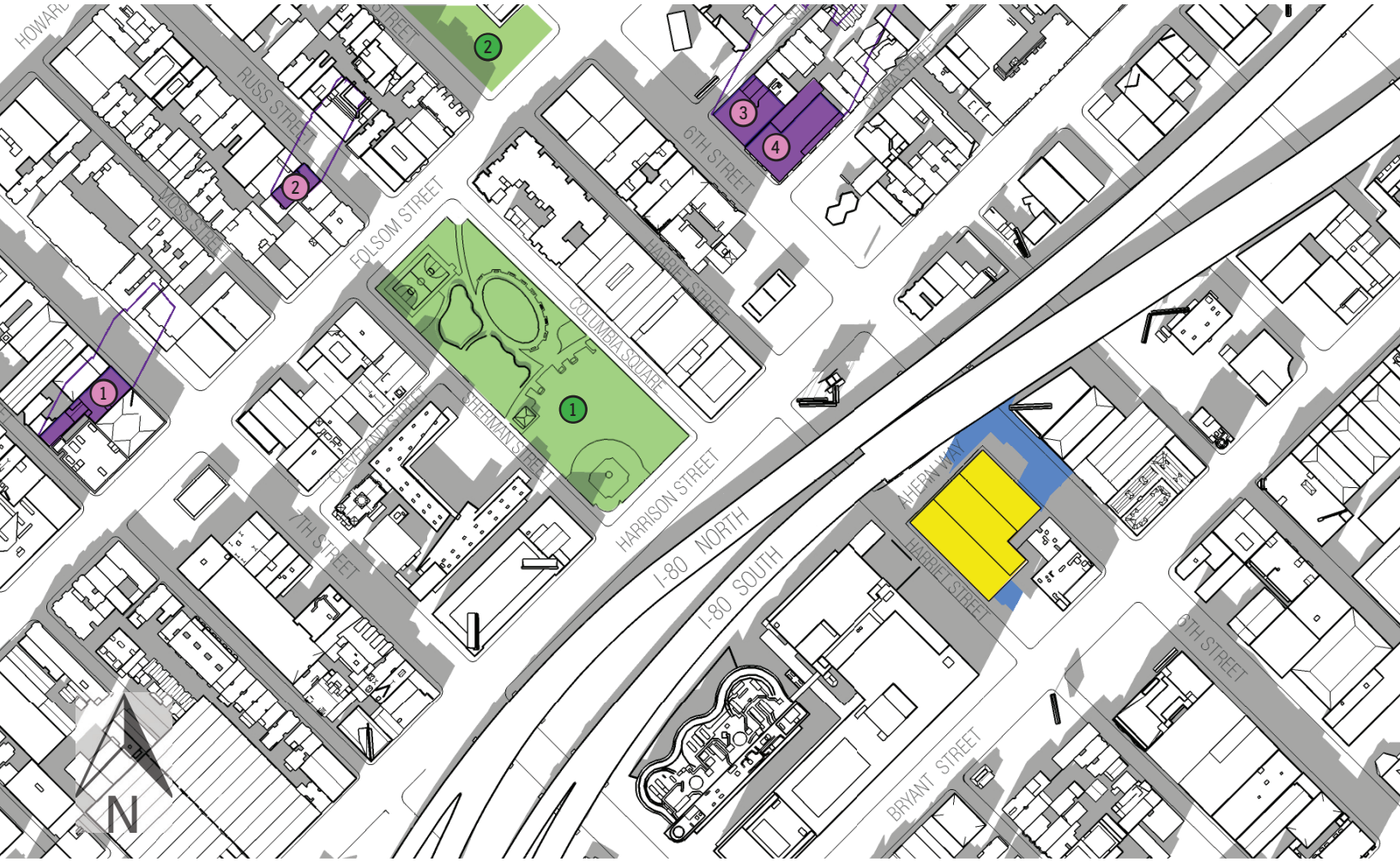
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

D1.7 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Winter Solstice



WINTER SOLSTICE
DECEMBER 21

2:00 PM

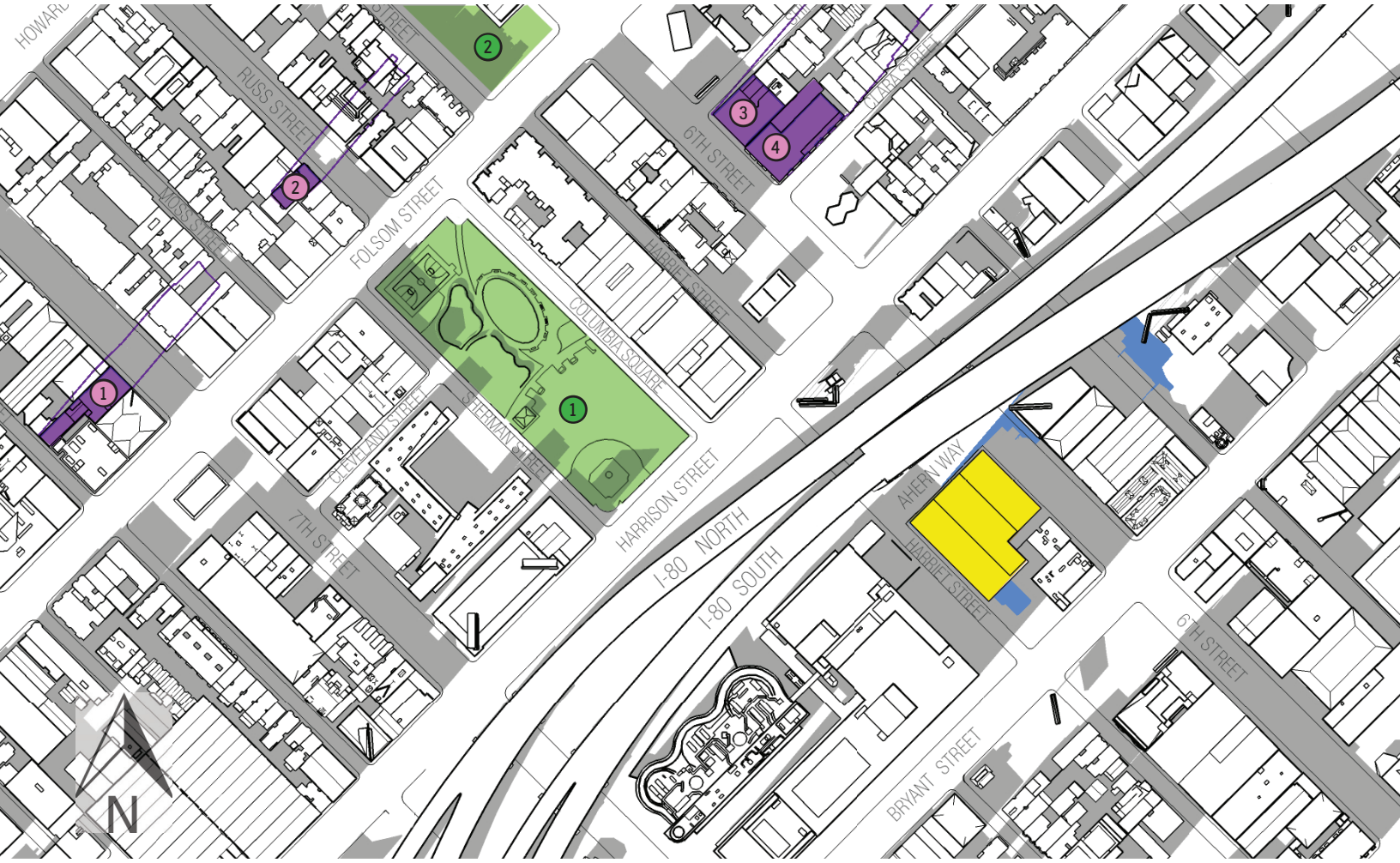
Proposed project
Existing (current) shading
New shading by proposed project
Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

D1.8 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Winter Solstice



WINTER SOLSTICE
DECEMBER 21

3:00 PM

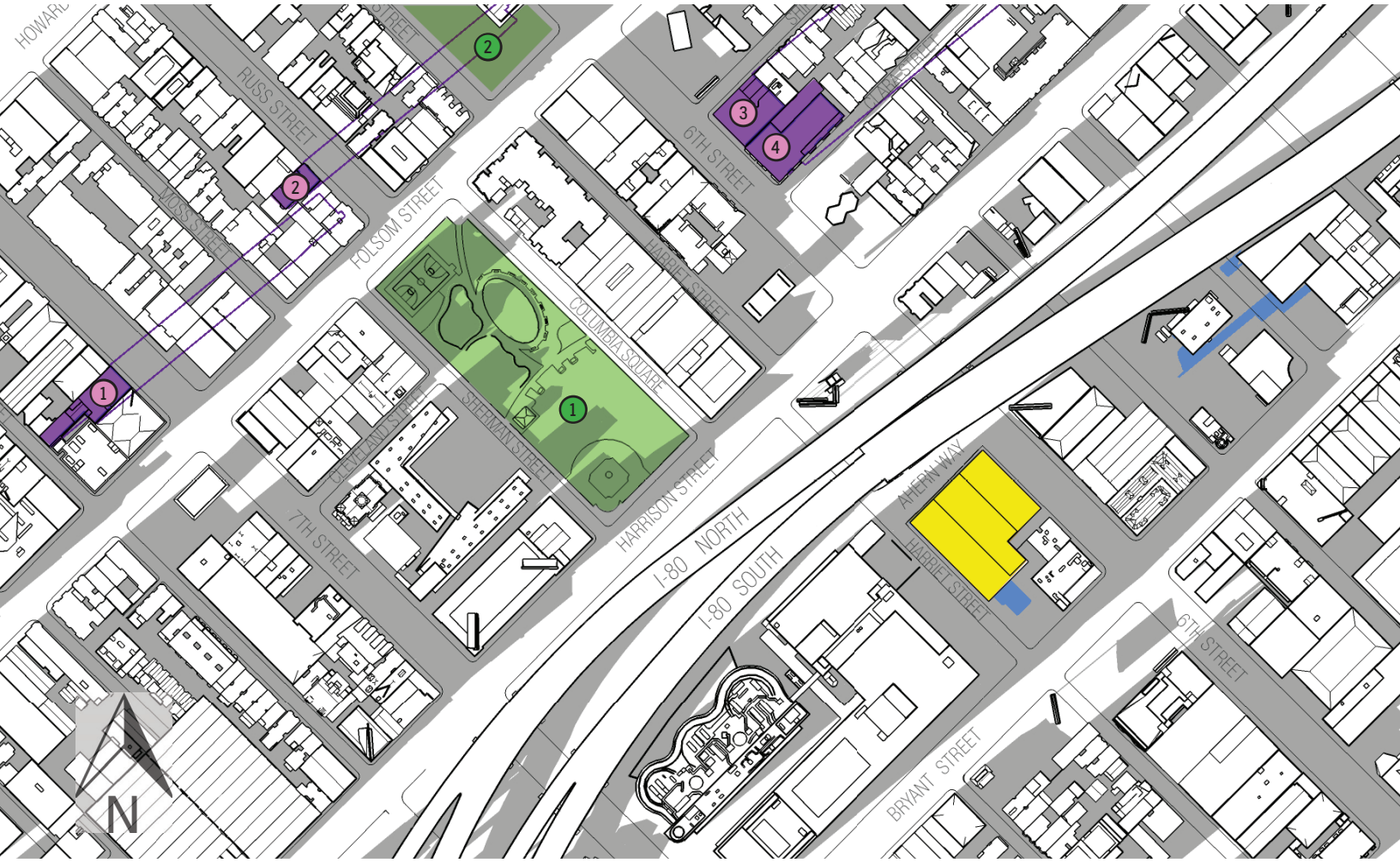
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

D1.9 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the Winter Solstice



WINTER SOLSTICE
DECEMBER 21

3:55 PM

Proposed project
Existing (current) shading
New shading by proposed project
Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

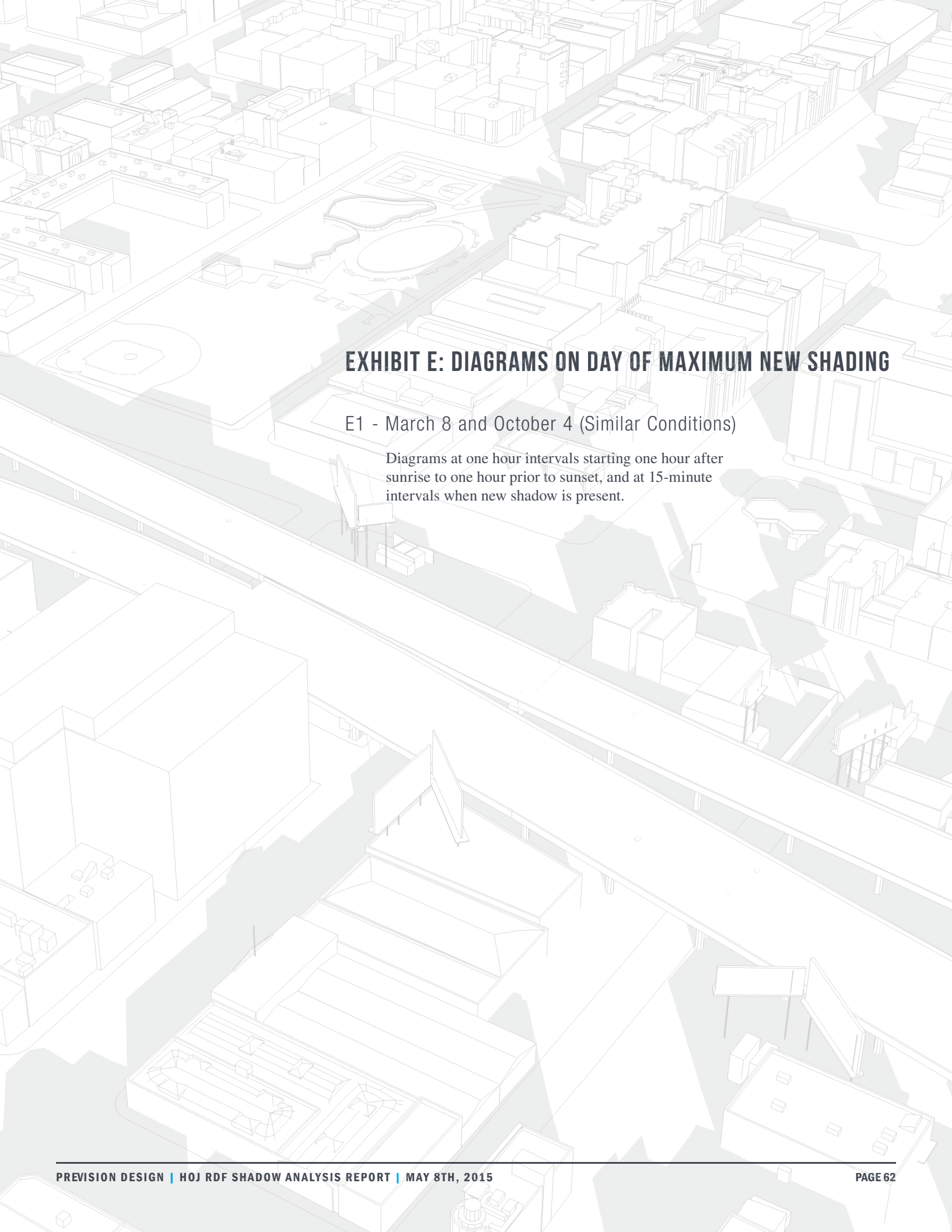


EXHIBIT E: DIAGRAMS ON DAY OF MAXIMUM NEW SHADING

E1 - March 8 and October 4 (Similar Conditions)

Diagrams at one hour intervals starting one hour after sunrise to one hour prior to sunset, and at 15-minute intervals when new shadow is present.

E1.1 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the date of maximum shading

DATES OF MAXIMUM SHADING
MARCH 8 / OCTOBER 4

8:08 AM

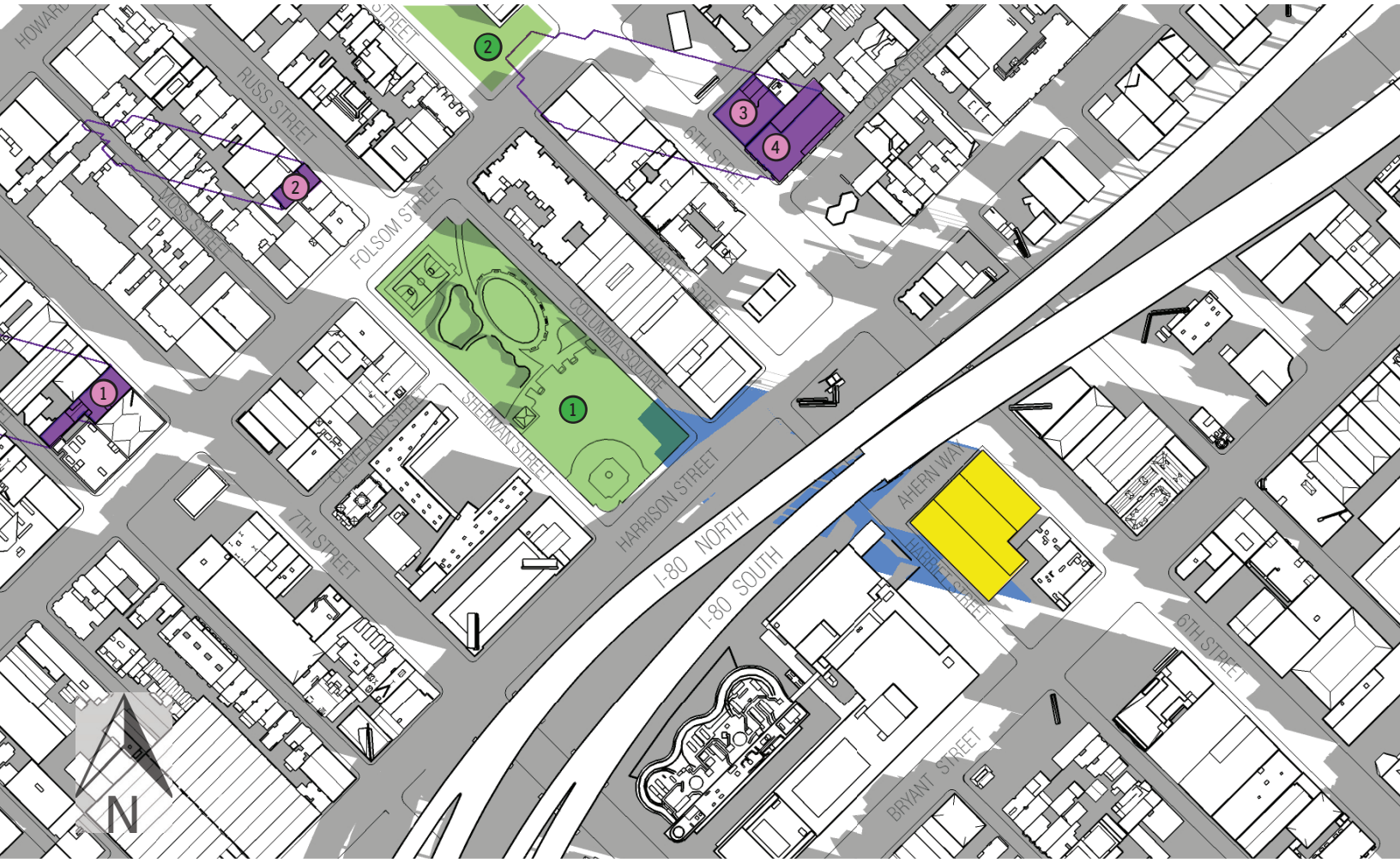
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

E1.2 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the date of maximum shading



