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# Environmental Assessment Determinations and Compliance Findings for HUD-assisted Projects 24 CFR Part 58

## **Project Information**

Project Name: 4840 Mission Street

**Responsible Entity:** Mayor's Office of Housing and Community Development, City and County of San Francisco

Grant Recipient (if different than Responsible Entity): BRIDGE Housing

State/Local Identifier:

**Preparer:** Eugene Flannery, Environmental Compliance Manager, Mayor's Office of Housing and Community Development

**Certifying Officer Name and Title:** Brian Cheu, Deputy Director, Mayor's Office of Housing and Community Development

Consultant (if applicable): Environmental Science Associates

Direct Comments to: Because our offices are closed, MOHCD is asking that written comments be submitted via email to <u>eugene.flannery@sfgov.org</u>. If you are unable to access email please send your comments to Eugene T. Flannery at MOHCD, 1 South Van Ness Avenue – 5<sup>th</sup> Floor, San Francisco, California 94103.

#### **Project Location:**

4840 Mission Street, San Francisco, CA 94112; APNs 6959/019, 6959/025, and 6959/026 (see Figure 1).

#### **Description of the Proposed Project** [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:

The project would involve the demolition of the existing two-story vacant mortuary building known as Valente, Marini, Perata & Co. funeral home, located at 4840 Mission Street. The site would be redeveloped through construction of a 6-story 65-foot-tall building. The project would be 100 percent affordable housing and includes up to 137 below-market-rate rental units, a 10,000 square-foot health clinic, and approximately 6,000 square feet of commercial space. The development includes 39 residential parking spaces. The project would include a mid-block pedestrian walkway, which would connect Mission Street and Alemany Boulevard as well as a public plaza on the Mission Street side. (Source Document: 1a and 1b)

#### Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:

The provision of adequate affordable housing remains a significant challenge for San Francisco due to the escalating cost of housing in San Francisco. This continuing trend amplifies the need for providing affordable housing to all household income levels, especially low and very low-income levels.

The California Department of Housing and Community Development (HCD) and Association of Bay Area Governments (ABAG) identified the total housing need for the San Francisco Bay Area for an eight-year period (in this cycle, from 2014 to 2022) and distributed the need among the various jurisdictions. The Regional Housing Need Plan for the San Francisco Bay Area estimates that San Francisco will need an additional 6,234 very low-income (0-50 percent of area median income) units and 4,639 low-income (51-80 percent of area median income) units.

City policies call for increased development of affordable housing in the City. The City's General Plan Housing Element states, "Affordable housing is the most salient housing issue in San Francisco and the Bay Area." Housing Element objectives and policies direct the City to meet that demand.

Section 101.1(b) of the San Francisco Planning Code provides the City's eight Priority Policies and designates these policies as the basis upon which inconsistencies in the General Plan are resolved, should they occur. Two General Plan Priority Policies relate specifically to housing and are supported directly by the Housing Element. These are:

- That the City's supply of affordable housing be preserved and enhanced, (see Objectives 1-3, Objectives 7-9, and all related policies under those objectives).
- That existing housing and neighborhood character be conserved and protected in order to preserve the cultural and economic diversity of our neighborhoods, (see Objective 2, Objective 11, and all related policies under those objectives).

The proposed project would accommodate a portion of the citywide demand for new housing that is near transit, jobs, retail services, cultural institutions, and regional transportation. The

proposed project would provide affordable housing in the Mission Terrace neighborhood. The proposed project would be accessible to various modes of public transit, thereby helping the City meet the objectives of the Housing Element of the General Plan to construct additional residential units in established neighborhoods that will contribute to the City's housing supply.