DATES OF MAXIMUM SHADING
MARCH 8 / OCTOBER 4

8:15 AM

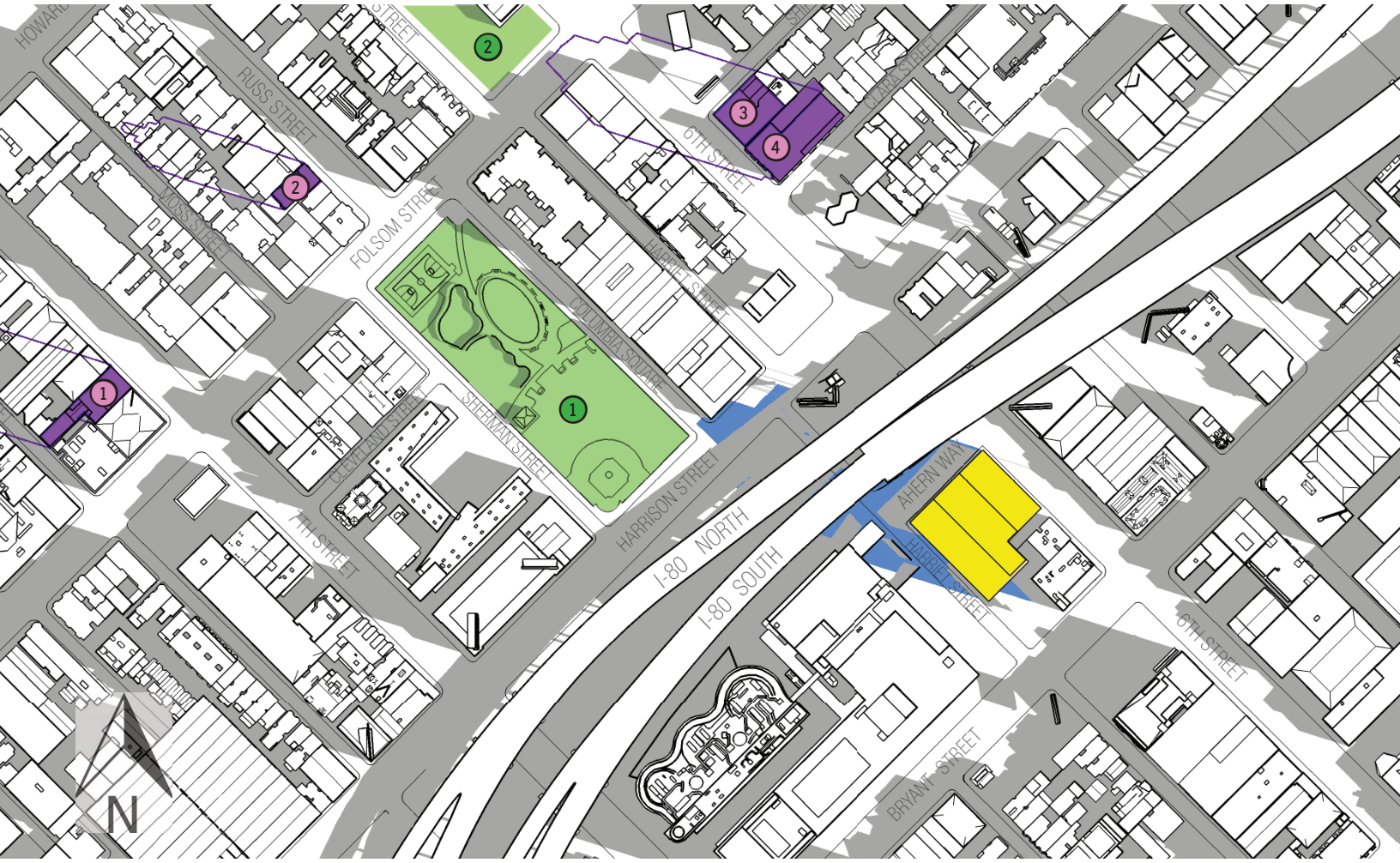
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

E1.3 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the date of maximum shading



DATES OF MAXIMUM SHADING
MARCH 8 / OCTOBER 4

8:30 AM

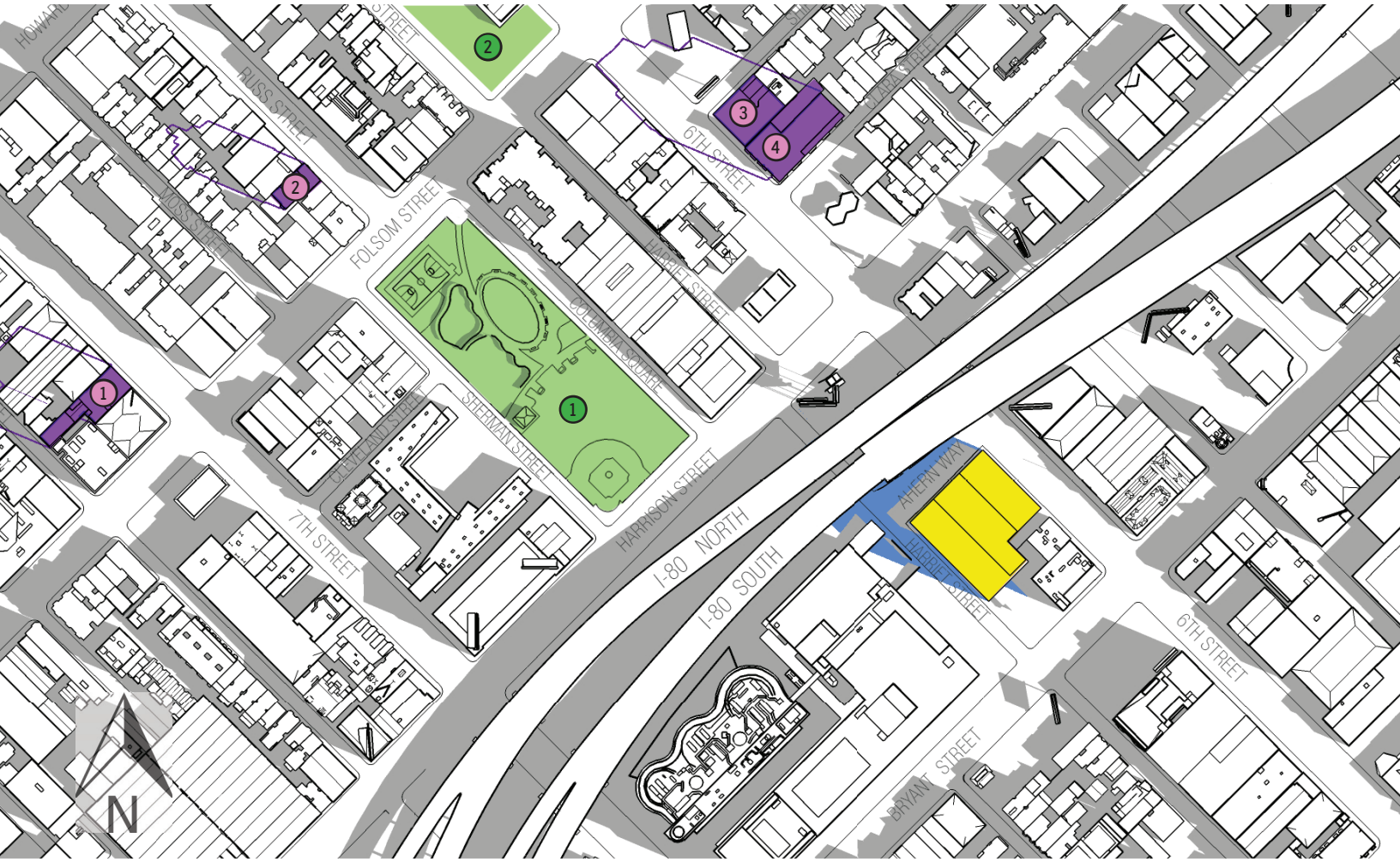
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

E1.4 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the date of maximum shading



DATES OF MAXIMUM SHADING
MARCH 8 / OCTOBER 4

9:00 AM

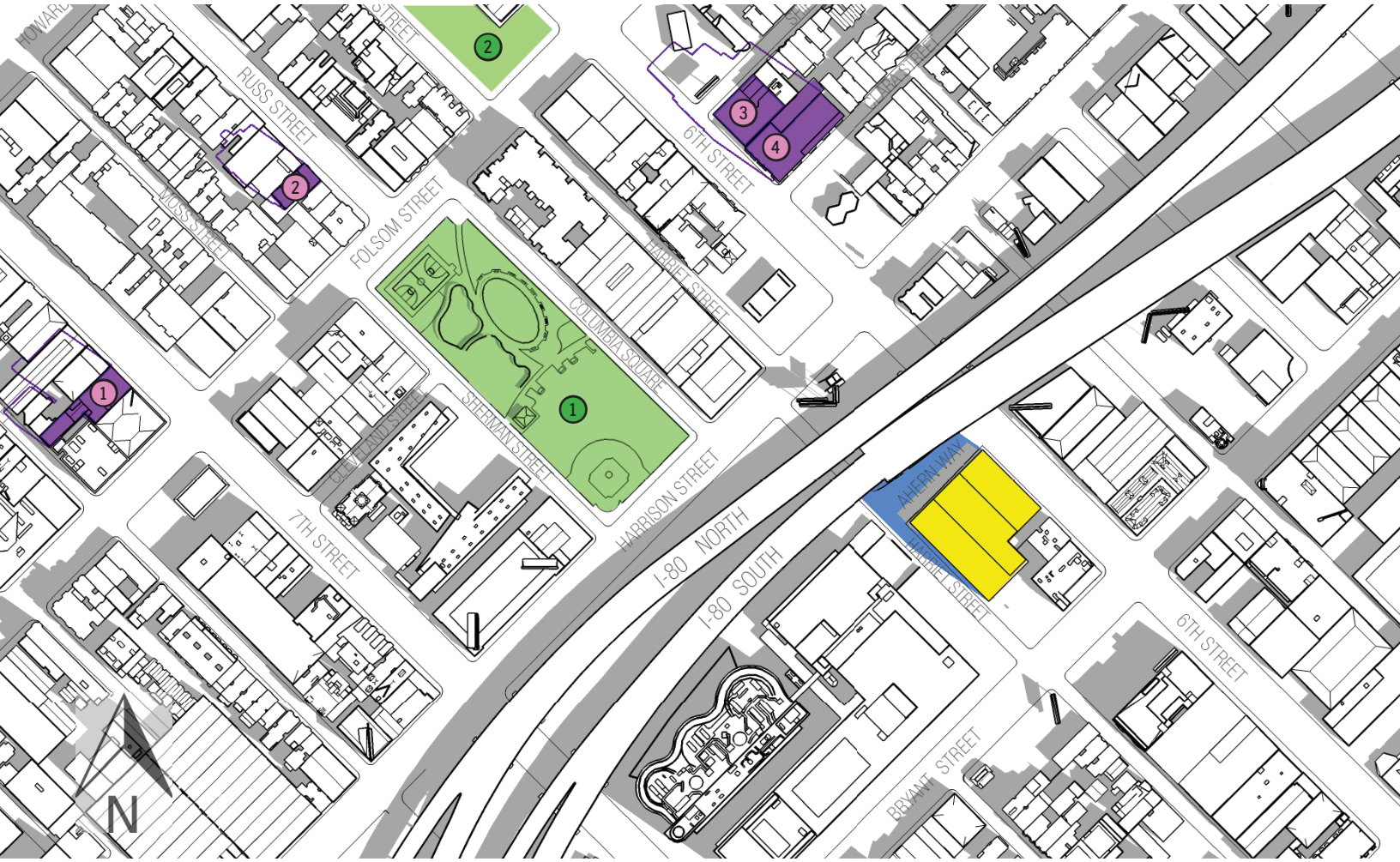
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

E1.5 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the date of maximum shading



DATES OF MAXIMUM SHADING
MARCH 8 / OCTOBER 4

10:00 AM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

E1.6 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the date of maximum shading

DATES OF MAXIMUM SHADING
MARCH 8 / OCTOBER 4

11:00 AM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

E1.7 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the date of maximum shading

DATES OF MAXIMUM SHADING
MARCH 8 / OCTOBER 4

12:00 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

E1.8 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the date of maximum shading

DATES OF MAXIMUM SHADING
MARCH 8 / OCTOBER 4

1:00 PM

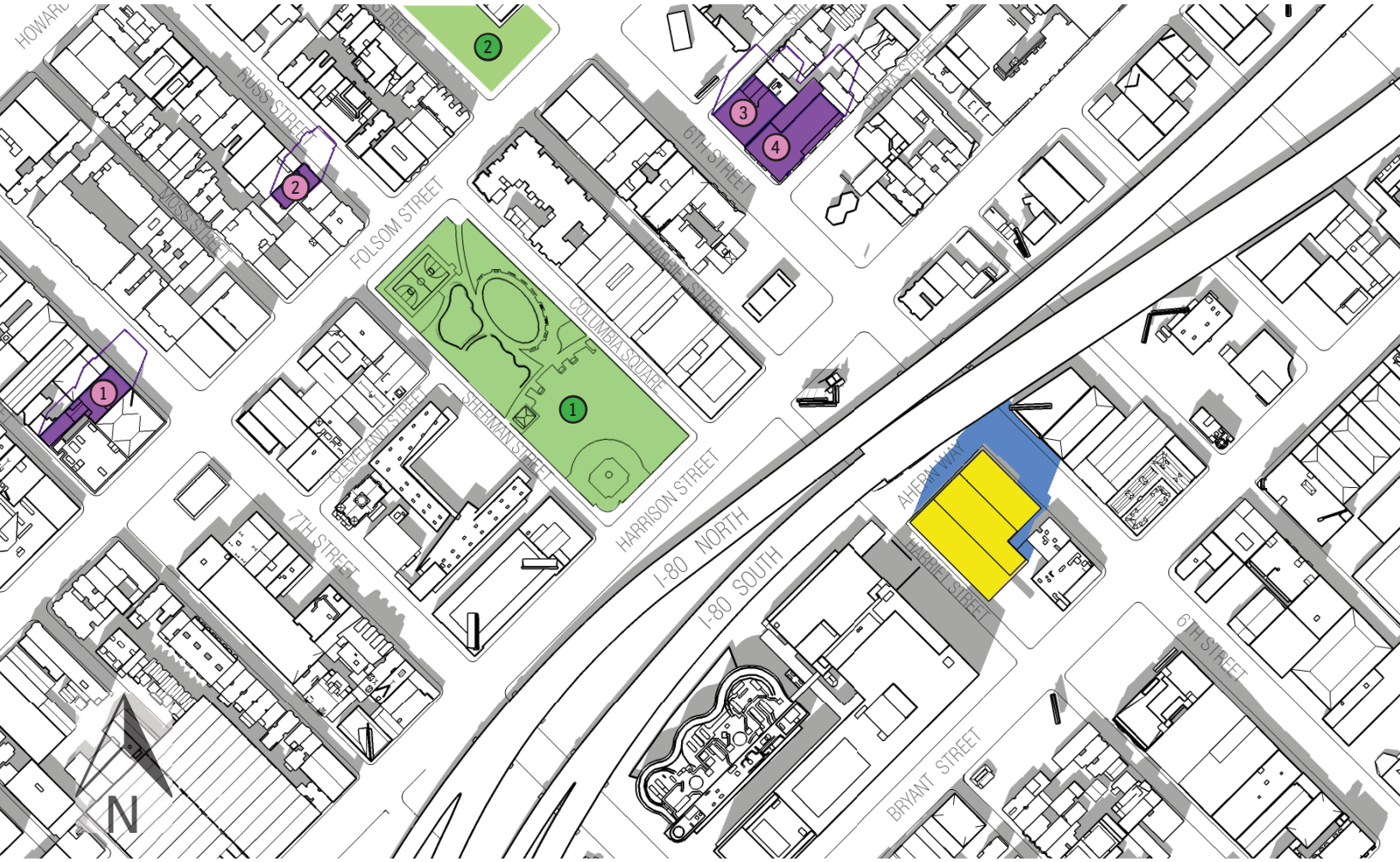
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

E1.9 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the date of maximum shading



DATES OF MAXIMUM SHADING
MARCH 8 / OCTOBER 4

2:00 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

E1.10 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the date of maximum shading

DATES OF MAXIMUM SHADING
MARCH 8 / OCTOBER 4

3:00 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

E1.11 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the date of maximum shading

DATES OF MAXIMUM SHADING
MARCH 8 / OCTOBER 4

4:00 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

E1.12 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the date of maximum shading

DATES OF MAXIMUM SHADING
MARCH 8 / OCTOBER 4

5:00 PM

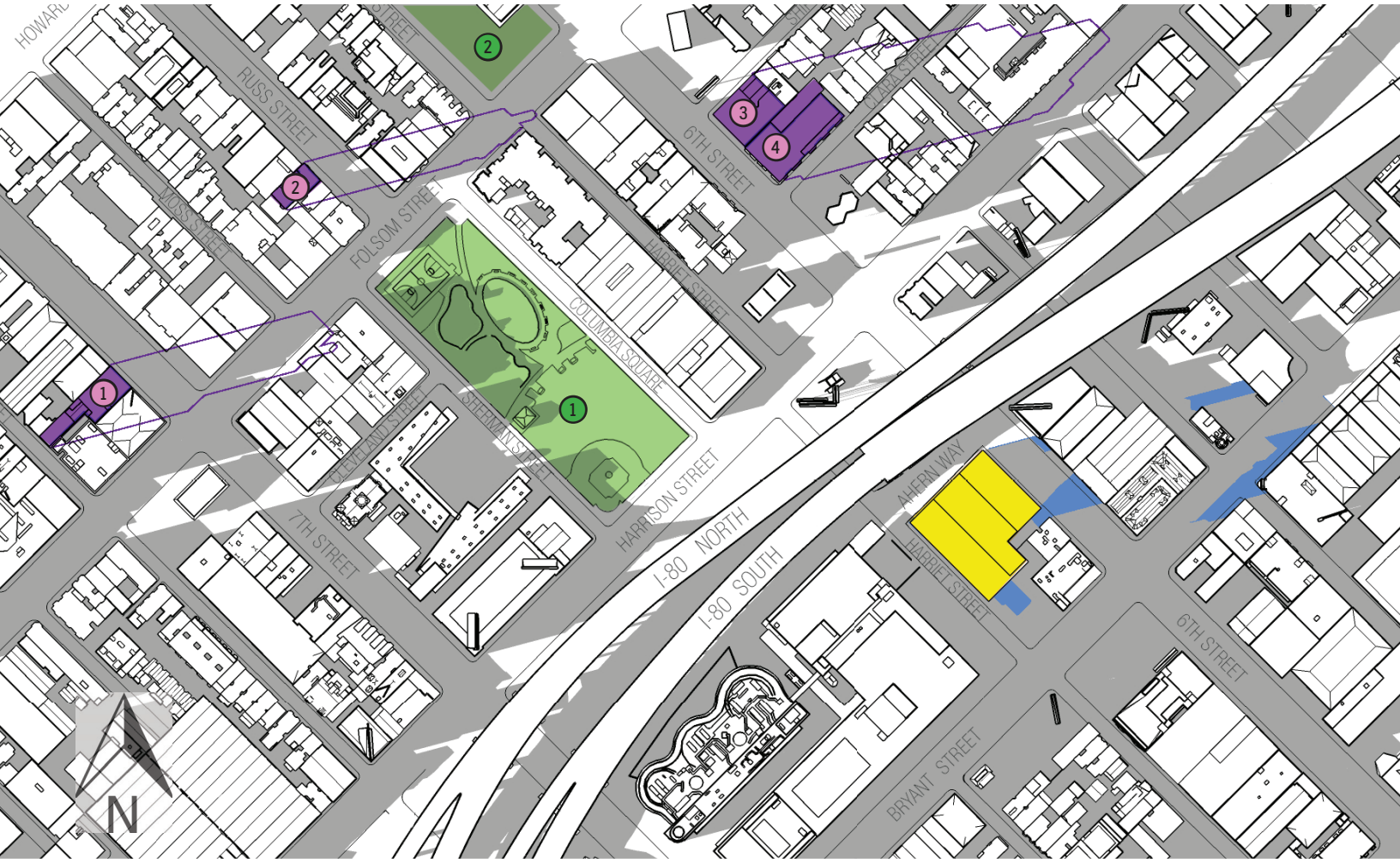
- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

E1.13 HALL OF JUSTICE ADULT DETENTION FACILITY

Shadow Profiles on the date of maximum shading



DATES OF MAXIMUM SHADING
MARCH 8 / OCTOBER 4

5:48 PM

- Proposed project
- Existing (current) shading
- New shading by proposed project
- Shadow profiles of cumulative projects

Cumulative Projects
1. 280 7th Street
2. 190 Russ Street
3. 345 6th Street
4. 363 6th Street

RPD Parks
1. VMD Park (Baseball Field)
2. Gene Friend Rec Center

EXHIBIT F: QUANTITATIVE SHADING DATA

Quantitative Shading Data for Victoria Manalo Draves Park

Shadow data for existing conditions, new shading from project, and cumulative condition shading

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Jun 21	6:48 AM	12 min	59,791.97	10397.16	0.00	0.00	0.00	0.00
Jun 21	7:00 AM	15 min	44,179.60	9472.63	0.00	0.00	0.00	0.00
Jun 21	7:15 AM	15 min	31,601.45	6731.46	0.00	0.00	0.00	0.00
Jun 21	7:30 AM	15 min	22,250.24	4661.30	0.00	0.00	0.00	0.00
Jun 21	7:45 AM	15 min	15,040.19	3184.66	0.00	0.00	0.00	0.00
Jun 21	8:00 AM	15 min	10,437.11	2243.22	0.00	0.00	0.00	0.00
Jun 21	8:15 AM	15 min	7,508.68	1641.95	0.00	0.00	0.00	0.00
Jun 21	8:30 AM	15 min	5,626.93	1275.16	0.00	0.00	0.00	0.00
Jun 21	8:45 AM	15 min	4,574.38	1037.26	0.00	0.00	0.00	0.00
Jun 21	9:00 AM	15 min	3,723.73	852.50	0.00	0.00	0.00	0.00
Jun 21	9:15 AM	15 min	3,096.30	737.31	0.00	0.00	0.00	0.00
Jun 21	9:30 AM	15 min	2,802.16	675.97	0.00	0.00	0.00	0.00
Jun 21	9:45 AM	15 min	2,605.60	629.73	0.00	0.00	0.00	0.00
Jun 21	10:00 AM	15 min	2,432.23	588.23	0.00	0.00	0.00	0.00
Jun 21	10:15 AM	15 min	2,273.62	549.98	0.00	0.00	0.00	0.00
Jun 21	10:30 AM	15 min	2,126.25	514.31	0.00	0.00	0.00	0.00
Jun 21	10:45 AM	15 min	1,988.20	480.78	0.00	0.00	0.00	0.00
Jun 21	11:00 AM	15 min	1,858.00	449.45	0.00	0.00	0.00	0.00
Jun 21	11:15 AM	15 min	1,737.61	420.71	0.00	0.00	0.00	0.00
Jun 21	11:30 AM	15 min	1,628.09	394.39	0.00	0.00	0.00	0.00
Jun 21	11:45 AM	15 min	1,527.03	370.09	0.00	0.00	0.00	0.00
Jun 21	12:00 PM	15 min	1,433.69	348.14	0.00	0.00	0.00	0.00
Jun 21	12:15 PM	15 min	1,351.43	331.51	0.00	0.00	0.00	0.00
Jun 21	12:30 PM	15 min	1,300.66	320.76	0.00	0.00	0.00	0.00
Jun 21	12:45 PM	15 min	1,265.39	313.45	0.00	0.00	0.00	0.00
Jun 21	1:00 PM	15 min	1,242.18	309.73	0.00	0.00	0.00	0.00
Jun 21	1:15 PM	15 min	1,235.66	309.75	0.00	0.00	0.00	0.00
Jun 21	1:30 PM	15 min	1,242.33	313.36	0.00	0.00	0.00	0.00
Jun 21	1:45 PM	15 min	1,264.55	320.28	0.00	0.00	0.00	0.00
Jun 21	2:00 PM	15 min	1,297.71	332.91	0.00	0.00	0.00	0.00
Jun 21	2:15 PM	15 min	1,365.54	353.03	0.00	0.00	0.00	0.00
Jun 21	2:30 PM	15 min	1,458.73	377.21	0.00	0.00	0.00	0.00
Jun 21	2:45 PM	15 min	1,558.94	403.39	0.00	0.00	0.00	0.00
Jun 21	3:00 PM	15 min	1,668.16	431.48	0.00	0.00	0.00	0.00
Jun 21	3:15 PM	15 min	1,783.66	461.49	0.00	0.00	0.00	0.00
Jun 21	3:30 PM	15 min	1,908.30	493.56	0.00	0.00	0.00	0.00
Jun 21	3:45 PM	15 min	2,040.20	527.41	0.00	0.00	0.00	0.00
Jun 21	4:00 PM	15 min	2,179.10	563.43	0.00	0.00	0.00	0.00
Jun 21	4:15 PM	15 min	2,328.37	602.20	0.00	0.00	0.00	0.00
Jun 21	4:30 PM	15 min	2,489.25	644.20	0.00	0.00	0.00	0.00
Jun 21	4:45 PM	15 min	2,664.38	690.31	0.00	0.00	0.00	0.00
Jun 21	5:00 PM	15 min	2,858.07	741.50	0.00	0.00	0.00	0.00
Jun 21	5:15 PM	15 min	3,073.92	798.98	0.00	0.00	0.00	0.00
Jun 21	5:30 PM	15 min	3,317.93	884.91	0.00	0.00	0.00	0.00
Jun 21	5:45 PM	15 min	3,761.31	1022.09	0.00	0.00	0.00	0.00
Jun 21	6:00 PM	15 min	4,415.37	1207.16	0.00	0.00	0.00	0.00
Jun 21	6:15 PM	15 min	5,241.89	1465.02	0.00	0.00	0.00	0.00
Jun 21	6:30 PM	15 min	6,478.29	1894.47	0.00	0.00	0.00	0.00
Jun 21	6:45 PM	15 min	8,677.50	2608.08	0.00	0.00	0.00	**131.46**
Jun 21	7:00 PM	15 min	12,187.14	3772.51	0.00	0.00	**1,051.67**	**662.00**
Jun 21	7:15 PM	15 min	17,992.94	5691.46	0.00	0.00	**4,244.36**	**1711.10**
Jun 21	7:30 PM	5 min	27,538.77	2625.18	0.00	0.00	**9,444.41**	**887.70**
Jun 21	7:35 PM	0 min	30,798.48		0.00		**10,282.19**	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Jun 28	6:50 AM	10 min	59,731.69	9006.83	0.00	0.00	0.00	0.00
Jun 28	7:00 AM	15 min	46,231.03	9896.42	0.00	0.00	0.00	0.00
Jun 28	7:15 AM	15 min	32,940.37	7039.55	0.00	0.00	0.00	0.00
Jun 28	7:30 AM	15 min	23,376.03	4894.20	0.00	0.00	0.00	0.00
Jun 28	7:45 AM	15 min	15,777.55	3324.95	0.00	0.00	0.00	0.00
Jun 28	8:00 AM	15 min	10,822.01	2329.60	0.00	0.00	0.00	0.00
Jun 28	8:15 AM	15 min	7,814.75	1696.92	0.00	0.00	0.00	0.00
Jun 28	8:30 AM	15 min	5,760.58	1304.70	0.00	0.00	0.00	0.00
Jun 28	8:45 AM	15 min	4,677.03	1060.63	0.00	0.00	0.00	0.00
Jun 28	9:00 AM	15 min	3,808.04	869.21	0.00	0.00	0.00	0.00
Jun 28	9:15 AM	15 min	3,145.66	746.88	0.00	0.00	0.00	0.00
Jun 28	9:30 AM	15 min	2,829.41	682.24	0.00	0.00	0.00	0.00
Jun 28	9:45 AM	15 min	2,628.50	635.28	0.00	0.00	0.00	0.00
Jun 28	10:00 AM	15 min	2,453.71	593.33	0.00	0.00	0.00	0.00
Jun 28	10:15 AM	15 min	2,292.91	554.58	0.00	0.00	0.00	0.00
Jun 28	10:30 AM	15 min	2,143.73	518.45	0.00	0.00	0.00	0.00
Jun 28	10:45 AM	15 min	2,003.87	484.53	0.00	0.00	0.00	0.00
Jun 28	11:00 AM	15 min	1,872.37	453.04	0.00	0.00	0.00	0.00
Jun 28	11:15 AM	15 min	1,751.93	424.17	0.00	0.00	0.00	0.00
Jun 28	11:30 AM	15 min	1,641.44	397.66	0.00	0.00	0.00	0.00
Jun 28	11:45 AM	15 min	1,539.85	373.15	0.00	0.00	0.00	0.00
Jun 28	12:00 PM	15 min	1,445.38	350.78	0.00	0.00	0.00	0.00
Jun 28	12:15 PM	15 min	1,360.83	333.76	0.00	0.00	0.00	0.00
Jun 28	12:30 PM	15 min	1,309.25	322.75	0.00	0.00	0.00	0.00
Jun 28	12:45 PM	15 min	1,272.71	315.12	0.00	0.00	0.00	0.00
Jun 28	1:00 PM	15 min	1,248.24	311.01	0.00	0.00	0.00	0.00
Jun 28	1:15 PM	15 min	1,239.82	310.63	0.00	0.00	0.00	0.00
Jun 28	1:30 PM	15 min	1,245.23	313.94	0.00	0.00	0.00	0.00
Jun 28	1:45 PM	15 min	1,266.27	320.34	0.00	0.00	0.00	0.00
Jun 28	2:00 PM	15 min	1,296.46	332.01	0.00	0.00	0.00	0.00
Jun 28	2:15 PM	15 min	1,359.62	351.26	0.00	0.00	0.00	0.00
Jun 28	2:30 PM	15 min	1,450.44	375.22	0.00	0.00	0.00	0.00
Jun 28	2:45 PM	15 min	1,551.30	401.29	0.00	0.00	0.00	0.00
Jun 28	3:00 PM	15 min	1,659.05	429.19	0.00	0.00	0.00	0.00
Jun 28	3:15 PM	15 min	1,774.46	459.14	0.00	0.00	0.00	0.00
Jun 28	3:30 PM	15 min	1,898.69	491.01	0.00	0.00	0.00	0.00
Jun 28	3:45 PM	15 min	2,029.40	524.78	0.00	0.00	0.00	0.00
Jun 28	4:00 PM	15 min	2,168.81	560.74	0.00	0.00	0.00	0.00
Jun 28	4:15 PM	15 min	2,317.11	599.36	0.00	0.00	0.00	0.00
Jun 28	4:30 PM	15 min	2,477.80	641.19	0.00	0.00	0.00	0.00
Jun 28	4:45 PM	15 min	2,651.69	686.99	0.00	0.00	0.00	0.00
Jun 28	5:00 PM	15 min	2,844.27	737.89	0.00	0.00	0.00	0.00
Jun 28	5:15 PM	15 min	3,058.83	794.96	0.00	0.00	0.00	0.00
Jun 28	5:30 PM	15 min	3,300.87	880.85	0.00	0.00	0.00	0.00
Jun 28	5:45 PM	15 min	3,745.93	1018.16	0.00	0.00	0.00	0.00
Jun 28	6:00 PM	15 min	4,399.35	1202.82	0.00	0.00	0.00	0.00
Jun 28	6:15 PM	15 min	5,223.22	1453.68	0.00	0.00	0.00	0.00
Jun 28	6:30 PM	15 min	6,406.23	1873.33	0.00	0.00	0.00	0.00
Jun 28	6:45 PM	15 min	8,580.38	2574.49	0.00	0.00	0.00	**107.49**
Jun 28	7:00 PM	15 min	12,015.56	3709.49	0.00	0.00	**859.94**	**608.44**
Jun 28	7:15 PM	15 min	17,660.38	5599.39	0.00	0.00	**4,007.56**	**1641.92**
Jun 28	7:30 PM	6 min	27,134.71	2912.03	0.00	0.00	**9,127.81**	**965.86**
Jun 28	7:36 PM	0 min	31,105.98		0.00		**10,189.35**	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Jul 5	6:54 AM	6 min	57,662.78	5351.49	0.00	0.00	0.00	0.00
Jul 5	7:00 AM	15 min	49,366.98	10528.26	0.00	0.00	0.00	0.00
Jul 5	7:15 AM	15 min	34,859.09	7466.07	0.00	0.00	0.00	0.00
Jul 5	7:30 AM	15 min	24,869.47	5195.88	0.00	0.00	0.00	0.00
Jul 5	7:45 AM	15 min	16,697.59	3504.73	0.00	0.00	0.00	0.00
Jul 5	8:00 AM	15 min	11,340.25	2439.73	0.00	0.00	0.00	0.00
Jul 5	8:15 AM	15 min	8,177.61	1762.18	0.00	0.00	0.00	0.00
Jul 5	8:30 AM	15 min	5,919.86	1338.92	0.00	0.00	0.00	0.00
Jul 5	8:45 AM	15 min	4,791.48	1086.72	0.00	0.00	0.00	0.00
Jul 5	9:00 AM	15 min	3,902.30	888.18	0.00	0.00	0.00	0.00
Jul 5	9:15 AM	15 min	3,203.14	758.43	0.00	0.00	0.00	0.00
Jul 5	9:30 AM	15 min	2,864.30	690.57	0.00	0.00	0.00	0.00
Jul 5	9:45 AM	15 min	2,660.25	642.77	0.00	0.00	0.00	0.00
Jul 5	10:00 AM	15 min	2,481.89	600.02	0.00	0.00	0.00	0.00
Jul 5	10:15 AM	15 min	2,318.23	560.63	0.00	0.00	0.00	0.00
Jul 5	10:30 AM	15 min	2,166.83	523.99	0.00	0.00	0.00	0.00
Jul 5	10:45 AM	15 min	2,025.09	489.64	0.00	0.00	0.00	0.00
Jul 5	11:00 AM	15 min	1,892.00	457.72	0.00	0.00	0.00	0.00
Jul 5	11:15 AM	15 min	1,769.75	428.60	0.00	0.00	0.00	0.00
Jul 5	11:30 AM	15 min	1,659.03	401.93	0.00	0.00	0.00	0.00
Jul 5	11:45 AM	15 min	1,556.38	377.17	0.00	0.00	0.00	0.00
Jul 5	12:00 PM	15 min	1,461.00	354.76	0.00	0.00	0.00	0.00
Jul 5	12:15 PM	15 min	1,377.07	337.82	0.00	0.00	0.00	0.00
Jul 5	12:30 PM	15 min	1,325.49	326.74	0.00	0.00	0.00	0.00
Jul 5	12:45 PM	15 min	1,288.42	318.95	0.00	0.00	0.00	0.00
Jul 5	1:00 PM	15 min	1,263.14	314.64	0.00	0.00	0.00	0.00
Jul 5	1:15 PM	15 min	1,253.97	313.99	0.00	0.00	0.00	0.00
Jul 5	1:30 PM	15 min	1,257.95	316.91	0.00	0.00	0.00	0.00
Jul 5	1:45 PM	15 min	1,277.30	322.74	0.00	0.00	0.00	0.00
Jul 5	2:00 PM	15 min	1,304.58	332.93	0.00	0.00	0.00	0.00
Jul 5	2:15 PM	15 min	1,358.86	350.97	0.00	0.00	0.00	0.00
Jul 5	2:30 PM	15 min	1,448.91	374.71	0.00	0.00	0.00	0.00
Jul 5	2:45 PM	15 min	1,548.81	400.64	0.00	0.00	0.00	0.00
Jul 5	3:00 PM	15 min	1,656.30	428.49	0.00	0.00	0.00	0.00
Jul 5	3:15 PM	15 min	1,771.62	458.38	0.00	0.00	0.00	0.00
Jul 5	3:30 PM	15 min	1,895.42	490.30	0.00	0.00	0.00	0.00
Jul 5	3:45 PM	15 min	2,027.02	524.11	0.00	0.00	0.00	0.00
Jul 5	4:00 PM	15 min	2,165.90	560.12	0.00	0.00	0.00	0.00
Jul 5	4:15 PM	15 min	2,315.09	598.91	0.00	0.00	0.00	0.00
Jul 5	4:30 PM	15 min	2,476.22	641.01	0.00	0.00	0.00	0.00
Jul 5	4:45 PM	15 min	2,651.86	687.02	0.00	0.00	0.00	0.00
Jul 5	5:00 PM	15 min	2,844.28	738.00	0.00	0.00	0.00	0.00
Jul 5	5:15 PM	15 min	3,059.73	795.68	0.00	0.00	0.00	0.00
Jul 5	5:30 PM	15 min	3,305.75	890.01	0.00	0.00	0.00	0.00
Jul 5	5:45 PM	15 min	3,814.37	1038.38	0.00	0.00	0.00	0.00
Jul 5	6:00 PM	15 min	4,492.64	1229.39	0.00	0.00	0.00	0.00
Jul 5	6:15 PM	15 min	5,342.46	1485.02	0.00	0.00	0.00	0.00
Jul 5	6:30 PM	15 min	6,537.73	1917.34	0.00	0.00	0.00	0.00
Jul 5	6:45 PM	15 min	8,800.97	2637.50	0.00	0.00	0.00	**103.46**
Jul 5	7:00 PM	15 min	12,299.03	3801.28	0.00	0.00	**827.68**	**602.03**
Jul 5	7:15 PM	15 min	18,111.23	5743.98	0.00	0.00	**3,988.52**	**1612.85**
Jul 5	7:30 PM	5 min	27,840.57	2655.58	0.00	0.00	**8,914.28**	**840.00**
Jul 5	7:35 PM	0 min	31,172.33		0.00		**9,752.37**	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Jul 12	6:58 AM	2 min	56,616.43	2205.30	0.00	0.00	0.00	0.00
Jul 12	7:00 AM	15 min	53,648.46	11382.84	0.00	0.00	0.00	0.00
Jul 12	7:15 AM	15 min	37,414.25	8007.49	0.00	0.00	0.00	0.00
Jul 12	7:30 AM	15 min	26,645.64	5571.02	0.00	0.00	0.00	0.00
Jul 12	7:45 AM	15 min	17,922.54	3742.80	0.00	0.00	0.00	0.00
Jul 12	8:00 AM	15 min	12,019.89	2575.25	0.00	0.00	0.00	0.00
Jul 12	8:15 AM	15 min	8,582.15	1835.36	0.00	0.00	0.00	0.00
Jul 12	8:30 AM	15 min	6,100.75	1377.82	0.00	0.00	0.00	0.00
Jul 12	8:45 AM	15 min	4,921.85	1115.12	0.00	0.00	0.00	0.00
Jul 12	9:00 AM	15 min	3,999.09	908.54	0.00	0.00	0.00	0.00
Jul 12	9:15 AM	15 min	3,269.26	771.86	0.00	0.00	0.00	0.00
Jul 12	9:30 AM	15 min	2,905.61	700.54	0.00	0.00	0.00	0.00
Jul 12	9:45 AM	15 min	2,698.71	651.82	0.00	0.00	0.00	0.00
Jul 12	10:00 AM	15 min	2,515.86	608.06	0.00	0.00	0.00	0.00
Jul 12	10:15 AM	15 min	2,348.63	567.78	0.00	0.00	0.00	0.00
Jul 12	10:30 AM	15 min	2,193.60	530.35	0.00	0.00	0.00	0.00
Jul 12	10:45 AM	15 min	2,049.21	495.54	0.00	0.00	0.00	0.00
Jul 12	11:00 AM	15 min	1,915.12	463.40	0.00	0.00	0.00	0.00
Jul 12	11:15 AM	15 min	1,792.05	433.92	0.00	0.00	0.00	0.00
Jul 12	11:30 AM	15 min	1,679.28	407.08	0.00	0.00	0.00	0.00
Jul 12	11:45 AM	15 min	1,577.39	382.27	0.00	0.00	0.00	0.00
Jul 12	12:00 PM	15 min	1,480.74	360.00	0.00	0.00	0.00	0.00
Jul 12	12:15 PM	15 min	1,399.25	343.39	0.00	0.00	0.00	0.00
Jul 12	12:30 PM	15 min	1,347.88	332.44	0.00	0.00	0.00	0.00
Jul 12	12:45 PM	15 min	1,311.64	324.78	0.00	0.00	0.00	0.00
Jul 12	1:00 PM	15 min	1,286.64	320.39	0.00	0.00	0.00	0.00
Jul 12	1:15 PM	15 min	1,276.48	319.42	0.00	0.00	0.00	0.00
Jul 12	1:30 PM	15 min	1,278.87	321.92	0.00	0.00	0.00	0.00
Jul 12	1:45 PM	15 min	1,296.49	327.29	0.00	0.00	0.00	0.00
Jul 12	2:00 PM	15 min	1,321.82	336.48	0.00	0.00	0.00	0.00
Jul 12	2:15 PM	15 min	1,370.00	352.97	0.00	0.00	0.00	0.00
Jul 12	2:30 PM	15 min	1,453.73	375.95	0.00	0.00	0.00	0.00
Jul 12	2:45 PM	15 min	1,553.84	401.71	0.00	0.00	0.00	0.00
Jul 12	3:00 PM	15 min	1,659.83	429.34	0.00	0.00	0.00	0.00
Jul 12	3:15 PM	15 min	1,774.91	459.22	0.00	0.00	0.00	0.00
Jul 12	3:30 PM	15 min	1,898.88	491.31	0.00	0.00	0.00	0.00
Jul 12	3:45 PM	15 min	2,031.62	525.60	0.00	0.00	0.00	0.00
Jul 12	4:00 PM	15 min	2,173.18	562.11	0.00	0.00	0.00	0.00
Jul 12	4:15 PM	15 min	2,323.69	601.30	0.00	0.00	0.00	0.00
Jul 12	4:30 PM	15 min	2,486.70	643.88	0.00	0.00	0.00	0.00
Jul 12	4:45 PM	15 min	2,664.32	690.47	0.00	0.00	0.00	0.00
Jul 12	5:00 PM	15 min	2,859.43	742.24	0.00	0.00	0.00	0.00
Jul 12	5:15 PM	15 min	3,078.48	809.23	0.00	0.00	0.00	0.00
Jul 12	5:30 PM	15 min	3,395.37	921.59	0.00	0.00	0.00	0.00
Jul 12	5:45 PM	15 min	3,977.37	1085.69	0.00	0.00	0.00	0.00
Jul 12	6:00 PM	15 min	4,708.17	1289.37	0.00	0.00	0.00	0.00
Jul 12	6:15 PM	15 min	5,606.75	1563.74	0.00	0.00	0.00	0.00
Jul 12	6:30 PM	15 min	6,903.18	2033.20	0.00	0.00	0.00	0.00
Jul 12	6:45 PM	15 min	9,362.41	2806.41	0.00	0.00	0.00	**123.31**
Jul 12	7:00 PM	15 min	13,088.90	4067.18	0.00	0.00	**986.51**	**649.88**
Jul 12	7:15 PM	15 min	19,448.55	6150.80	0.00	0.00	**4,212.54**	**1615.52**
Jul 12	7:30 PM	2 min	29,757.84	1218.12	0.00	0.00	**8,711.65**	**354.35**
Jul 12	7:32 PM	0 min	31,148.05		0.00		**9,005.92**	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Jul 19	7:03 AM	12 min	54,759.39	9536.31	0.00	0.00	0.00	0.00
Jul 19	7:15 AM	15 min	40,603.75	8661.24	0.00	0.00	0.00	0.00
Jul 19	7:30 AM	15 min	28,686.18	6017.88	0.00	0.00	0.00	0.00
Jul 19	7:45 AM	15 min	19,456.89	4038.02	0.00	0.00	0.00	0.00
Jul 19	8:00 AM	15 min	12,847.27	2734.28	0.00	0.00	0.00	0.00
Jul 19	8:15 AM	15 min	9,026.95	1916.75	0.00	0.00	0.00	0.00