According to the most recent Regional Housing Needs Assessment Progress Report, in 2017, 4,878 new affordable housing units, including very-low, low, and moderate affordable units, were added to San Francisco's housing stock. The proposed project provides 137 units, which would satisfy a portion of identified affordable housing needs for San Francisco. (Source Document: 1c)

#### Existing Conditions and Trends [24 CFR 58.40(a)]:

The approximately 1.47-acre rectangular shaped project site is located at 4840 Mission Street in San Francisco, California. The existing site contains a two-story mortuary building and an asphalt parking lot. The property is serviced with all typical urban utilities, including public water and sewer systems, electricity, gas, and telephone service. The project site is bounded by mixed-use residential and commercial buildings to the north, Mission Street to the east, residential buildings and a Safeway to the south, and Alemany Boulevard to the west. All streets adjacent to the subject are fully paved and contain sidewalks, curbs, gutters and street lighting.



SOURCE: USDA, 2018; City of San Francisco, 2019; ESA, 2020

4840 Mission Street

Figure 1 Project Site

ESA

## **Funding Information**

Grant Number	HUD Program	Funding Amount
	Project-Based Vouchers	35 Vouchers

#### **Estimated Total HUD Funded Amount:**

35 Vouchers

Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]:

Construction Costs:	\$72,000,000
Non-Construction Costs:	\$27,000,000
Total:	\$99,000,000

## Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
STATUTES, EXECU	<b>TIVE ORDER</b>	S, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6
Airport Hazards 24 CFR Part 51 Subpart D	Yes No	San Francisco International Airport is approximately 6 miles southeast of the project site. The project site is well outside the boundaries of the San Francisco Airport runway protection zones. The project site is outside all other defined safety zones, airspace protection zones, and Airport Influence Areas of the airport's Comprehensive Land Use Compatibility Plan. Oakland International Airport is approximately 11 miles northeast of the project site. The project site is well outside the boundaries of Oakland Airport runway protection zones and all other defined safety zones. There are no military airfields in San Francisco County or the nearby vicinity; therefore, no military airfield Airport Protection Zone or Clear Zone would affect the proposed project. Source Document(s): 2 and 3
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes No	There are no Coastal Barrier Resource System (CBRS) Units, or CBRS buffer zones, as defined under the Coastal Barrier Resources Act of 1982 (PL 97-348), as amended by the Coastal Barrier Improvement Act of 1990 (PL 101-591) located within San Francisco Bay. The project site is therefore not located within a CBRS Unit, or a CBRS buffer zone. Source Document(s): 4
Flood Insurance Flood Disaster Protection Act of 1973 and National	Yes No	At the time of the preparation of this environmental review, Federal Emergency Management Agency (FEMA) had not completed a study to determine flood hazard for the project site; therefore, a flood map has not been published at this time and the

Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]		project site is not considered to be within a Special Flood Hazard Area. Based on best-available information that relies upon the FEMA completed preliminary Flood Insurance Rate Map (FIRM) prepared for the City, dated June 2, 2014, the project site as located entirely outside of the 100-year and 500-year floodplain. The project site is not considered to be within a floodplain or Special Flood Hazard Area and is therefore, in compliance with the Flood Insurance Reform Act. Source Document(s): 5 and 6
	<b>TIVE ORDER</b>	S, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes No	<u>Criteria Pollutants</u> Construction and operational criteria pollutant emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. The modeled criteria pollutant emissions were compared to the federal General Conformity <i>de</i> <i>minimis</i> levels and local Bay Area Air Quality Management District (BAAQMD) construction and operational thresholds to determine if the project would result in a significant air quality impact.
		<u>Comparison to Federal General Conformity De Minimis Levels</u> Construction emissions from the project would result primarily from off-road equipment, vehicle use, and fugitive dust. The modeling results indicate that maximum annual emissions from construction would be approximately:
		<ul> <li>1.1 tons per year of reactive organic gases (ROG);</li> <li>5.5 tons per year of nitrogen oxides (NO<sub>X</sub>);</li> <li>4.4 tons per year of carbon monoxide (CO); and</li> <li>0.64 tons per year of fine particulate matter of 2.5 microns or less (PM<sub>2.5</sub>).</li> </ul>
		Based on the San Francisco Bay Area Air Basin's designation status as marginal nonattainment for ozone, moderate nonattainment for PM <sub>2.5</sub> , and maintenance for CO, federal <i>de</i> <i>minimis</i> levels would be 100 tons per year for each of these pollutants or their precursors (ROG, NO <sub>X</sub> , PM <sub>2.5</sub> , and CO). A conformity determination would be required for each criteria or precursor exceeding the federal General Conformity <i>de minimis</i> level. Emissions of ROG, NO <sub>X</sub> , PM <sub>2.5</sub> , and CO from construction would be below the federal General Conformity <i>de minimis</i>