Jul 19	8:30 AM	15 min	6,307.08	1420.51	0.00	0.00	0.00	0.00
Jul 19	8:45 AM	15 min	5,056.97	1144.22	0.00	0.00	0.00	0.00
Jul 19	9:00 AM	15 min	4,096.80	929.65	0.00	0.00	0.00	0.00
Jul 19	9:15 AM	15 min	3,340.38	786.83	0.00	0.00	0.00	0.00
Jul 19	9:30 AM	15 min	2,954.23	712.25	0.00	0.00	0.00	0.00
Jul 19	9:45 AM	15 min	2,743.76	662.34	0.00	0.00	0.00	0.00
Jul 19	10:00 AM	15 min	2,554.92	617.15	0.00	0.00	0.00	0.00
Jul 19	10:15 AM	15 min	2,382.24	575.72	0.00	0.00	0.00	0.00
Jul 19	10:30 AM	15 min	2,223.55	537.43	0.00	0.00	0.00	0.00
Jul 19	10:45 AM	15 min	2,075.88	502.00	0.00	0.00	0.00	0.00
Jul 19	11:00 AM	15 min	1,940.09	469.67	0.00	0.00	0.00	0.00
Jul 19	11:15 AM	15 min	1,817.30	440.12	0.00	0.00	0.00	0.00
Jul 19	11:30 AM	15 min	1,703.68	413.01	0.00	0.00	0.00	0.00
Jul 19	11:45 AM	15 min	1,600.37	387.98	0.00	0.00	0.00	0.00
Jul 19	12:00 PM	15 min	1,503.47	366.38	0.00	0.00	0.00	0.00
Jul 19	12:15 PM	15 min	1,427.57	350.62	0.00	0.00	0.00	0.00
Jul 19	12:30 PM	15 min	1,377.40	339.95	0.00	0.00	0.00	0.00
Jul 19	12:45 PM	15 min	1,342.23	332.42	0.00	0.00	0.00	0.00
Jul 19	1:00 PM	15 min	1,317.14	328.00	0.00	0.00	0.00	0.00
Jul 19	1:15 PM	15 min	1,306.83	326.88	0.00	0.00	0.00	0.00
Jul 19	1:30 PM	15 min	1,308.23	329.15	0.00	0.00	0.00	0.00
Jul 19	1:45 PM	15 min	1,324.98	334.37	0.00	0.00	0.00	0.00
Jul 19	2:00 PM	15 min	1,349.94	342.63	0.00	0.00	0.00	0.00
Jul 19	2:15 PM	15 min	1,391.09	357.28	0.00	0.00	0.00	0.00
Jul 19	2:30 PM	15 min	1,467.16	378.96	0.00	0.00	0.00	0.00
Jul 19	2:45 PM	15 min	1,564.55	404.52	0.00	0.00	0.00	0.00
Jul 19	3:00 PM	15 min	1,671.64	432.30	0.00	0.00	0.00	0.00
Jul 19	3:15 PM	15 min	1,786.79	462.22	0.00	0.00	0.00	0.00
Jul 19	3:30 PM	15 min	1,910.98	494.63	0.00	0.00	0.00	0.00
Jul 19	3:45 PM	15 min	2,046.10	529.41	0.00	0.00	0.00	0.00
Jul 19	4:00 PM	15 min	2,189.14	566.57	0.00	0.00	0.00	0.00
Jul 19	4:15 PM	15 min	2,343.41	606.59	0.00	0.00	0.00	0.00
Jul 19	4:30 PM	15 min	2,509.28	650.08	0.00	0.00	0.00	0.00
Jul 19	4:45 PM	15 min	2,691.33	697.85	0.00	0.00	0.00	0.00
Jul 19	5:00 PM	15 min	2,891.48	751.15	0.00	0.00	0.00	0.00
Jul 19	5:15 PM	15 min	3,117.71	840.36	0.00	0.00	0.00	0.00
Jul 19	5:30 PM	15 min	3,605.14	982.40	0.00	0.00	0.00	0.00
Jul 19	5:45 PM	15 min	4,254.03	1164.09	0.00	0.00	0.00	0.00
Jul 19	6:00 PM	15 min	5,058.72	1386.58	0.00	0.00	0.00	0.00
Jul 19	6:15 PM	15 min	6,033.91	1700.46	0.00	0.00	0.00	0.00
Jul 19	6:30 PM	15 min	7,569.78	2233.87	0.00	0.00	0.00	0.00
Jul 19	6:45 PM	15 min	10,301.17	3098.70	0.00	0.00	0.00	**170.85**
Jul 19	7:00 PM	15 min	14,488.42	4547.93	0.00	0.00	**1,366.81**	**785.48**
Jul 19	7:15 PM	14 min	21,895.02	6525.51	0.00	0.00	**4,917.04**	**1591.06**
Jul 19	7:29 PM	0 min	32,484.21		0.00		**8,341.83**	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Jul 26	7:09 AM	6 min	51,879.25	4813.85	0.00	0.00	0.00	0.00
Jul 26	7:15 AM	15 min	44,397.84	9421.48	0.00	0.00	0.00	0.00
Jul 26	7:30 AM	15 min	30,973.98	6526.67	0.00	0.00	0.00	0.00
Jul 26	7:45 AM	15 min	21,239.37	4397.70	0.00	0.00	0.00	0.00
Jul 26	8:00 AM	15 min	13,942.20	2928.22	0.00	0.00	0.00	0.00
Jul 26	8:15 AM	15 min	9,483.57	2010.12	0.00	0.00	0.00	0.00
Jul 26	8:30 AM	15 min	6,597.39	1474.25	0.00	0.00	0.00	0.00
Jul 26	8:45 AM	15 min	5,196.62	1174.90	0.00	0.00	0.00	0.00
Jul 26	9:00 AM	15 min	4,202.62	951.27	0.00	0.00	0.00	0.00
Jul 26	9:15 AM	15 min	3,407.58	802.46	0.00	0.00	0.00	0.00
Jul 26	9:30 AM	15 min	3,012.08	725.73	0.00	0.00	0.00	0.00
Jul 26	9:45 AM	15 min	2,793.75	673.95	0.00	0.00	0.00	0.00
Jul 26	10:00 AM	15 min	2,597.82	627.18	0.00	0.00	0.00	0.00
Jul 26	10:15 AM	15 min	2,419.64	584.40	0.00	0.00	0.00	0.00
Jul 26	10:30 AM	15 min	2,255.57	545.03	0.00	0.00	0.00	0.00
Jul 26	10:45 AM	15 min	2,104.68	509.12	0.00	0.00	0.00	0.00
Jul 26	11:00 AM	15 min	1,968.25	476.52	0.00	0.00	0.00	0.00
Jul 26	11:15 AM	15 min	1,843.92	446.89	0.00	0.00	0.00	0.00
Jul 26	11:30 AM	15 min	1,731.16	419.81	0.00	0.00	0.00	0.00
Jul 26	11:45 AM	15 min	1,627.30	394.54	0.00	0.00	0.00	0.00
Jul 26	12:00 PM	15 min	1,529.03	373.98	0.00	0.00	0.00	0.00
Jul 26	12:15 PM	15 min	1,462.84	359.59	0.00	0.00	0.00	0.00
Jul 26	12:30 PM	15 min	1,413.90	349.22	0.00	0.00	0.00	0.00
Jul 26	12:45 PM	15 min	1,379.84	341.93	0.00	0.00	0.00	0.00
Jul 26	1:00 PM	15 min	1,355.56	337.67	0.00	0.00	0.00	0.00
Jul 26	1:15 PM	15 min	1,345.81	336.57	0.00	0.00	0.00	0.00
Jul 26	1:30 PM	15 min	1,346.72	338.63	0.00	0.00	0.00	0.00
Jul 26	1:45 PM	15 min	1,362.29	343.64	0.00	0.00	0.00	0.00
Jul 26	2:00 PM	15 min	1,386.80	351.05	0.00	0.00	0.00	0.00
Jul 26	2:15 PM	15 min	1,421.64	363.63	0.00	0.00	0.00	0.00
Jul 26	2:30 PM	15 min	1,487.43	383.84	0.00	0.00	0.00	0.00
Jul 26	2:45 PM	15 min	1,583.25	409.40	0.00	0.00	0.00	0.00
Jul 26	3:00 PM	15 min	1,691.91	437.47	0.00	0.00	0.00	0.00
Jul 26	3:15 PM	15 min	1,807.87	467.61	0.00	0.00	0.00	0.00
Jul 26	3:30 PM	15 min	1,933.00	500.24	0.00	0.00	0.00	0.00
Jul 26	3:45 PM	15 min	2,068.95	535.72	0.00	0.00	0.00	0.00
Jul 26	4:00 PM	15 min	2,216.81	573.98	0.00	0.00	0.00	0.00
Jul 26	4:15 PM	15 min	2,374.99	615.15	0.00	0.00	0.00	0.00
Jul 26	4:30 PM	15 min	2,546.18	660.02	0.00	0.00	0.00	0.00
Jul 26	4:45 PM	15 min	2,733.98	709.45	0.00	0.00	0.00	0.00
Jul 26	5:00 PM	15 min	2,941.60	784.29	0.00	0.00	0.00	0.00
Jul 26	5:15 PM	15 min	3,332.71	907.60	0.00	0.00	0.00	0.00
Jul 26	5:30 PM	15 min	3,928.11	1074.54	0.00	0.00	0.00	0.00
Jul 26	5:45 PM	15 min	4,668.20	1277.96	0.00	0.00	0.00	0.00
Jul 26	6:00 PM	15 min	5,555.52	1530.76	0.00	0.00	0.00	0.00
Jul 26	6:15 PM	15 min	6,690.55	1907.80	0.00	0.00	0.00	0.00
Jul 26	6:30 PM	15 min	8,571.87	2535.70	0.00	0.00	0.00	0.00
Jul 26	6:45 PM	15 min	11,713.76	3573.27	0.00	0.00	0.00	**233.57**
Jul 26	7:00 PM	15 min	16,872.41	5341.36	0.00	0.00	**1,868.56**	**819.49**
Jul 26	7:15 PM	8 min	25,858.46	4100.99	0.00	0.00	**4,687.33**	**822.57**
Jul 26	7:23 PM	0 min	32,727.08		0.00		**7,063.61**	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Aug 2	7:14 AM	1 min	50,510.32	996.47	0.00	0.00	0.00	0.00
Aug 2	7:15 AM	15 min	49,136.76	10327.25	0.00	0.00	0.00	0.00
Aug 2	7:30 AM	15 min	33,481.24	7061.96	0.00	0.00	0.00	0.00
Aug 2	7:45 AM	15 min	23,014.43	4762.02	0.00	0.00	0.00	0.00
Aug 2	8:00 AM	15 min	15,081.73	3130.98	0.00	0.00	0.00	0.00
Aug 2	8:15 AM	15 min	9,966.15	2109.53	0.00	0.00	0.00	0.00
Aug 2	8:30 AM	15 min	6,910.12	1532.30	0.00	0.00	0.00	0.00
Aug 2	8:45 AM	15 min	5,348.32	1206.60	0.00	0.00	0.00	0.00
Aug 2	9:00 AM	15 min	4,304.49	973.27	0.00	0.00	0.00	0.00
Aug 2	9:15 AM	15 min	3,481.65	819.64	0.00	0.00	0.00	0.00
Aug 2	9:30 AM	15 min	3,075.44	740.36	0.00	0.00	0.00	0.00
Aug 2	9:45 AM	15 min	2,847.43	686.40	0.00	0.00	0.00	0.00
Aug 2	10:00 AM	15 min	2,643.75	637.86	0.00	0.00	0.00	0.00
Aug 2	10:15 AM	15 min	2,459.16	593.61	0.00	0.00	0.00	0.00
Aug 2	10:30 AM	15 min	2,289.71	553.33	0.00	0.00	0.00	0.00
Aug 2	10:45 AM	15 min	2,136.93	517.24	0.00	0.00	0.00	0.00
Aug 2	11:00 AM	15 min	2,000.97	484.53	0.00	0.00	0.00	0.00
Aug 2	11:15 AM	15 min	1,875.28	454.66	0.00	0.00	0.00	0.00
Aug 2	11:30 AM	15 min	1,761.99	427.23	0.00	0.00	0.00	0.00
Aug 2	11:45 AM	15 min	1,655.88	402.30	0.00	0.00	0.00	0.00
Aug 2	12:00 PM	15 min	1,562.51	383.26	0.00	0.00	0.00	0.00
Aug 2	12:15 PM	15 min	1,503.53	370.11	0.00	0.00	0.00	0.00
Aug 2	12:30 PM	15 min	1,457.38	360.20	0.00	0.00	0.00	0.00
Aug 2	12:45 PM	15 min	1,424.18	353.20	0.00	0.00	0.00	0.00
Aug 2	1:00 PM	15 min	1,401.45	349.24	0.00	0.00	0.00	0.00
Aug 2	1:15 PM	15 min	1,392.50	348.23	0.00	0.00	0.00	0.00
Aug 2	1:30 PM	15 min	1,393.32	350.15	0.00	0.00	0.00	0.00
Aug 2	1:45 PM	15 min	1,407.91	354.96	0.00	0.00	0.00	0.00
Aug 2	2:00 PM	15 min	1,431.79	361.71	0.00	0.00	0.00	0.00
Aug 2	2:15 PM	15 min	1,461.85	372.65	0.00	0.00	0.00	0.00
Aug 2	2:30 PM	15 min	1,519.38	391.55	0.00	0.00	0.00	0.00
Aug 2	2:45 PM	15 min	1,613.02	416.71	0.00	0.00	0.00	0.00
Aug 2	3:00 PM	15 min	1,720.66	444.75	0.00	0.00	0.00	0.00
Aug 2	3:15 PM	15 min	1,837.32	475.36	0.00	0.00	0.00	0.00
Aug 2	3:30 PM	15 min	1,965.56	508.68	0.00	0.00	0.00	0.00
Aug 2	3:45 PM	15 min	2,103.84	544.86	0.00	0.00	0.00	0.00
Aug 2	4:00 PM	15 min	2,255.03	584.26	0.00	0.00	0.00	0.00
Aug 2	4:15 PM	15 min	2,419.07	627.04	0.00	0.00	0.00	0.00
Aug 2	4:30 PM	15 min	2,597.27	673.75	0.00	0.00	0.00	0.00
Aug 2	4:45 PM	15 min	2,792.76	740.58	0.00	0.00	0.00	0.00
Aug 2	5:00 PM	15 min	3,131.88	853.44	0.00	0.00	0.00	0.00
Aug 2	5:15 PM	15 min	3,695.62	1011.06	0.00	0.00	0.00	0.00
Aug 2	5:30 PM	15 min	4,392.84	1201.94	0.00	0.00	0.00	0.00
Aug 2	5:45 PM	15 min	5,222.67	1434.41	0.00	0.00	0.00	0.00
Aug 2	6:00 PM	15 min	6,252.59	1735.68	0.00	0.00	0.00	0.00
Aug 2	6:15 PM	15 min	7,632.88	2200.24	0.00	0.00	0.00	0.00
Aug 2	6:30 PM	15 min	9,969.03	2985.55	0.00	0.00	0.00	**0.93**
Aug 2	6:45 PM	15 min	13,915.35	4301.57	0.00	0.00	**7.40**	**287.44**
Aug 2	7:00 PM	15 min	20,497.21	6543.20	0.00	0.00	**2,292.13**	**942.04**
Aug 2	7:15 PM	2 min	31,848.38	1310.29	0.00	0.00	**5,244.22**	**221.88**
Aug 2	7:17 PM	0 min	33,666.12		0.00		**5,849.55**	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Aug 9	7:20 AM	11 min	47,283.91	7525.21	0.00	0.00	0.00	0.00
Aug 9	7:30 AM	15 min	36,329.58	7623.93	0.00	0.00	0.00	0.00
Aug 9	7:45 AM	15 min	24,661.89	5131.81	0.00	0.00	0.00	0.00
Aug 9	8:00 AM	15 min	16,392.57	3361.37	0.00	0.00	0.00	0.00
Aug 9	8:15 AM	15 min	10,498.38	2213.11	0.00	0.00	0.00	0.00
Aug 9	8:30 AM	15 min	7,206.50	1587.02	0.00	0.00	0.00	0.00
Aug 9	8:45 AM	15 min	5,489.68	1236.26	0.00	0.00	0.00	0.00
Aug 9	9:00 AM	15 min	4,400.39	994.21	0.00	0.00	0.00	0.00
Aug 9	9:15 AM	15 min	3,553.28	837.12	0.00	0.00	0.00	0.00
Aug 9	9:30 AM	15 min	3,143.64	756.03	0.00	0.00	0.00	0.00
Aug 9	9:45 AM	15 min	2,904.61	699.63	0.00	0.00	0.00	0.00
Aug 9	10:00 AM	15 min	2,692.41	649.06	0.00	0.00	0.00	0.00
Aug 9	10:15 AM	15 min	2,500.09	603.48	0.00	0.00	0.00	0.00
Aug 9	10:30 AM	15 min	2,327.78	562.62	0.00	0.00	0.00	0.00
Aug 9	10:45 AM	15 min	2,173.15	526.00	0.00	0.00	0.00	0.00
Aug 9	11:00 AM	15 min	2,034.84	493.05	0.00	0.00	0.00	0.00
Aug 9	11:15 AM	15 min	1,909.56	463.05	0.00	0.00	0.00	0.00
Aug 9	11:30 AM	15 min	1,794.81	435.24	0.00	0.00	0.00	0.00
Aug 9	11:45 AM	15 min	1,687.12	411.83	0.00	0.00	0.00	0.00
Aug 9	12:00 PM	15 min	1,607.51	394.90	0.00	0.00	0.00	0.00
Aug 9	12:15 PM	15 min	1,551.71	382.51	0.00	0.00	0.00	0.00
Aug 9	12:30 PM	15 min	1,508.40	373.11	0.00	0.00	0.00	0.00
Aug 9	12:45 PM	15 min	1,476.46	366.46	0.00	0.00	0.00	0.00
Aug 9	1:00 PM	15 min	1,455.18	362.68	0.00	0.00	0.00	0.00
Aug 9	1:15 PM	15 min	1,446.25	361.72	0.00	0.00	0.00	0.00
Aug 9	1:30 PM	15 min	1,447.54	363.67	0.00	0.00	0.00	0.00
Aug 9	1:45 PM	15 min	1,461.79	368.40	0.00	0.00	0.00	0.00
Aug 9	2:00 PM	15 min	1,485.39	374.85	0.00	0.00	0.00	0.00
Aug 9	2:15 PM	15 min	1,513.43	385.01	0.00	0.00	0.00	0.00
Aug 9	2:30 PM	15 min	1,566.67	402.28	0.00	0.00	0.00	0.00
Aug 9	2:45 PM	15 min	1,651.59	426.22	0.00	0.00	0.00	0.00
Aug 9	3:00 PM	15 min	1,758.18	454.58	0.00	0.00	0.00	0.00
Aug 9	3:15 PM	15 min	1,878.45	485.88	0.00	0.00	0.00	0.00
Aug 9	3:30 PM	15 min	2,008.63	519.86	0.00	0.00	0.00	0.00
Aug 9	3:45 PM	15 min	2,150.23	557.02	0.00	0.00	0.00	0.00
Aug 9	4:00 PM	15 min	2,305.93	597.87	0.00	0.00	0.00	0.00
Aug 9	4:15 PM	15 min	2,477.05	642.61	0.00	0.00	0.00	0.00
Aug 9	4:30 PM	15 min	2,663.81	705.81	0.00	0.00	0.00	0.00
Aug 9	4:45 PM	15 min	2,982.68	814.01	0.00	0.00	0.00	0.00
Aug 9	5:00 PM	15 min	3,529.39	966.61	0.00	0.00	0.00	0.00
Aug 9	5:15 PM	15 min	4,203.46	1150.00	0.00	0.00	0.00	0.00
Aug 9	5:30 PM	15 min	4,996.54	1369.73	0.00	0.00	0.00	0.00
Aug 9	5:45 PM	15 min	5,961.27	1650.61	0.00	0.00	0.00	0.00
Aug 9	6:00 PM	15 min	7,243.64	2017.20	0.00	0.00	0.00	0.00
Aug 9	6:15 PM	15 min	8,893.96	2616.52	0.00	0.00	0.00	0.00
Aug 9	6:30 PM	15 min	12,038.21	3653.59	0.00	0.00	0.00	**37.25**
Aug 9	6:45 PM	15 min	17,190.49	5386.05	0.00	0.00	**298.01**	**361.11**
Aug 9	7:00 PM	9 min	25,897.90	4482.46	0.00	0.00	**2,590.90**	**513.35**
Aug 9	7:09 PM	0 min	33,868.24		0.00		**4,253.72**	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Aug 16	7:26 AM	4 min	43,730.96	2910.03	0.00	0.00	0.00	0.00
Aug 16	7:30 AM	15 min	39,412.78	8212.17	0.00	0.00	0.00	0.00
Aug 16	7:45 AM	15 min	26,284.58	5494.42	0.00	0.00	0.00	0.00
Aug 16	8:00 AM	15 min	17,670.75	3612.93	0.00	0.00	0.00	0.00
Aug 16	8:15 AM	15 min	11,232.72	2340.32	0.00	0.00	0.00	0.00
Aug 16	8:30 AM	15 min	7,489.85	1638.86	0.00	0.00	0.00	0.00
Aug 16	8:45 AM	15 min	5,621.07	1263.02	0.00	0.00	0.00	0.00
Aug 16	9:00 AM	15 min	4,483.12	1012.54	0.00	0.00	0.00	0.00
Aug 16	9:15 AM	15 min	3,617.23	854.20	0.00	0.00	0.00	0.00
Aug 16	9:30 AM	15 min	3,216.39	772.65	0.00	0.00	0.00	0.00
Aug 16	9:45 AM	15 min	2,964.78	713.38	0.00	0.00	0.00	0.00
Aug 16	10:00 AM	15 min	2,742.30	660.88	0.00	0.00	0.00	0.00
Aug 16	10:15 AM	15 min	2,544.74	614.28	0.00	0.00	0.00	0.00
Aug 16	10:30 AM	15 min	2,369.48	572.88	0.00	0.00	0.00	0.00
Aug 16	10:45 AM	15 min	2,213.56	535.92	0.00	0.00	0.00	0.00
Aug 16	11:00 AM	15 min	2,073.80	502.67	0.00	0.00	0.00	0.00
Aug 16	11:15 AM	15 min	1,947.52	472.19	0.00	0.00	0.00	0.00
Aug 16	11:30 AM	15 min	1,829.98	444.52	0.00	0.00	0.00	0.00
Aug 16	11:45 AM	15 min	1,726.21	423.24	0.00	0.00	0.00	0.00
Aug 16	12:00 PM	15 min	1,659.75	408.15	0.00	0.00	0.00	0.00
Aug 16	12:15 PM	15 min	1,605.47	396.54	0.00	0.00	0.00	0.00
Aug 16	12:30 PM	15 min	1,566.84	387.76	0.00	0.00	0.00	0.00
Aug 16	12:45 PM	15 min	1,535.24	381.36	0.00	0.00	0.00	0.00
Aug 16	1:00 PM	15 min	1,515.64	377.98	0.00	0.00	0.00	0.00
Aug 16	1:15 PM	15 min	1,508.17	377.21	0.00	0.00	0.00	0.00
Aug 16	1:30 PM	15 min	1,509.51	379.10	0.00	0.00	0.00	0.00
Aug 16	1:45 PM	15 min	1,523.29	383.84	0.00	0.00	0.00	0.00
Aug 16	2:00 PM	15 min	1,547.42	390.49	0.00	0.00	0.00	0.00
Aug 16	2:15 PM	15 min	1,576.53	399.92	0.00	0.00	0.00	0.00
Aug 16	2:30 PM	15 min	1,622.81	415.21	0.00	0.00	0.00	0.00
Aug 16	2:45 PM	15 min	1,698.83	438.27	0.00	0.00	0.00	0.00
Aug 16	3:00 PM	15 min	1,807.35	467.20	0.00	0.00	0.00	0.00
Aug 16	3:15 PM	15 min	1,930.27	499.14	0.00	0.00	0.00	0.00
Aug 16	3:30 PM	15 min	2,062.82	534.07	0.00	0.00	0.00	0.00
Aug 16	3:45 PM	15 min	2,209.75	572.54	0.00	0.00	0.00	0.00
Aug 16	4:00 PM	15 min	2,370.57	614.96	0.00	0.00	0.00	0.00
Aug 16	4:15 PM	15 min	2,549.11	677.85	0.00	0.00	0.00	0.00
Aug 16	4:30 PM	15 min	2,873.72	786.05	0.00	0.00	0.00	0.00
Aug 16	4:45 PM	15 min	3,414.72	936.44	0.00	0.00	0.00	0.00
Aug 16	5:00 PM	15 min	4,076.79	1115.46	0.00	0.00	0.00	0.00
Aug 16	5:15 PM	15 min	4,846.85	1327.93	0.00	0.00	0.00	0.00
Aug 16	5:30 PM	15 min	5,776.57	1596.25	0.00	0.00	0.00	0.00
Aug 16	5:45 PM	15 min	6,993.46	1942.27	0.00	0.00	0.00	0.00
Aug 16	6:00 PM	15 min	8,544.67	2419.84	0.00	0.00	0.00	0.00
Aug 16	6:15 PM	15 min	10,814.09	3250.20	0.00	0.00	0.00	0.00
Aug 16	6:30 PM	15 min	15,187.50	4645.00	0.00	0.00	0.00	**109.83**
Aug 16	6:45 PM	15 min	21,972.52	7007.52	0.00	0.00	**878.65**	**448.68**
Aug 16	7:00 PM	1 min	34,087.66	691.56	0.00	0.00	**2,710.76**	**56.15**
Aug 16	7:01 PM	0 min	35,068.23		0.00		**2,903.96**	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Aug 23	7:32 AM	3 min	39,752.24	1916.20	**128.58**	**3.21**	**128.58**	**3.21**
Aug 23	7:35 AM	15 min	36,895.92	7691.28	0.00	0.00	0.00	0.00
Aug 23	7:50 AM	15 min	24,634.35	5112.72	0.00	0.00	0.00	0.00
Aug 23	8:05 AM	15 min	16,267.40	3328.65	0.00	0.00	0.00	0.00
Aug 23	8:20 AM	15 min	10,361.76	2140.83	0.00	0.00	0.00	0.00
Aug 23	8:35 AM	15 min	6,764.87	1509.11	0.00	0.00	0.00	0.00
Aug 23	8:50 AM	15 min	5,308.04	1191.43	0.00	0.00	0.00	0.00
Aug 23	9:05 AM	15 min	4,223.42	965.53	0.00	0.00	0.00	0.00
Aug 23	9:20 AM	15 min	3,500.78	837.65	0.00	0.00	0.00	0.00
Aug 23	9:35 AM	15 min	3,200.43	768.42	0.00	0.00	0.00	0.00
Aug 23	9:50 AM	15 min	2,946.90	709.07	0.00	0.00	0.00	0.00
Aug 23	10:05 AM	15 min	2,725.68	657.20	0.00	0.00	0.00	0.00
Aug 23	10:20 AM	15 min	2,531.96	611.73	0.00	0.00	0.00	0.00
Aug 23	10:35 AM	15 min	2,361.87	571.46	0.00	0.00	0.00	0.00
Aug 23	10:50 AM	15 min	2,209.78	535.36	0.00	0.00	0.00	0.00
Aug 23	11:05 AM	15 min	2,073.07	502.49	0.00	0.00	0.00	0.00
Aug 23	11:20 AM	15 min	1,946.85	472.39	0.00	0.00	0.00	0.00
Aug 23	11:35 AM	15 min	1,832.26	449.10	0.00	0.00	0.00	0.00
Aug 23	11:50 AM	15 min	1,760.50	432.62	0.00	0.00	0.00	0.00
Aug 23	12:05 PM	15 min	1,700.47	419.38	0.00	0.00	0.00	0.00
Aug 23	12:20 PM	15 min	1,654.54	409.29	0.00	0.00	0.00	0.00
Aug 23	12:35 PM	15 min	1,619.81	401.76	0.00	0.00	0.00	0.00
Aug 23	12:50 PM	15 min	1,594.30	396.81	0.00	0.00	0.00	0.00
Aug 23	1:05 PM	15 min	1,580.19	394.67	0.00	0.00	0.00	0.00
Aug 23	1:20 PM	15 min	1,577.13	394.92	0.00	0.00	0.00	0.00
Aug 23	1:35 PM	15 min	1,582.27	397.96	0.00	0.00	0.00	0.00
Aug 23	1:50 PM	15 min	1,601.38	403.58	0.00	0.00	0.00	0.00
Aug 23	2:05 PM	15 min	1,627.27	410.80	0.00	0.00	0.00	0.00
Aug 23	2:20 PM	15 min	1,659.15	421.19	0.00	0.00	0.00	0.00
Aug 23	2:35 PM	15 min	1,710.39	437.71	0.00	0.00	0.00	0.00
Aug 23	2:50 PM	15 min	1,791.30	462.24	0.00	0.00	0.00	0.00
Aug 23	3:05 PM	15 min	1,906.61	492.89	0.00	0.00	0.00	0.00
Aug 23	3:20 PM	15 min	2,036.53	526.89	0.00	0.00	0.00	0.00
Aug 23	3:35 PM	15 min	2,178.58	564.42	0.00	0.00	0.00	0.00
Aug 23	3:50 PM	15 min	2,336.74	606.51	0.00	0.00	0.00	0.00
Aug 23	4:05 PM	15 min	2,515.32	685.01	0.00	0.00	0.00	0.00
Aug 23	4:20 PM	15 min	2,964.75	813.84	0.00	0.00	0.00	0.00
Aug 23	4:35 PM	15 min	3,545.95	973.30	0.00	0.00	0.00	0.00
Aug 23	4:50 PM	15 min	4,240.47	1159.02	0.00	0.00	0.00	0.00
Aug 23	5:05 PM	15 min	5,031.66	1382.71	0.00	0.00	0.00	0.00
Aug 23	5:20 PM	15 min	6,030.03	1665.73	0.00	0.00	0.00	0.00
Aug 23	5:35 PM	15 min	7,295.84	2027.42	0.00	0.00	0.00	0.00
Aug 23	5:50 PM	15 min	8,923.50	2531.95	0.00	0.00	0.00	0.00
Aug 23	6:05 PM	15 min	11,332.08	3365.70	0.00	0.00	0.00	0.00
Aug 23	6:20 PM	15 min	15,593.48	4737.40	0.00	0.00	0.00	**24.73**
Aug 23	6:35 PM	15 min	22,305.72	7034.09	0.00	0.00	**197.81**	**212.29**
Aug 23	6:50 PM	1 min	33,967.03	689.88	0.00	0.00	**1,500.47**	**30.10**
Aug 23	6:51 PM	0 min	35,020.59		0.00		**1,509.04**	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Aug 30	7:38 AM	7 min	36,076.20	3974.49	**1,508.14**	**90.49**	**1,508.14**	**90.49**
Aug 30	7:45 AM	15 min	30,165.34	6218.56	0.00	0.00	0.00	0.00
Aug 30	8:00 AM	15 min	19,583.17	4038.43	0.00	0.00	0.00	0.00
Aug 30	8:15 AM	15 min	12,724.28	2599.67	0.00	0.00	0.00	0.00
Aug 30	8:30 AM	15 min	8,073.07	1741.48	0.00	0.00	0.00	0.00
Aug 30	8:45 AM	15 min	5,858.73	1308.85	0.00	0.00	0.00	0.00
Aug 30	9:00 AM	15 min	4,612.05	1043.30	0.00	0.00	0.00	0.00
Aug 30	9:15 AM	15 min	3,734.39	888.32	0.00	0.00	0.00	0.00
Aug 30	9:30 AM	15 min	3,372.19	808.52	0.00	0.00	0.00	0.00
Aug 30	9:45 AM	15 min	3,095.97	744.04	0.00	0.00	0.00	0.00
Aug 30	10:00 AM	15 min	2,856.32	688.38	0.00	0.00	0.00	0.00
Aug 30	10:15 AM	15 min	2,650.75	639.95	0.00	0.00	0.00	0.00
Aug 30	10:30 AM	15 min	2,468.87	597.27	0.00	0.00	0.00	0.00
Aug 30	10:45 AM	15 min	2,309.27	559.23	0.00	0.00	0.00	0.00
Aug 30	11:00 AM	15 min	2,164.61	524.57	0.00	0.00	0.00	0.00
Aug 30	11:15 AM	15 min	2,031.95	494.14	0.00	0.00	0.00	0.00
Aug 30	11:30 AM	15 min	1,921.16	471.07	0.00	0.00	0.00	0.00
Aug 30	11:45 AM	15 min	1,847.42	454.17	0.00	0.00	0.00	0.00
Aug 30	12:00 PM	15 min	1,785.93	440.69	0.00	0.00	0.00	0.00
Aug 30	12:15 PM	15 min	1,739.55	430.17	0.00	0.00	0.00	0.00
Aug 30	12:30 PM	15 min	1,701.80	422.06	0.00	0.00	0.00	0.00
Aug 30	12:45 PM	15 min	1,674.72	416.75	0.00	0.00	0.00	0.00
Aug 30	1:00 PM	15 min	1,659.29	414.12	0.00	0.00	0.00	0.00
Aug 30	1:15 PM	15 min	1,653.64	413.80	0.00	0.00	0.00	0.00
Aug 30	1:30 PM	15 min	1,656.78	416.02	0.00	0.00	0.00	0.00
Aug 30	1:45 PM	15 min	1,671.34	421.01	0.00	0.00	0.00	0.00
Aug 30	2:00 PM	15 min	1,696.72	428.14	0.00	0.00	0.00	0.00
Aug 30	2:15 PM	15 min	1,728.42	437.06	0.00	0.00	0.00	0.00
Aug 30	2:30 PM	15 min	1,768.07	450.46	0.00	0.00	0.00	0.00
Aug 30	2:45 PM	15 min	1,835.59	471.60	0.00	0.00	0.00	0.00
Aug 30	3:00 PM	15 min	1,937.20	500.15	0.00	0.00	0.00	0.00
Aug 30	3:15 PM	15 min	2,064.00	534.17	0.00	0.00	0.00	0.00
Aug 30	3:30 PM	15 min	2,209.40	572.13	0.00	0.00	0.00	0.00
Aug 30	3:45 PM	15 min	2,367.63	640.00	0.00	0.00	0.00	0.00
Aug 30	4:00 PM	15 min	2,752.35	756.26	0.00	0.00	0.00	0.00
Aug 30	4:15 PM	15 min	3,297.71	906.63	0.00	0.00	0.00	0.00
Aug 30	4:30 PM	15 min	3,955.30	1081.92	0.00	0.00	0.00	0.00
Aug 30	4:45 PM	15 min	4,700.03	1288.58	0.00	0.00	0.00	0.00
Aug 30	5:00 PM	15 min	5,608.64	1545.51	0.00	0.00	0.00	0.00
Aug 30	5:15 PM	15 min	6,755.46	1875.46	0.00	0.00	0.00	0.00
Aug 30	5:30 PM	15 min	8,248.21	2320.22	0.00	0.00	0.00	0.00
Aug 30	5:45 PM	15 min	10,313.57	2942.58	0.00	0.00	0.00	0.00
Aug 30	6:00 PM	15 min	13,227.11	3951.12	0.00	0.00	0.00	0.00
Aug 30	6:15 PM	15 min	18,381.86	5575.64	0.00	0.00	0.01	**21.14**
Aug 30	6:30 PM	11 min	26,223.28	5876.85	0.00	0.00	**169.15**	**70.34**
Aug 30	6:41 PM	0 min	35,638.32		0.00		**571.28**	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Sep 6	7:44 AM	1 min	32,535.07	642.26	**3,788.71**	**69.19**	**3,788.71**	**69.19**
Sep 6	7:45 AM	15 min	31,690.84	6585.35	**3,130.68**	**391.34**	**3,130.68**	**391.34**
Sep 6	8:00 AM	15 min	20,991.96	4280.43	0.00	0.00	0.00	0.00
Sep 6	8:15 AM	15 min	13,251.46	2709.44	0.00	0.00	0.00	0.00
Sep 6	8:30 AM	15 min	8,424.08	1798.60	0.00	0.00	0.00	0.00
Sep 6	8:45 AM	15 min	5,964.74	1328.36	0.00	0.00	0.00	0.00
Sep 6	9:00 AM	15 min	4,662.14	1057.19	0.00	0.00	0.00	0.00
Sep 6	9:15 AM	15 min	3,795.34	905.94	0.00	0.00	0.00	0.00
Sep 6	9:30 AM	15 min	3,452.20	827.89	0.00	0.00	0.00	0.00
Sep 6	9:45 AM	15 min	3,170.93	762.26	0.00	0.00	0.00	0.00
Sep 6	10:00 AM	15 min	2,927.12	705.11	0.00	0.00	0.00	0.00
Sep 6	10:15 AM	15 min	2,713.75	655.42	0.00	0.00	0.00	0.00
Sep 6	10:30 AM	15 min	2,529.59	611.82	0.00	0.00	0.00	0.00
Sep 6	10:45 AM	15 min	2,364.97	572.69	0.00	0.00	0.00	0.00
Sep 6	11:00 AM	15 min	2,216.55	537.30	0.00	0.00	0.00	0.00
Sep 6	11:15 AM	15 min	2,081.82	509.21	0.00	0.00	0.00	0.00
Sep 6	11:30 AM	15 min	1,991.86	489.14	0.00	0.00	0.00	0.00
Sep 6	11:45 AM	15 min	1,921.23	472.87	0.00	0.00	0.00	0.00
Sep 6	12:00 PM	15 min	1,861.71	459.97	0.00	0.00	0.00	0.00
Sep 6	12:15 PM	15 min	1,818.02	449.88	0.00	0.00	0.00	0.00
Sep 6	12:30 PM	15 min	1,781.04	442.16	0.00	0.00	0.00	0.00
Sep 6	12:45 PM	15 min	1,756.26	437.29	0.00	0.00	0.00	0.00
Sep 6	1:00 PM	15 min	1,742.03	435.05	0.00	0.00	0.00	0.00
Sep 6	1:15 PM	15 min	1,738.35	435.00	0.00	0.00	0.00	0.00
Sep 6	1:30 PM	15 min	1,741.67	437.35	0.00	0.00	0.00	0.00
Sep 6	1:45 PM	15 min	1,757.13	442.69	0.00	0.00	0.00	0.00
Sep 6	2:00 PM	15 min	1,784.36	450.26	0.00	0.00	0.00	0.00
Sep 6	2:15 PM	15 min	1,817.73	459.22	0.00	0.00	0.00	0.00
Sep 6	2:30 PM	15 min	1,856.02	472.27	0.00	0.00	0.00	0.00
Sep 6	2:45 PM	15 min	1,922.18	492.44	0.00	0.00	0.00	0.00
Sep 6	3:00 PM	15 min	2,017.32	520.92	0.00	0.00	0.00	0.00
Sep 6	3:15 PM	15 min	2,150.07	557.18	0.00	0.00	0.00	0.00
Sep 6	3:30 PM	15 min	2,307.35	630.68	0.00	0.00	0.00	0.00
Sep 6	3:45 PM	15 min	2,738.11	753.47	0.00	0.00	0.00	0.00
Sep 6	4:00 PM	15 min	3,289.68	904.35	0.00	0.00	0.00	0.00
Sep 6	4:15 PM	15 min	3,945.12	1077.81	0.00	0.00	0.00	0.00
Sep 6	4:30 PM	15 min	4,677.38	1283.10	0.00	0.00	0.00	0.00
Sep 6	4:45 PM	15 min	5,587.44	1537.79	0.00	0.00	0.00	0.00
Sep 6	5:00 PM	15 min	6,714.88	1864.25	0.00	0.00	0.00	0.00
Sep 6	5:15 PM	15 min	8,199.14	2318.32	0.00	0.00	0.00	0.00
Sep 6	5:30 PM	15 min	10,347.39	2933.96	0.00	0.00	0.00	0.00
Sep 6	5:45 PM	15 min	13,124.28	3798.47	0.00	0.00	0.00	0.00
Sep 6	6:00 PM	15 min	17,263.45	5230.77	0.00	0.00	0.00	0.00
Sep 6	6:15 PM	15 min	24,582.73	7554.80	0.00	0.00	0.00	**7.95**
Sep 6	6:30 PM	1 min	35,855.64	728.87	0.00	0.00	**63.62**	**1.40**
Sep 6	6:31 PM	0 min	37,031.76		0.00		**76.10**	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Sep 13	7:50 AM	10 min	29,071.04	4337.71	**6,444.30**	**613.15**	**6,444.30**	**613.15**
Sep 13	8:00 AM	15 min	21,960.86	4487.58	**769.22**	**96.15**	**769.22**	**96.15**
Sep 13	8:15 AM	15 min	13,939.76	2834.24	0.00	0.00	0.00	0.00
Sep 13	8:30 AM	15 min	8,734.16	1846.26	0.00	0.00	0.00	0.00
Sep 13	8:45 AM	15 min	6,035.96	1343.42	0.00	0.00	0.00	0.00
Sep 13	9:00 AM	15 min	4,711.41	1074.39	0.00	0.00	0.00	0.00
Sep 13	9:15 AM	15 min	3,883.72	927.91	0.00	0.00	0.00	0.00
Sep 13	9:30 AM	15 min	3,539.54	849.17	0.00	0.00	0.00	0.00
Sep 13	9:45 AM	15 min	3,253.84	782.42	0.00	0.00	0.00	0.00
Sep 13	10:00 AM	15 min	3,005.52	724.20	0.00	0.00	0.00	0.00
Sep 13	10:15 AM	15 min	2,788.08	673.12	0.00	0.00	0.00	0.00
Sep 13	10:30 AM	15 min	2,596.90	627.99	0.00	0.00	0.00	0.00
Sep 13	10:45 AM	15 min	2,426.99	587.58	0.00	0.00	0.00	0.00
Sep 13	11:00 AM	15 min	2,273.65	553.86	0.00	0.00	0.00	0.00
Sep 13	11:15 AM	15 min	2,157.25	528.86	0.00	0.00	0.00	0.00
Sep 13	11:30 AM	15 min	2,073.61	509.56	0.00	0.00	0.00	0.00
Sep 13	11:45 AM	15 min	2,002.87	493.65	0.00	0.00	0.00	0.00
Sep 13	12:00 PM	15 min	1,946.32	481.29	0.00	0.00	0.00	0.00
Sep 13	12:15 PM	15 min	1,904.03	471.58	0.00	0.00	0.00	0.00
Sep 13	12:30 PM	15 min	1,868.64	464.13	0.00	0.00	0.00	0.00
Sep 13	12:45 PM	15 min	1,844.42	459.64	0.00	0.00	0.00	0.00
Sep 13	1:00 PM	15 min	1,832.67	457.86	0.00	0.00	0.00	0.00
Sep 13	1:15 PM	15 min	1,830.23	458.18	0.00	0.00	0.00	0.00
Sep 13	1:30 PM	15 min	1,835.24	460.85	0.00	0.00	0.00	0.00
Sep 13	1:45 PM	15 min	1,851.59	466.58	0.00	0.00	0.00	0.00
Sep 13	2:00 PM	15 min	1,881.06	474.58	0.00	0.00	0.00	0.00
Sep 13	2:15 PM	15 min	1,915.55	483.90	0.00	0.00	0.00	0.00
Sep 13	2:30 PM	15 min	1,955.64	496.93	0.00	0.00	0.00	0.00
Sep 13	2:45 PM	15 min	2,019.81	516.15	0.00	0.00	0.00	0.00
Sep 13	3:00 PM	15 min	2,109.35	549.90	0.00	0.00	0.00	0.00
Sep 13	3:15 PM	15 min	2,289.81	629.44	0.00	0.00	0.00	0.00
Sep 13	3:30 PM	15 min	2,745.71	756.77	0.00	0.00	0.00	0.00
Sep 13	3:45 PM	15 min	3,308.46	908.19	0.00	0.00	0.00	0.00
Sep 13	4:00 PM	15 min	3,957.07	1080.10	0.00	0.00	0.00	0.00
Sep 13	4:15 PM	15 min	4,683.76	1284.67	0.00	0.00	0.00	0.00
Sep 13	4:30 PM	15 min	5,593.59	1536.85	0.00	0.00	0.00	0.00
Sep 13	4:45 PM	15 min	6,701.23	1858.07	0.00	0.00	0.00	0.00
Sep 13	5:00 PM	15 min	8,163.34	2313.72	0.00	0.00	0.00	0.00
Sep 13	5:15 PM	15 min	10,346.42	2919.77	0.00	0.00	0.00	0.00
Sep 13	5:30 PM	15 min	13,011.76	3731.15	0.00	0.00	0.00	0.00
Sep 13	5:45 PM	15 min	16,837.42	4985.67	0.00	0.00	0.00	0.00
Sep 13	6:00 PM	15 min	23,047.93	6962.43	0.00	0.00	0.00	0.00
Sep 13	6:15 PM	5 min	32,651.47	3149.75	0.00	0.00	0.00	0.00
Sep 13	6:20 PM	0 min	37,342.99		0.00		0.00	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Sep 20	7:56 AM	5 min	25,921.98	1951.84	**8,776.23**	**557.29**	**8,776.23**	**557.29**
Sep 20	8:00 AM	15 min	22,874.12	4675.55	**5,155.92**	**644.49**	**5,155.92**	**644.49**
Sep 20	8:15 AM	15 min	14,530.30	2946.25	**0.02**	0.00	**0.02**	0.00
Sep 20	8:30 AM	15 min	9,039.73	1896.82	0.00	0.00	0.00	0.00
Sep 20	8:45 AM	15 min	6,134.82	1361.69	0.00	0.00	0.00	0.00
Sep 20	9:00 AM	15 min	4,758.67	1094.82	0.00	0.00	0.00	0.00
Sep 20	9:15 AM	15 min	3,999.88	955.18	0.00	0.00	0.00	0.00
Sep 20	9:30 AM	15 min	3,641.55	873.14	0.00	0.00	0.00	0.00
Sep 20	9:45 AM	15 min	3,343.55	804.55	0.00	0.00	0.00	0.00