levels pursuant to the 1990 amendments to the Federal Clean Air Act.
Operational emissions from the project would result primarily from use of consumer products (e.g., paints, solvents), building energy demand (i.e., natural gas use), and vehicle use. Results from CalEEMod indicate that maximum annual emissions from the operation of the project would be approximately:
<ul> <li>0.91 tons per year of ROG;</li> <li>1.1 tons per year of NO<sub>X</sub>;</li> <li>3.8 tons per year of CO; and</li> <li>0.23 tons per year of PM<sub>2.5</sub>.</li> </ul>
Operational emissions would also be below the federal <i>de minimis</i> level of 100 tons per year for ROG, $NO_X$ , $PM_{2.5}$ , and CO. Therefore, the Proposed Action is exempt from General Conformity regulations.
<u>Comparison to Bay Area Air Quality Management District</u> <u>Thresholds</u>
The modeling results indicate that the average daily emissions from construction, excluding fugitive dust, would be:
<ul> <li>8 pounds per day of ROG;</li> <li>31 pounds per day of NO<sub>X</sub>;</li> <li>1 pound per day of exhaust PM<sub>10</sub>; and</li> <li>1 pound per day of exhaust PM<sub>2.5</sub>.</li> </ul>
The average daily construction emissions would be below the BAAQMD's average daily construction emission thresholds of:
<ul> <li>54 pounds per day of ROG and NOX;</li> <li>54 pounds per day of exhaust PM<sub>2.5</sub>; and</li> <li>82 pounds per day of exhaust PM<sub>10</sub>.</li> </ul>
It is important to note that the BAAQMD only considers exhaust particulate matter in its thresholds of significance and emphasizes implementation of its basic and enhanced construction mitigation control measures to ensure that fugitive dust impacts are reduced to a less-than-significant level.
Results from CalEEMod indicate that maximum annual and average daily emissions from the operation of the project would be:
<ul> <li>0.9 ton per year / 5 pounds per day of ROG;</li> <li>1.1 ton per year / 6 pounds per day of NO<sub>X</sub>;</li> </ul>

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	<ul> <li>0.83 tons per year / 5 pounds per day of total PM<sub>10</sub>; and</li> <li>0.24 tons per year / 1 pound per day of total PM<sub>2.5</sub>.</li> </ul>
	These emissions would be below the BAAQMD's maximum
	annual and average daily operational emission thresholds of:
	<ul> <li>10 tons per year / 54 pounds per day of ROG and NO<sub>X</sub> (each);</li> <li>10 tons per year / 54 pounds per day of exhaust PM<sub>2.5</sub>; and</li> </ul>
	• 15 tons per year / 82 pounds per day of exhaust PM <sub>10</sub> .
	Consequently, criteria pollutant emissions from construction and operation of the project would be less than significant with respect to BAAQMD's thresholds of significance.
	Fugitive Dust
	The City's Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008) requires a number of measures to control fugitive dust to ensure that construction projects do not result in visible dust. The project would implement Best Management Practices (BMPs) in compliance with the City's Construction Dust Control Ordinance and BAAQMD recommended control measures for controlling fugitive dust. These BMPs would be effective in controlling construction-related fugitive dust, such that there would be no significant project related impacts.
	Toxic Air Contaminants (TACs) from Construction
	Toxic Air Contaminants (TAC) are a defined set of pollutants that may pose a present or potential risk to human health. Construction-related activities could result in the generation of TACs, specifically diesel particulate matter (DPM), from construction equipment.
	Regarding construction emissions, off-road equipment (which includes construction-related equipment) is a large contributor to DPM emissions in California, although since 2007, the Air Resources Board has found the emissions to be substantially lower than previously expected. Newer and more refined emission inventories have substantially lowered the estimates of DPM emissions from off road equipment such that off road
	DPM emissions from off-road equipment such that off-road equipment is now considered the sixth largest source of DPM emissions in California. For example, revised PM emission estimates for the year 2010, of which DPM is a major component of, have decreased by 83 percent from previous 2010 emissions estimates for the San Francisco Bay Area Air Basin.