Sep 20	10:00 AM	15 min	3,092.89	745.53	0.00	0.00	0.00	0.00
Sep 20	10:15 AM	15 min	2,871.35	693.03	0.00	0.00	0.00	0.00
Sep 20	10:30 AM	15 min	2,672.87	645.97	0.00	0.00	0.00	0.00
Sep 20	10:45 AM	15 min	2,494.89	605.33	0.00	0.00	0.00	0.00
Sep 20	11:00 AM	15 min	2,347.73	574.48	0.00	0.00	0.00	0.00
Sep 20	11:15 AM	15 min	2,248.10	551.53	0.00	0.00	0.00	0.00
Sep 20	11:30 AM	15 min	2,164.18	532.38	0.00	0.00	0.00	0.00
Sep 20	11:45 AM	15 min	2,094.89	517.08	0.00	0.00	0.00	0.00
Sep 20	12:00 PM	15 min	2,041.74	505.00	0.00	0.00	0.00	0.00
Sep 20	12:15 PM	15 min	1,998.27	495.31	0.00	0.00	0.00	0.00
Sep 20	12:30 PM	15 min	1,964.25	488.28	0.00	0.00	0.00	0.00
Sep 20	12:45 PM	15 min	1,941.98	484.25	0.00	0.00	0.00	0.00
Sep 20	1:00 PM	15 min	1,932.02	482.72	0.00	0.00	0.00	0.00
Sep 20	1:15 PM	15 min	1,929.75	483.27	0.00	0.00	0.00	0.00
Sep 20	1:30 PM	15 min	1,936.44	486.44	0.00	0.00	0.00	0.00
Sep 20	1:45 PM	15 min	1,955.11	492.64	0.00	0.00	0.00	0.00
Sep 20	2:00 PM	15 min	1,986.00	501.21	0.00	0.00	0.00	0.00
Sep 20	2:15 PM	15 min	2,023.65	511.38	0.00	0.00	0.00	0.00
Sep 20	2:30 PM	15 min	2,067.35	524.68	0.00	0.00	0.00	0.00
Sep 20	2:45 PM	15 min	2,130.10	556.95	0.00	0.00	0.00	0.00
Sep 20	3:00 PM	15 min	2,325.53	638.05	0.00	0.00	0.00	0.00
Sep 20	3:15 PM	15 min	2,778.87	765.53	0.00	0.00	0.00	0.00
Sep 20	3:30 PM	15 min	3,345.38	916.56	0.00	0.00	0.00	0.00
Sep 20	3:45 PM	15 min	3,987.12	1086.90	0.00	0.00	0.00	0.00
Sep 20	4:00 PM	15 min	4,708.06	1291.27	0.00	0.00	0.00	0.00
Sep 20	4:15 PM	15 min	5,622.12	1541.49	0.00	0.00	0.00	0.00
Sep 20	4:30 PM	15 min	6,709.82	1856.34	0.00	0.00	0.00	0.00
Sep 20	4:45 PM	15 min	8,140.90	2302.25	0.00	0.00	0.00	0.00
Sep 20	5:00 PM	15 min	10,277.14	2904.29	0.00	0.00	0.00	0.00
Sep 20	5:15 PM	15 min	12,957.21	3708.52	0.00	0.00	0.00	0.00
Sep 20	5:30 PM	15 min	16,710.95	4838.41	0.00	0.00	0.00	0.00
Sep 20	5:45 PM	15 min	21,996.36	6596.86	0.00	0.00	0.00	0.00
Sep 20	6:00 PM	9 min	30,778.50	5170.93	0.00	0.00	0.00	0.00
Sep 20	6:09 PM	0 min	38,167.29		0.00		0.00	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Sep 27	8:02 AM	13 min	23,305.00	4205.30	**10,375.83**	**1278.76**	**10,375.83**	**1278.76**
Sep 27	8:15 AM	15 min	14,925.04	3042.23	**1,249.31**	**156.16**	**1,249.31**	**156.16**
Sep 27	8:30 AM	15 min	9,412.76	1971.62	0.01	0.00	0.01	0.00
Sep 27	8:45 AM	15 min	6,360.20	1400.85	0.00	0.00	0.00	0.00
Sep 27	9:00 AM	15 min	4,846.62	1122.96	0.00	0.00	0.00	0.00
Sep 27	9:15 AM	15 min	4,137.06	986.84	0.00	0.00	0.00	0.00
Sep 27	9:30 AM	15 min	3,757.66	900.58	0.00	0.00	0.00	0.00
Sep 27	9:45 AM	15 min	3,446.99	829.31	0.00	0.00	0.00	0.00
Sep 27	10:00 AM	15 min	3,187.46	768.69	0.00	0.00	0.00	0.00
Sep 27	10:15 AM	15 min	2,962.07	714.82	0.00	0.00	0.00	0.00
Sep 27	10:30 AM	15 min	2,756.48	666.38	0.00	0.00	0.00	0.00
Sep 27	10:45 AM	15 min	2,574.57	628.00	0.00	0.00	0.00	0.00
Sep 27	11:00 AM	15 min	2,449.39	599.82	0.00	0.00	0.00	0.00
Sep 27	11:15 AM	15 min	2,349.15	576.78	0.00	0.00	0.00	0.00
Sep 27	11:30 AM	15 min	2,265.13	557.80	0.00	0.00	0.00	0.00
Sep 27	11:45 AM	15 min	2,197.23	542.83	0.00	0.00	0.00	0.00
Sep 27	12:00 PM	15 min	2,145.37	530.68	0.00	0.00	0.00	0.00
Sep 27	12:15 PM	15 min	2,100.03	521.10	0.00	0.00	0.00	0.00
Sep 27	12:30 PM	15 min	2,068.78	514.61	0.00	0.00	0.00	0.00
Sep 27	12:45 PM	15 min	2,048.09	510.85	0.00	0.00	0.00	0.00
Sep 27	1:00 PM	15 min	2,038.67	509.55	0.00	0.00	0.00	0.00
Sep 27	1:15 PM	15 min	2,037.69	510.51	0.00	0.00	0.00	0.00
Sep 27	1:30 PM	15 min	2,046.38	514.13	0.00	0.00	0.00	0.00
Sep 27	1:45 PM	15 min	2,066.63	520.95	0.00	0.00	0.00	0.00
Sep 27	2:00 PM	15 min	2,100.96	530.18	0.00	0.00	0.00	0.00
Sep 27	2:15 PM	15 min	2,140.49	541.17	0.00	0.00	0.00	0.00
Sep 27	2:30 PM	15 min	2,188.86	575.52	0.00	0.00	0.00	0.00
Sep 27	2:45 PM	15 min	2,415.32	658.52	0.00	0.00	0.00	0.00
Sep 27	3:00 PM	15 min	2,852.84	781.64	0.00	0.00	0.00	0.00
Sep 27	3:15 PM	15 min	3,400.24	928.74	0.00	0.00	0.00	0.00
Sep 27	3:30 PM	15 min	4,029.71	1098.02	0.00	0.00	0.00	0.00
Sep 27	3:45 PM	15 min	4,754.45	1301.68	0.00	0.00	0.00	0.00
Sep 27	4:00 PM	15 min	5,658.98	1548.15	0.00	0.00	0.00	0.00
Sep 27	4:15 PM	15 min	6,726.18	1853.39	0.00	0.00	0.00	0.00
Sep 27	4:30 PM	15 min	8,100.92	2286.02	0.00	0.00	0.00	0.00
Sep 27	4:45 PM	15 min	10,187.27	2893.84	0.00	0.00	0.00	0.00
Sep 27	5:00 PM	15 min	12,963.45	3689.02	0.00	0.00	0.00	0.00
Sep 27	5:15 PM	15 min	16,548.71	4764.13	0.00	0.00	0.00	0.00
Sep 27	5:30 PM	15 min	21,564.34	6334.57	0.00	0.00	0.00	0.00
Sep 27	5:45 PM	13 min	29,112.24	7516.69	0.00	0.00	0.00	0.00
Sep 27	5:58 PM	0 min	39,221.30		0.00		0.00	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Oct 4	8:08 AM	7 min	21,645.49	2262.09	**10,954.26**	**914.11**	**10,954.26**	**914.11**
Oct 4	8:15 AM	15 min	16,056.00	3205.72	**4,280.83**	**535.10**	**4,280.83**	**535.10**
Oct 4	8:30 AM	15 min	9,589.76	2026.10	0.00	0.00	0.00	0.00
Oct 4	8:45 AM	15 min	6,619.01	1450.63	0.00	0.00	0.00	0.00
Oct 4	9:00 AM	15 min	4,986.06	1160.60	0.00	0.00	0.00	0.00
Oct 4	9:15 AM	15 min	4,298.77	1024.02	0.00	0.00	0.00	0.00
Oct 4	9:30 AM	15 min	3,893.39	932.57	0.00	0.00	0.00	0.00
Oct 4	9:45 AM	15 min	3,567.16	857.49	0.00	0.00	0.00	0.00
Oct 4	10:00 AM	15 min	3,292.75	793.72	0.00	0.00	0.00	0.00
Oct 4	10:15 AM	15 min	3,056.98	738.35	0.00	0.00	0.00	0.00
Oct 4	10:30 AM	15 min	2,849.81	692.15	0.00	0.00	0.00	0.00
Oct 4	10:45 AM	15 min	2,687.37	656.54	0.00	0.00	0.00	0.00
Oct 4	11:00 AM	15 min	2,564.98	628.48	0.00	0.00	0.00	0.00
Oct 4	11:15 AM	15 min	2,462.82	605.07	0.00	0.00	0.00	0.00
Oct 4	11:30 AM	15 min	2,377.78	586.14	0.00	0.00	0.00	0.00
Oct 4	11:45 AM	15 min	2,311.36	571.02	0.00	0.00	0.00	0.00
Oct 4	12:00 PM	15 min	2,256.84	558.74	0.00	0.00	0.00	0.00
Oct 4	12:15 PM	15 min	2,213.09	549.29	0.00	0.00	0.00	0.00
Oct 4	12:30 PM	15 min	2,181.23	542.91	0.00	0.00	0.00	0.00
Oct 4	12:45 PM	15 min	2,162.02	539.39	0.00	0.00	0.00	0.00
Oct 4	1:00 PM	15 min	2,153.09	538.37	0.00	0.00	0.00	0.00
Oct 4	1:15 PM	15 min	2,153.91	539.84	0.00	0.00	0.00	0.00
Oct 4	1:30 PM	15 min	2,164.78	543.96	0.00	0.00	0.00	0.00
Oct 4	1:45 PM	15 min	2,186.90	551.40	0.00	0.00	0.00	0.00
Oct 4	2:00 PM	15 min	2,224.30	561.55	0.00	0.00	0.00	0.00
Oct 4	2:15 PM	15 min	2,268.09	601.11	0.00	0.00	0.00	0.00
Oct 4	2:30 PM	15 min	2,540.79	687.13	0.00	0.00	0.00	0.00
Oct 4	2:45 PM	15 min	2,956.26	806.05	0.00	0.00	0.00	0.00
Oct 4	3:00 PM	15 min	3,492.16	946.71	0.00	0.00	0.00	0.00
Oct 4	3:15 PM	15 min	4,081.55	1111.65	0.00	0.00	0.00	0.00
Oct 4	3:30 PM	15 min	4,811.61	1314.15	0.00	0.00	0.00	0.00
Oct 4	3:45 PM	15 min	5,701.62	1554.92	0.00	0.00	0.00	0.00
Oct 4	4:00 PM	15 min	6,737.72	1853.08	0.00	0.00	0.00	0.00
Oct 4	4:15 PM	15 min	8,086.93	2277.54	0.00	0.00	0.00	0.00
Oct 4	4:30 PM	15 min	10,133.38	2880.69	0.00	0.00	0.00	0.00
Oct 4	4:45 PM	15 min	12,912.10	3658.78	0.00	0.00	0.00	0.00
Oct 4	5:00 PM	15 min	16,358.12	4705.26	0.00	0.00	0.00	0.00
Oct 4	5:15 PM	15 min	21,283.95	6141.10	0.00	0.00	0.00	0.00
Oct 4	5:30 PM	15 min	27,844.82	8221.92	0.00	0.00	0.00	0.00
Oct 4	5:45 PM	3 min	37,930.50	1981.79	0.00	0.00	0.00	0.00
Oct 4	5:48 PM	0 min	41,340.95		0.00		0.00	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Oct 11	8:15 AM	15 min	20,468.74	3825.61	**8,939.64**	**1121.96**	**8,939.64**	**1121.96**
Oct 11	8:30 AM	15 min	10,136.15	2126.06	**36.07**	**4.51**	**36.07**	**4.51**
Oct 11	8:45 AM	15 min	6,872.30	1507.53	0.00	0.00	0.00	0.00
Oct 11	9:00 AM	15 min	5,187.97	1209.83	0.00	0.00	0.00	0.00
Oct 11	9:15 AM	15 min	4,490.71	1068.48	0.00	0.00	0.00	0.00
Oct 11	9:30 AM	15 min	4,057.12	970.21	0.00	0.00	0.00	0.00
Oct 11	9:45 AM	15 min	3,704.56	889.50	0.00	0.00	0.00	0.00
Oct 11	10:00 AM	15 min	3,411.48	821.65	0.00	0.00	0.00	0.00
Oct 11	10:15 AM	15 min	3,161.70	764.93	0.00	0.00	0.00	0.00
Oct 11	10:30 AM	15 min	2,957.76	721.74	0.00	0.00	0.00	0.00
Oct 11	10:45 AM	15 min	2,816.13	688.74	0.00	0.00	0.00	0.00
Oct 11	11:00 AM	15 min	2,693.82	660.21	0.00	0.00	0.00	0.00
Oct 11	11:15 AM	15 min	2,587.89	636.26	0.00	0.00	0.00	0.00
Oct 11	11:30 AM	15 min	2,502.18	617.16	0.00	0.00	0.00	0.00
Oct 11	11:45 AM	15 min	2,435.13	601.69	0.00	0.00	0.00	0.00
Oct 11	12:00 PM	15 min	2,378.41	589.11	0.00	0.00	0.00	0.00
Oct 11	12:15 PM	15 min	2,334.47	579.62	0.00	0.00	0.00	0.00
Oct 11	12:30 PM	15 min	2,302.47	573.39	0.00	0.00	0.00	0.00
Oct 11	12:45 PM	15 min	2,284.63	570.22	0.00	0.00	0.00	0.00
Oct 11	1:00 PM	15 min	2,277.14	569.47	0.00	0.00	0.00	0.00
Oct 11	1:15 PM	15 min	2,278.65	571.20	0.00	0.00	0.00	0.00
Oct 11	1:30 PM	15 min	2,290.96	575.81	0.00	0.00	0.00	0.00
Oct 11	1:45 PM	15 min	2,315.49	585.27	0.00	0.00	0.00	0.00
Oct 11	2:00 PM	15 min	2,366.70	630.11	0.00	0.00	0.00	0.00
Oct 11	2:15 PM	15 min	2,674.16	720.56	0.00	0.00	0.00	0.00
Oct 11	2:30 PM	15 min	3,090.30	835.27	0.00	0.00	0.00	0.00
Oct 11	2:45 PM	15 min	3,591.89	969.60	0.00	0.00	0.00	0.00
Oct 11	3:00 PM	15 min	4,164.89	1132.30	0.00	0.00	0.00	0.00
Oct 11	3:15 PM	15 min	4,893.52	1339.96	0.00	0.00	0.00	0.00
Oct 11	3:30 PM	15 min	5,826.16	1587.16	0.00	0.00	0.00	0.00
Oct 11	3:45 PM	15 min	6,871.15	1886.86	0.00	0.00	0.00	0.00
Oct 11	4:00 PM	15 min	8,223.69	2304.88	0.00	0.00	0.00	0.00
Oct 11	4:15 PM	15 min	10,215.36	2876.62	0.00	0.00	0.00	0.00
Oct 11	4:30 PM	15 min	12,797.59	3610.11	0.00	0.00	0.00	0.00
Oct 11	4:45 PM	15 min	16,083.29	4599.26	0.00	0.00	0.00	0.00
Oct 11	5:00 PM	15 min	20,710.80	5971.19	0.00	0.00	0.00	0.00
Oct 11	5:15 PM	15 min	27,058.73	7749.26	0.00	0.00	0.00	0.00
Oct 11	5:30 PM	7 min	34,935.39	4614.20	0.00	0.00	0.00	0.00
Oct 11	5:37 PM	0 min	41,967.96		0.00		0.00	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Oct 18	8:21 AM	9 min	21,425.26	2795.27	**7,093.11**	**631.13**	**7,093.11**	**631.13**
Oct 18	8:30 AM	15 min	13,515.62	2597.16	**795.97**	**99.50**	**795.97**	**99.50**
Oct 18	8:45 AM	15 min	7,261.69	1587.83	0.00	0.00	0.00	0.00
Oct 18	9:00 AM	15 min	5,440.98	1270.56	0.00	0.00	0.00	0.00
Oct 18	9:15 AM	15 min	4,723.52	1121.26	0.00	0.00	0.00	0.00
Oct 18	9:30 AM	15 min	4,246.58	1013.82	0.00	0.00	0.00	0.00
Oct 18	9:45 AM	15 min	3,864.02	926.33	0.00	0.00	0.00	0.00
Oct 18	10:00 AM	15 min	3,546.66	853.63	0.00	0.00	0.00	0.00
Oct 18	10:15 AM	15 min	3,282.40	797.30	0.00	0.00	0.00	0.00
Oct 18	10:30 AM	15 min	3,096.04	756.20	0.00	0.00	0.00	0.00
Oct 18	10:45 AM	15 min	2,953.59	723.19	0.00	0.00	0.00	0.00
Oct 18	11:00 AM	15 min	2,831.92	694.70	0.00	0.00	0.00	0.00
Oct 18	11:15 AM	15 min	2,725.68	670.58	0.00	0.00	0.00	0.00
Oct 18	11:30 AM	15 min	2,638.93	650.93	0.00	0.00	0.00	0.00
Oct 18	11:45 AM	15 min	2,568.52	634.71	0.00	0.00	0.00	0.00
Oct 18	12:00 PM	15 min	2,509.13	621.80	0.00	0.00	0.00	0.00
Oct 18	12:15 PM	15 min	2,465.23	612.24	0.00	0.00	0.00	0.00
Oct 18	12:30 PM	15 min	2,432.66	605.93	0.00	0.00	0.00	0.00
Oct 18	12:45 PM	15 min	2,414.79	602.83	0.00	0.00	0.00	0.00
Oct 18	1:00 PM	15 min	2,407.84	602.30	0.00	0.00	0.00	0.00
Oct 18	1:15 PM	15 min	2,410.53	604.41	0.00	0.00	0.00	0.00
Oct 18	1:30 PM	15 min	2,424.78	614.17	0.00	0.00	0.00	0.00
Oct 18	1:45 PM	15 min	2,488.59	661.61	0.00	0.00	0.00	0.00
Oct 18	2:00 PM	15 min	2,804.29	752.64	0.00	0.00	0.00	0.00
Oct 18	2:15 PM	15 min	3,216.82	865.53	0.00	0.00	0.00	0.00
Oct 18	2:30 PM	15 min	3,707.39	994.16	0.00	0.00	0.00	0.00
Oct 18	2:45 PM	15 min	4,245.87	1149.84	0.00	0.00	0.00	0.00
Oct 18	3:00 PM	15 min	4,952.87	1355.94	0.00	0.00	0.00	0.00
Oct 18	3:15 PM	15 min	5,894.68	1613.74	0.00	0.00	0.00	0.00
Oct 18	3:30 PM	15 min	7,015.25	1937.09	0.00	0.00	0.00	0.00
Oct 18	3:45 PM	15 min	8,481.46	2362.15	0.00	0.00	0.00	0.00
Oct 18	4:00 PM	15 min	10,415.73	2909.84	0.00	0.00	0.00	0.00
Oct 18	4:15 PM	15 min	12,862.98	3609.89	0.00	0.00	0.00	0.00
Oct 18	4:30 PM	15 min	16,016.18	4498.23	0.00	0.00	0.00	0.00
Oct 18	4:45 PM	15 min	19,969.64	5744.04	0.00	0.00	0.00	0.00
Oct 18	5:00 PM	15 min	25,982.66	7472.48	0.00	0.00	0.00	0.00
Oct 18	5:15 PM	13 min	33,797.14	8591.44	0.00	0.00	0.00	0.00
Oct 18	5:28 PM	0 min	44,306.84		0.00		0.00	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Oct 25	8:28 AM	2 min	23,874.18	918.51	**3,655.10**	**115.34**	**3,655.10**	**115.34**
Oct 25	8:30 AM	15 min	22,051.57	3910.17	**2,111.68**	**263.96**	**2,111.68**	**263.96**
Oct 25	8:45 AM	15 min	9,229.80	1884.22	0.00	0.00	0.00	0.00
Oct 25	9:00 AM	15 min	5,843.95	1355.64	0.00	0.00	0.00	0.00
Oct 25	9:15 AM	15 min	5,001.21	1183.78	0.00	0.00	0.00	0.00
Oct 25	9:30 AM	15 min	4,469.01	1064.59	0.00	0.00	0.00	0.00
Oct 25	9:45 AM	15 min	4,047.69	968.91	0.00	0.00	0.00	0.00
Oct 25	10:00 AM	15 min	3,703.59	892.59	0.00	0.00	0.00	0.00
Oct 25	10:15 AM	15 min	3,437.16	836.04	0.00	0.00	0.00	0.00
Oct 25	10:30 AM	15 min	3,251.16	793.88	0.00	0.00	0.00	0.00
Oct 25	10:45 AM	15 min	3,099.91	759.51	0.00	0.00	0.00	0.00
Oct 25	11:00 AM	15 min	2,976.19	731.10	0.00	0.00	0.00	0.00
Oct 25	11:15 AM	15 min	2,872.64	707.36	0.00	0.00	0.00	0.00
Oct 25	11:30 AM	15 min	2,786.21	687.08	0.00	0.00	0.00	0.00
Oct 25	11:45 AM	15 min	2,710.41	669.90	0.00	0.00	0.00	0.00
Oct 25	12:00 PM	15 min	2,648.81	656.55	0.00	0.00	0.00	0.00
Oct 25	12:15 PM	15 min	2,603.58	646.82	0.00	0.00	0.00	0.00
Oct 25	12:30 PM	15 min	2,570.96	640.42	0.00	0.00	0.00	0.00
Oct 25	12:45 PM	15 min	2,552.43	637.31	0.00	0.00	0.00	0.00
Oct 25	1:00 PM	15 min	2,546.02	636.96	0.00	0.00	0.00	0.00
Oct 25	1:15 PM	15 min	2,549.68	646.83	0.00	0.00	0.00	0.00
Oct 25	1:30 PM	15 min	2,624.96	693.73	0.00	0.00	0.00	0.00
Oct 25	1:45 PM	15 min	2,924.87	781.95	0.00	0.00	0.00	0.00
Oct 25	2:00 PM	15 min	3,330.72	891.53	0.00	0.00	0.00	0.00
Oct 25	2:15 PM	15 min	3,801.54	1016.08	0.00	0.00	0.00	0.00
Oct 25	2:30 PM	15 min	4,327.14	1167.54	0.00	0.00	0.00	0.00
Oct 25	2:45 PM	15 min	5,013.17	1366.02	0.00	0.00	0.00	0.00
Oct 25	3:00 PM	15 min	5,915.00	1619.29	0.00	0.00	0.00	0.00
Oct 25	3:15 PM	15 min	7,039.34	1951.65	0.00	0.00	0.00	0.00
Oct 25	3:30 PM	15 min	8,573.90	2409.13	0.00	0.00	0.00	0.00
Oct 25	3:45 PM	15 min	10,699.17	2966.21	0.00	0.00	0.00	0.00
Oct 25	4:00 PM	15 min	13,030.48	3629.82	0.00	0.00	0.00	0.00
Oct 25	4:15 PM	15 min	16,008.06	4458.60	0.00	0.00	0.00	0.00
Oct 25	4:30 PM	15 min	19,660.71	5535.15	0.00	0.00	0.00	0.00
Oct 25	4:45 PM	15 min	24,620.51	7054.59	0.00	0.00	0.00	0.00
Oct 25	5:00 PM	15 min	31,816.25	9177.46	0.00	0.00	0.00	0.00
Oct 25	5:15 PM	4 min	41,603.40	3048.57	0.00	0.00	0.00	0.00
Oct 25	5:19 PM	0 min	45,498.60		0.00		0.00	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Nov 1	8:35 AM	10 min	28,146.28	3945.49	**1,158.48**	**98.47**	**1,158.48**	**98.47**
Nov 1	8:45 AM	15 min	18,271.23	3158.03	0.00	0.00	0.00	0.00
Nov 1	9:00 AM	15 min	6,993.03	1544.90	0.00	0.00	0.00	0.00
Nov 1	9:15 AM	15 min	5,366.17	1261.86	0.00	0.00	0.00	0.00
Nov 1	9:30 AM	15 min	4,728.71	1123.48	0.00	0.00	0.00	0.00
Nov 1	9:45 AM	15 min	4,259.12	1017.97	0.00	0.00	0.00	0.00
Nov 1	10:00 AM	15 min	3,884.62	938.45	0.00	0.00	0.00	0.00
Nov 1	10:15 AM	15 min	3,622.98	880.66	0.00	0.00	0.00	0.00
Nov 1	10:30 AM	15 min	3,422.28	835.29	0.00	0.00	0.00	0.00
Nov 1	10:45 AM	15 min	3,260.05	798.41	0.00	0.00	0.00	0.00
Nov 1	11:00 AM	15 min	3,127.26	768.57	0.00	0.00	0.00	0.00
Nov 1	11:15 AM	15 min	3,021.28	744.69	0.00	0.00	0.00	0.00
Nov 1	11:30 AM	15 min	2,936.22	724.69	0.00	0.00	0.00	0.00
Nov 1	11:45 AM	15 min	2,861.34	707.23	0.00	0.00	0.00	0.00
Nov 1	12:00 PM	15 min	2,796.46	693.09	0.00	0.00	0.00	0.00
Nov 1	12:15 PM	15 min	2,748.24	682.80	0.00	0.00	0.00	0.00
Nov 1	12:30 PM	15 min	2,714.13	676.16	0.00	0.00	0.00	0.00
Nov 1	12:45 PM	15 min	2,695.18	672.93	0.00	0.00	0.00	0.00
Nov 1	1:00 PM	15 min	2,688.28	681.04	0.00	0.00	0.00	0.00
Nov 1	1:15 PM	15 min	2,760.01	725.07	0.00	0.00	0.00	0.00
Nov 1	1:30 PM	15 min	3,040.56	807.75	0.00	0.00	0.00	0.00
Nov 1	1:45 PM	15 min	3,421.43	911.84	0.00	0.00	0.00	0.00
Nov 1	2:00 PM	15 min	3,873.31	1031.24	0.00	0.00	0.00	0.00
Nov 1	2:15 PM	15 min	4,376.57	1177.56	0.00	0.00	0.00	0.00
Nov 1	2:30 PM	15 min	5,043.88	1369.89	0.00	0.00	0.00	0.00
Nov 1	2:45 PM	15 min	5,915.26	1613.62	0.00	0.00	0.00	0.00
Nov 1	3:00 PM	15 min	6,993.68	1930.64	0.00	0.00	0.00	0.00
Nov 1	3:15 PM	15 min	8,451.43	2375.48	0.00	0.00	0.00	0.00
Nov 1	3:30 PM	15 min	10,552.42	2956.63	0.00	0.00	0.00	0.00
Nov 1	3:45 PM	15 min	13,100.64	3642.13	0.00	0.00	0.00	0.00
Nov 1	4:00 PM	15 min	16,036.43	4442.52	0.00	0.00	0.00	0.00
Nov 1	4:15 PM	15 min	19,503.73	5418.06	0.00	0.00	0.00	0.00
Nov 1	4:30 PM	15 min	23,840.78	6675.72	0.00	0.00	0.00	0.00
Nov 1	4:45 PM	15 min	29,565.01	8451.37	0.00	0.00	0.00	0.00
Nov 1	5:00 PM	11 min	38,045.94	8126.83	0.00	0.00	0.00	0.00
Nov 1	5:11 PM	0 min	47,499.65		0.00		0.00	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Nov 8	7:43 AM	2 min	32,768.59	1267.70	0.00	0.00	0.00	0.00
Nov 8	7:45 AM	15 min	30,616.22	5680.06	0.00	0.00	0.00	0.00
Nov 8	8:00 AM	15 min	14,824.27	2641.71	0.00	0.00	0.00	0.00
Nov 8	8:15 AM	15 min	6,309.42	1418.34	0.00	0.00	0.00	0.00
Nov 8	8:30 AM	15 min	5,037.29	1192.60	0.00	0.00	0.00	0.00
Nov 8	8:45 AM	15 min	4,503.54	1075.92	0.00	0.00	0.00	0.00
Nov 8	9:00 AM	15 min	4,103.79	991.50	0.00	0.00	0.00	0.00
Nov 8	9:15 AM	15 min	3,828.18	929.53	0.00	0.00	0.00	0.00
Nov 8	9:30 AM	15 min	3,608.07	880.00	0.00	0.00	0.00	0.00
Nov 8	9:45 AM	15 min	3,431.92	840.04	0.00	0.00	0.00	0.00
Nov 8	10:00 AM	15 min	3,288.43	807.97	0.00	0.00	0.00	0.00
Nov 8	10:15 AM	15 min	3,175.34	782.67	0.00	0.00	0.00	0.00
Nov 8	10:30 AM	15 min	3,086.03	762.01	0.00	0.00	0.00	0.00
Nov 8	10:45 AM	15 min	3,010.05	744.81	0.00	0.00	0.00	0.00
Nov 8	11:00 AM	15 min	2,948.39	730.64	0.00	0.00	0.00	0.00
Nov 8	11:15 AM	15 min	2,896.74	719.72	0.00	0.00	0.00	0.00
Nov 8	11:30 AM	15 min	2,861.03	712.60	0.00	0.00	0.00	0.00
Nov 8	11:45 AM	15 min	2,839.80	716.08	0.00	0.00	0.00	0.00
Nov 8	12:00 PM	15 min	2,888.85	753.97	0.00	0.00	0.00	0.00
Nov 8	12:15 PM	15 min	3,142.87	829.81	0.00	0.00	0.00	0.00
Nov 8	12:30 PM	15 min	3,495.61	926.27	0.00	0.00	0.00	0.00
Nov 8	12:45 PM	15 min	3,914.52	1038.33	0.00	0.00	0.00	0.00
Nov 8	1:00 PM	15 min	4,392.14	1176.51	0.00	0.00	0.00	0.00
Nov 8	1:15 PM	15 min	5,019.93	1358.67	0.00	0.00	0.00	0.00
Nov 8	1:30 PM	15 min	5,849.44	1594.95	0.00	0.00	0.00	0.00
Nov 8	1:45 PM	15 min	6,910.19	1893.30	0.00	0.00	0.00	0.00
Nov 8	2:00 PM	15 min	8,236.17	2301.73	0.00	0.00	0.00	0.00
Nov 8	2:15 PM	15 min	10,177.71	2850.03	0.00	0.00	0.00	0.00
Nov 8	2:30 PM	15 min	12,622.53	3533.68	0.00	0.00	0.00	0.00
Nov 8	2:45 PM	15 min	15,646.89	4362.03	0.00	0.00	0.00	0.00
Nov 8	3:00 PM	15 min	19,249.39	5325.65	0.00	0.00	0.00	0.00
Nov 8	3:15 PM	15 min	23,355.81	6473.78	0.00	0.00	0.00	0.00
Nov 8	3:30 PM	15 min	28,434.43	7871.29	0.00	0.00	0.00	0.00
Nov 8	3:45 PM	15 min	34,535.91	10078.87	0.00	0.00	0.00	0.00
Nov 8	4:00 PM	4 min	46,095.03	3380.31	0.00	0.00	0.00	0.00
Nov 8	4:04 PM	0 min	50,485.17		0.00		0.00	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Nov 15	7:50 AM	10 min	39,515.30	5680.78	0.00	0.00	0.00	0.00
Nov 15	8:00 AM	15 min	27,317.40	4783.41	0.00	0.00	0.00	0.00
Nov 15	8:15 AM	15 min	10,949.91	2089.78	0.00	0.00	0.00	0.00
Nov 15	8:30 AM	15 min	5,768.31	1318.76	0.00	0.00	0.00	0.00
Nov 15	8:45 AM	15 min	4,781.80	1142.21	0.00	0.00	0.00	0.00
Nov 15	9:00 AM	15 min	4,355.87	1050.68	0.00	0.00	0.00	0.00
Nov 15	9:15 AM	15 min	4,049.56	981.87	0.00	0.00	0.00	0.00
Nov 15	9:30 AM	15 min	3,805.40	927.13	0.00	0.00	0.00	0.00
Nov 15	9:45 AM	15 min	3,611.62	883.42	0.00	0.00	0.00	0.00
Nov 15	10:00 AM	15 min	3,455.75	848.63	0.00	0.00	0.00	0.00
Nov 15	10:15 AM	15 min	3,333.28	821.18	0.00	0.00	0.00	0.00
Nov 15	10:30 AM	15 min	3,236.18	798.94	0.00	0.00	0.00	0.00
Nov 15	10:45 AM	15 min	3,155.37	781.02	0.00	0.00	0.00	0.00
Nov 15	11:00 AM	15 min	3,092.78	767.13	0.00	0.00	0.00	0.00
Nov 15	11:15 AM	15 min	3,044.28	756.30	0.00	0.00	0.00	0.00
Nov 15	11:30 AM	15 min	3,006.11	752.04	0.00	0.00	0.00	0.00
Nov 15	11:45 AM	15 min	3,010.18	779.68	0.00	0.00	0.00	0.00
Nov 15	12:00 PM	15 min	3,227.25	846.39	0.00	0.00	0.00	0.00
Nov 15	12:15 PM	15 min	3,543.89	934.45	0.00	0.00	0.00	0.00
Nov 15	12:30 PM	15 min	3,931.73	1037.29	0.00	0.00	0.00	0.00
Nov 15	12:45 PM	15 min	4,366.59	1162.61	0.00	0.00	0.00	0.00
Nov 15	1:00 PM	15 min	4,934.28	1329.79	0.00	0.00	0.00	0.00
Nov 15	1:15 PM	15 min	5,704.03	1549.68	0.00	0.00	0.00	0.00
Nov 15	1:30 PM	15 min	6,693.39	1830.26	0.00	0.00	0.00	0.00
Nov 15	1:45 PM	15 min	7,948.73	2202.11	0.00	0.00	0.00	0.00
Nov 15	2:00 PM	15 min	9,668.13	2693.97	0.00	0.00	0.00	0.00
Nov 15	2:15 PM	15 min	11,883.62	3321.65	0.00	0.00	0.00	0.00
Nov 15	2:30 PM	15 min	14,689.57	4103.72	0.00	0.00	0.00	0.00
Nov 15	2:45 PM	15 min	18,140.21	5074.46	0.00	0.00	0.00	0.00
Nov 15	3:00 PM	15 min	22,455.47	6219.10	0.00	0.00	0.00	0.00
Nov 15	3:15 PM	15 min	27,297.34	7509.60	0.00	0.00	0.00	0.00
Nov 15	3:30 PM	15 min	32,779.45	9155.64	0.00	0.00	0.00	0.00
Nov 15	3:45 PM	13 min	40,465.70	10194.15	0.00	0.00	0.00	0.00
Nov 15	3:58 PM	0 min	52,208.36		0.00		0.00	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Nov 22	7:58 AM	2 min	44,865.36	1748.56	0.00	0.00	0.00	0.00
Nov 22	8:00 AM	15 min	42,562.43	8009.00	0.00	0.00	0.00	0.00
Nov 22	8:15 AM	15 min	21,509.58	3650.34	0.00	0.00	0.00	0.00
Nov 22	8:30 AM	15 min	7,693.18	1625.53	0.00	0.00	0.00	0.00
Nov 22	8:45 AM	15 min	5,311.06	1242.16	0.00	0.00	0.00	0.00
Nov 22	9:00 AM	15 min	4,626.23	1113.48	0.00	0.00	0.00	0.00
Nov 22	9:15 AM	15 min	4,281.63	1036.42	0.00	0.00	0.00	0.00
Nov 22	9:30 AM	15 min	4,009.77	975.52	0.00	0.00	0.00	0.00
Nov 22	9:45 AM	15 min	3,794.39	927.18	0.00	0.00	0.00	0.00
Nov 22	10:00 AM	15 min	3,623.03	889.00	0.00	0.00	0.00	0.00
Nov 22	10:15 AM	15 min	3,488.94	858.93	0.00	0.00	0.00	0.00
Nov 22	10:30 AM	15 min	3,382.53	834.80	0.00	0.00	0.00	0.00
Nov 22	10:45 AM	15 min	3,295.86	815.61	0.00	0.00	0.00	0.00
Nov 22	11:00 AM	15 min	3,229.00	800.86	0.00	0.00	0.00	0.00
Nov 22	11:15 AM	15 min	3,177.89	790.15	0.00	0.00	0.00	0.00
Nov 22	11:30 AM	15 min	3,143.32	804.49	0.00	0.00	0.00	0.00
Nov 22	11:45 AM	15 min	3,292.64	856.54	0.00	0.00	0.00	0.00
Nov 22	12:00 PM	15 min	3,559.68	933.98	0.00	0.00	0.00	0.00
Nov 22	12:15 PM	15 min	3,912.14	1027.38	0.00	0.00	0.00	0.00
Nov 22	12:30 PM	15 min	4,306.90	1137.30	0.00	0.00	0.00	0.00
Nov 22	12:45 PM	15 min	4,791.49	1283.38	0.00	0.00	0.00	0.00
Nov 22	1:00 PM	15 min	5,475.55	1480.16	0.00	0.00	0.00	0.00
Nov 22	1:15 PM	15 min	6,365.75	1735.68	0.00	0.00	0.00	0.00
Nov 22	1:30 PM	15 min	7,519.66	2066.48	0.00	0.00	0.00	0.00
Nov 22	1:45 PM	15 min	9,012.21	2501.03	0.00	0.00	0.00	0.00
Nov 22	2:00 PM	15 min	10,996.05	3059.18	0.00	0.00	0.00	0.00
Nov 22	2:15 PM	15 min	13,477.39	3752.90	0.00	0.00	0.00	0.00
Nov 22	2:30 PM	15 min	16,545.79	4609.19	0.00	0.00	0.00	0.00
Nov 22	2:45 PM	15 min	20,327.71	5686.83	0.00	0.00	0.00	0.00
Nov 22	3:00 PM	15 min	25,166.95	7019.07	0.00	0.00	0.00	0.00
Nov 22	3:15 PM	15 min	30,985.60	8492.93	0.00	0.00	0.00	0.00
Nov 22	3:30 PM	15 min	36,957.84	10346.18	0.00	0.00	0.00	0.00
Nov 22	3:45 PM	9 min	45,811.56	7547.92	0.00	0.00	0.00	0.00
Nov 22	3:54 PM	0 min	54,827.41		0.00		0.00	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Nov 29	8:05 AM	10 min	50,462.84	7261.32	0.00	0.00	0.00	0.00
Nov 29	8:15 AM	15 min	34,964.51	6249.09	0.00	0.00	0.00	0.00
Nov 29	8:30 AM	15 min	15,028.21	2669.39	0.00	0.00	0.00	0.00
Nov 29	8:45 AM	15 min	6,326.92	1414.21	0.00	0.00	0.00	0.00
Nov 29	9:00 AM	15 min	4,986.73	1187.84	0.00	0.00	0.00	0.00
Nov 29	9:15 AM	15 min	4,515.96	1091.07	0.00	0.00	0.00	0.00
Nov 29	9:30 AM	15 min	4,212.59	1023.25	0.00	0.00	0.00	0.00
Nov 29	9:45 AM	15 min	3,973.39	969.68	0.00	0.00	0.00	0.00
Nov 29	10:00 AM	15 min	3,784.02	927.53	0.00	0.00	0.00	0.00
Nov 29	10:15 AM	15 min	3,636.23	894.47	0.00	0.00	0.00	0.00
Nov 29	10:30 AM	15 min	3,519.55	868.03	0.00	0.00	0.00	0.00
Nov 29	10:45 AM	15 min	3,424.67	847.18	0.00	0.00	0.00	0.00
Nov 29	11:00 AM	15 min	3,352.80	831.38	0.00	0.00	0.00	0.00
Nov 29	11:15 AM	15 min	3,298.24	829.26	0.00	0.00	0.00	0.00
Nov 29	11:30 AM	15 min	3,335.88	860.15	0.00	0.00	0.00	0.00
Nov 29	11:45 AM	15 min	3,545.28	923.80	0.00	0.00	0.00	0.00
Nov 29	12:00 PM	15 min	3,845.12	1005.92	0.00	0.00	0.00	0.00
Nov 29	12:15 PM	15 min	4,202.23	1101.69	0.00	0.00	0.00	0.00
Nov 29	12:30 PM	15 min	4,611.32	1223.70	0.00	0.00	0.00	0.00
Nov 29	12:45 PM	15 min	5,178.24	1390.20	0.00	0.00	0.00	0.00
Nov 29	1:00 PM	15 min	5,943.34	1610.78	0.00	0.00	0.00	0.00
Nov 29	1:15 PM	15 min	6,942.89	1899.78	0.00	0.00	0.00	0.00
Nov 29	1:30 PM	15 min	8,255.32	2273.78	0.00	0.00	0.00	0.00
Nov 29	1:45 PM	15 min	9,934.91	2752.92	0.00	0.00	0.00	0.00
Nov 29	2:00 PM	15 min	12,088.44	3353.94	0.00	0.00	0.00	0.00
Nov 29	2:15 PM	15 min	14,743.05	4090.44	0.00	0.00	0.00	0.00
Nov 29	2:30 PM	15 min	17,980.44	5004.66	0.00	0.00	0.00	0.00
Nov 29	2:45 PM	15 min	22,056.83	6176.11	0.00	0.00	0.00	0.00
Nov 29	3:00 PM	15 min	27,352.03	7675.16	0.00	0.00	0.00	0.00
Nov 29	3:15 PM	15 min	34,049.21	9328.74	0.00	0.00	0.00	0.00
Nov 29	3:30 PM	15 min	40,580.73	11325.41	0.00	0.00	0.00	0.00
Nov 29	3:45 PM	6 min	50,022.57	5320.90	0.00	0.00	0.00	0.00
Nov 29	3:51 PM	0 min	56,395.47		0.00		0.00	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Dec 6	8:11 AM	5 min	55,449.30	4197.18	0.00	0.00	0.00	0.00
Dec 6	8:15 AM	15 min	49,480.32	9121.33	0.00	0.00	0.00	0.00
Dec 6	8:30 AM	15 min	23,490.29	4122.49	0.00	0.00	0.00	0.00
Dec 6	8:45 AM	15 min	9,489.61	1892.58	0.00	0.00	0.00	0.00
Dec 6	9:00 AM	15 min	5,651.07	1299.61	0.00	0.00	0.00	0.00
Dec 6	9:15 AM	15 min	4,745.81	1143.40	0.00	0.00	0.00	0.00
Dec 6	9:30 AM	15 min	4,401.37	1067.42	0.00	0.00	0.00	0.00
Dec 6	9:45 AM	15 min	4,137.97	1008.40	0.00	0.00	0.00	0.00
Dec 6	10:00 AM	15 min	3,929.25	962.05	0.00	0.00	0.00	0.00
Dec 6	10:15 AM	15 min	3,767.13	925.78	0.00	0.00	0.00	0.00
Dec 6	10:30 AM	15 min	3,639.12	896.82	0.00	0.00	0.00	0.00
Dec 6	10:45 AM	15 min	3,535.46	873.93	0.00	0.00	0.00	0.00
Dec 6	11:00 AM	15 min	3,455.97	856.82	0.00	0.00	0.00	0.00
Dec 6	11:15 AM	15 min	3,398.55	862.55	0.00	0.00	0.00	0.00
Dec 6	11:30 AM	15 min	3,501.83	904.38	0.00	0.00	0.00	0.00
Dec 6	11:45 AM	15 min	3,733.24	972.61	0.00	0.00	0.00	0.00
Dec 6	12:00 PM	15 min	4,047.60	1056.82	0.00	0.00	0.00	0.00
Dec 6	12:15 PM	15 min	4,406.92	1155.85	0.00	0.00	0.00	0.00
Dec 6	12:30 PM	15 min	4,839.88	1287.29	0.00	0.00	0.00	0.00
Dec 6	12:45 PM	15 min	5,458.43	1466.80	0.00	0.00	0.00	0.00
Dec 6	1:00 PM	15 min	6,275.99	1702.96	0.00	0.00	0.00	0.00
Dec 6	1:15 PM	15 min	7,347.70	2014.52	0.00	0.00	0.00	0.00
Dec 6	1:30 PM	15 min	8,768.43	2415.93	0.00	0.00	0.00	0.00
Dec 6	1:45 PM	15 min	10,558.99	2922.07	0.00	0.00	0.00	0.00
Dec 6	2:00 PM	15 min	12,817.54	3545.94	0.00	0.00	0.00	0.00
Dec 6	2:15 PM	15 min	15,550.00	4302.15	0.00	0.00	0.00	0.00
Dec 6	2:30 PM	15 min	18,867.21	5247.64	0.00	0.00	0.00	0.00
Dec 6	2:45 PM	15 min	23,113.89	6462.23	0.00	0.00	0.00	0.00
Dec 6	3:00 PM	15 min	28,583.96	8046.88	0.00	0.00	0.00	0.00
Dec 6	3:15 PM	15 min	35,791.06	9828.01	0.00	0.00	0.00	0.00
Dec 6	3:30 PM	15 min	42,833.04	11875.69	0.00	0.00	0.00	0.00
Dec 6	3:45 PM	6 min	52,172.46	5597.38	0.00	0.00	0.00	0.00
Dec 6	3:51 PM	0 min	59,775.23		0.00		0.00	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

Data Color Key

EXAMPLE	No new shading from proposed project
EXAMPLE	No new shading from project + cumulative

EXAMPLE	Existing Shading on Park / Open Space
EXAMPLE	New Shading from proposed project
EXAMPLE	New Shading from Project + Cumulative

Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Dec 13	8:17 AM	13 min	57,488.34	9963.43	0.00	0.00	0.00	0.00
Dec 13	8:30 AM	15 min	33,088.28	5927.18	0.00	0.00	0.00	0.00
Dec 13	8:45 AM	15 min	14,329.20	2600.44	0.00	0.00	0.00	0.00
Dec 13	9:00 AM	15 min	6,474.28	1443.26	0.00	0.00	0.00	0.00
Dec 13	9:15 AM	15 min	5,071.84	1204.52	0.00	0.00	0.00	0.00
Dec 13	9:30 AM	15 min	4,564.30	1104.96	0.00	0.00	0.00	0.00
Dec 13	9:45 AM	15 min	4,275.34	1040.43	0.00	0.00	0.00	0.00
Dec 13	10:00 AM	15 min	4,048.06	989.88	0.00	0.00	0.00	0.00
Dec 13	10:15 AM	15 min	3,870.94	950.42	0.00	0.00	0.00	0.00
Dec 13	10:30 AM	15 min	3,732.45	919.06	0.00	0.00	0.00	0.00
Dec 13	10:45 AM	15 min	3,620.03	894.15	0.00	0.00	0.00	0.00
Dec 13	11:00 AM	15 min	3,533.19	875.88	0.00	0.00	0.00	0.00
Dec 13	11:15 AM	15 min	3,473.84	884.26	0.00	0.00	0.00	0.00
Dec 13	11:30 AM	15 min	3,600.22	929.61	0.00	0.00	0.00	0.00
Dec 13	11:45 AM	15 min	3,836.65	998.27	0.00	0.00	0.00	0.00
Dec 13	12:00 PM	15 min	4,149.54	1082.03	0.00	0.00	0.00	0.00
Dec 13	12:15 PM	15 min	4,506.71	1182.43	0.00	0.00	0.00	0.00
Dec 13	12:30 PM	15 min	4,952.69	1317.49	0.00	0.00	0.00	0.00
Dec 13	12:45 PM	15 min	5,587.23	1500.95	0.00	0.00	0.00	0.00
Dec 13	1:00 PM	15 min	6,420.36	1741.75	0.00	0.00	0.00	0.00
Dec 13	1:15 PM	15 min	7,513.66	2062.49	0.00	0.00	0.00	0.00
Dec 13	1:30 PM	15 min	8,986.29	2472.76	0.00	0.00	0.00	0.00
Dec 13	1:45 PM	15 min	10,795.83	2983.80	0.00	0.00	0.00	0.00
Dec 13	2:00 PM	15 min	13,074.59	3611.21	0.00	0.00	0.00	0.00
Dec 13	2:15 PM	15 min	15,815.10	4366.13	0.00	0.00	0.00	0.00
Dec 13	2:30 PM	15 min	19,113.95	5306.83	0.00	0.00	0.00	0.00
Dec 13	2:45 PM	15 min	23,340.66	6520.14	0.00	0.00	0.00	0.00
Dec 13	3:00 PM	15 min	28,820.45	8130.75	0.00	0.00	0.00	0.00
Dec 13	3:15 PM	15 min	36,225.52	9987.70	0.00	0.00	0.00	0.00
Dec 13	3:30 PM	15 min	43,676.07	12030.29	0.00	0.00	0.00	0.00
Dec 13	3:45 PM	6 min	52,566.23	5625.99	0.00	0.00	0.00	0.00
Dec 13	3:51 PM	0 min	59,953.55		0.00		0.00	

HALL OF JUSTICE REHABILITATION AND DETENTION FACILITY

Quantitative Shading Calculations for Victoria Manolo Draves Park

Analysis Run: 2/25/2015
Technician: AF

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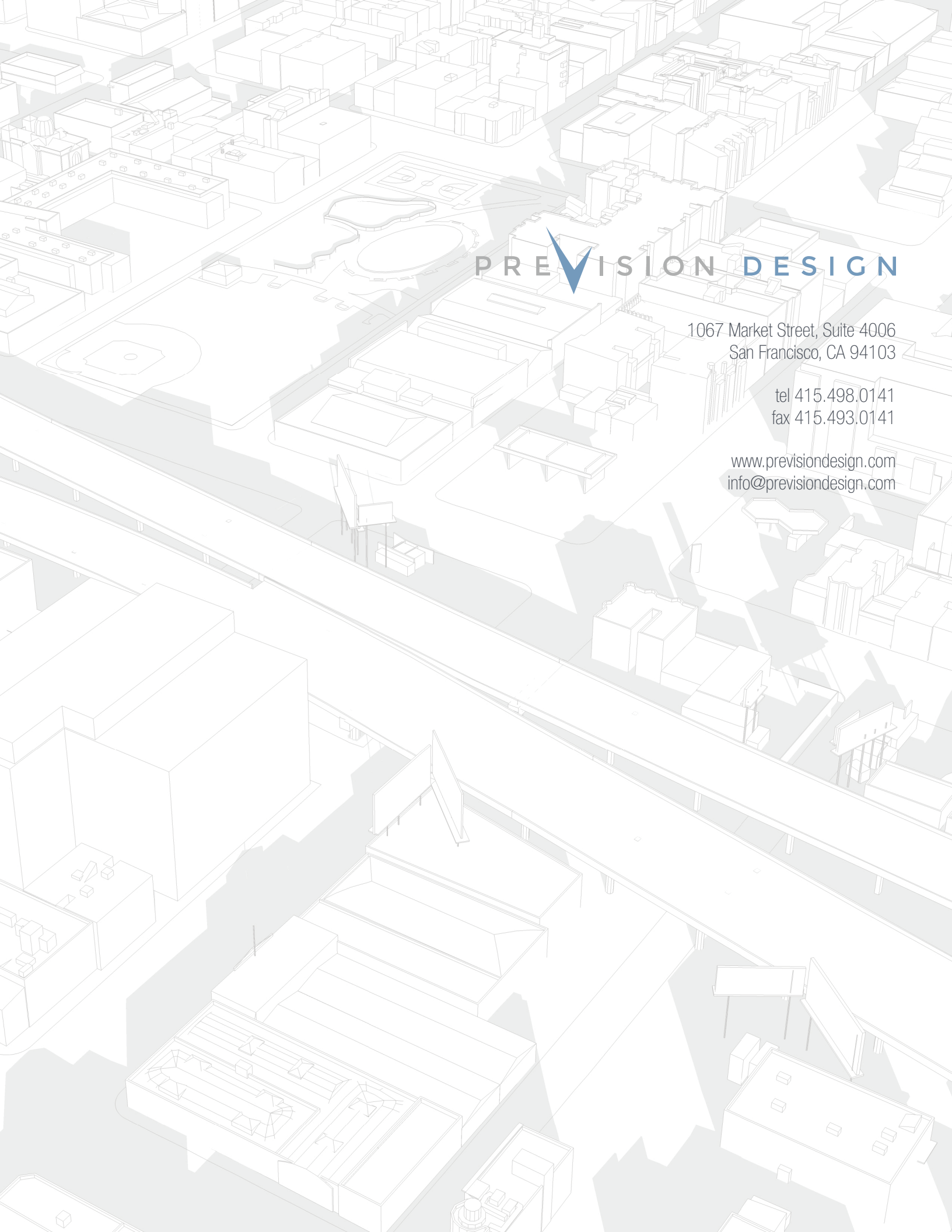
Date	Start Time	Duration	Current Park Shading		New Shading from Project		New Shade Project + Cumulative	
			Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)	Shadow Area (sf)	Shading (sfh)
Dec 21	8:22 AM	8 min	58,418.41	7106.44	0.00	0.00	0.00	0.00
Dec 21	8:30 AM	15 min	43,102.22	7800.74	0.00	0.00	0.00	0.00
Dec 21	8:45 AM	15 min	19,303.68	3402.27	0.00	0.00	0.00	0.00
Dec 21	9:00 AM	15 min	7,914.44	1674.46	0.00	0.00	0.00	0.00
Dec 21	9:15 AM	15 min	5,481.27	1272.47	0.00	0.00	0.00	0.00
Dec 21	9:30 AM	15 min	4,698.46	1135.38	0.00	0.00	0.00	0.00
Dec 21	9:45 AM	15 min	4,384.57	1065.24	0.00	0.00	0.00	0.00
Dec 21	10:00 AM	15 min	4,137.38	1010.38	0.00	0.00	0.00	0.00
Dec 21	10:15 AM	15 min	3,945.68	967.76	0.00	0.00	0.00	0.00
Dec 21	10:30 AM	15 min	3,796.41	934.01	0.00	0.00	0.00	0.00
Dec 21	10:45 AM	15 min	3,675.70	907.04	0.00	0.00	0.00	0.00
Dec 21	11:00 AM	15 min	3,580.65	886.59	0.00	0.00	0.00	0.00
Dec 21	11:15 AM	15 min	3,512.07	890.73	0.00	0.00	0.00	0.00
Dec 21	11:30 AM	15 min	3,613.81	931.09	0.00	0.00	0.00	0.00
Dec 21	11:45 AM	15 min	3,834.91	996.58	0.00	0.00	0.00	0.00
Dec 21	12:00 PM	15 min	4,137.75	1077.78	0.00	0.00	0.00	0.00
Dec 21	12:15 PM	15 min	4,484.48	1174.60	0.00	0.00	0.00	0.00
Dec 21	12:30 PM	15 min	4,912.34	1304.22	0.00	0.00	0.00	0.00
Dec 21	12:45 PM	15 min	5,521.41	1480.90	0.00	0.00	0.00	0.00
Dec 21	1:00 PM	15 min	6,325.77	1712.93	0.00	0.00	0.00	0.00
Dec 21	1:15 PM	15 min	7,377.68	2022.04	0.00	0.00	0.00	0.00
Dec 21	1:30 PM	15 min	8,798.67	2419.68	0.00	0.00	0.00	0.00
Dec 21	1:45 PM	15 min	10,558.73	2914.79	0.00	0.00	0.00	0.00
Dec 21	2:00 PM	15 min	12,759.57	3523.26	0.00	0.00	0.00	0.00
Dec 21	2:15 PM	15 min	15,426.50	4254.44	0.00	0.00	0.00	0.00
Dec 21	2:30 PM	15 min	18,609.04	5155.73	0.00	0.00	0.00	0.00
Dec 21	2:45 PM	15 min	22,636.79	6313.17	0.00	0.00	0.00	0.00
Dec 21	3:00 PM	15 min	27,868.56	7847.07	0.00	0.00	0.00	0.00
Dec 21	3:15 PM	15 min	34,907.98	9730.52	0.00	0.00	0.00	0.00
Dec 21	3:30 PM	15 min	42,936.16	11756.70	0.00	0.00	0.00	0.00
Dec 21	3:45 PM	10 min	51,117.42	9628.47	0.00	0.00	0.00	0.00
Dec 21	3:55 PM	0 min	62,158.68		0.00		0.00	



PREVISION DESIGN

1067 Market Street, Suite 4006
San Francisco, CA 94103

tel 415.498.0141
fax 415.493.0141

www.previsiondesign.com
info@previsiondesign.com