Approximately half of the reduction in emissions can be attributed to the economic recession and half to updated methodologies used to better assess construction emissions.
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 have been phased in between 2008 and 2015. To meet the Tier 4 emission standards, engine manufacturers are 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 estimated that by implementing the federal Tier 4 standards, NO <sub>x</sub> and PM emissions will be reduced by more than 90 percent.
The BAAQMD recommends the annual thresholds of significance for project operations be applied to construction (10 tons per year for ROG, NOX and $PM_{2.5}$ and 15 tons per year for $PM_{10}$ ). The proposed project would result in variable and temporary generation of TACs from construction equipment. Results from CALEEMOD indicate that maximum annual emissions from construction would be approximately:
<ul> <li>1.1 tons per year of reactive organic gases (ROG);</li> <li>5.5 tons per year of nitrogen oxides (NO<sub>X</sub>);</li> <li>4.4 tons per year of carbon monoxide (CO); and</li> <li>0.64 tons per year of fine particulate matter of 2.5 microns or less (PM<sub>2.5</sub>).</li> </ul>
Annual construction emissions would be below applicable thresholds and thus the project would not result in significant adverse risks to community health from construction activities.
Asbestos Containing Materials and Lead Based Paint
Demolition of existing buildings and structures would be subject to BAAQMD Regulation 11, Rule 2, which is intended to limit asbestos emissions from demolition and renovation of structures and the associated disturbance of asbestos-containing waste material generated or handled during these activities. The existing on-site structure, constructed on or before December 31, 1978, would be demolished; thus, demolition shall also comply with Section 3406 of the City of San Francisco's Building Code. These regulations would minimize the release of airborne

		asbestos and lead emissions such that there would be no significant project related impacts. Source Document(s): 7a, 7b, 7c, 7d, 7e, 7f, 7g, and Attachment 1
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes No	The project site is not located within Coastal Zone Management Area or San Francisco Bay Conservation and Development Commission's area of jurisdiction, which includes the first 100 feet shoreward from the mean high-tide-line around San Francisco Bay; therefore, no formal finding of consistency with the Commission's San Francisco Bay Plan is required. Source Document(s): 8 and 9
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes No	The project site is currently covered with an asphalt surface with a two-story mortuary building. A Phase I Environmental Site Assessment was conducted by Group Delta to identify historical uses and potential hazards for the project site and immediate vicinity. <u>Phase I Environmental Site Assessment Findings</u> The environmental database search report found that the project site not listed on any of the databases searched by EDR. A site reconnaissance was performed on April 21, 2017 to observe current conditions throughout the site. One area of concern was identified during the site reconnaissance: two hydraulic elevators, which have historically contained polychlorinated biphenyls (PCBs). <u>Conclusion</u> There are no records of historic or present leaking underground storage tank cleanup sites, underground storage tank cleanup sites, or other cleanup sites on the project site. In order to reduce exposure risks during construction, prior to construction, the hydraulic elevators would be inspected for PCBs and if necessary, their contents would be managed using best management practices according to the prevailing regulatory agency requirements. This measure is included as <b>Mitigation</b> <b>Measure 1: Inspect Hydraulic Elevators for PCBs.</b> Implementation of Mitigation Measure 1 would ensure impacts related to potential onsite hazardous materials are reduced to a less-than-significant level.

		Source Document(s): 10
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes No	The project site is currently a vacant two-story mortuary building and parking lot and does not support sensitive vegetation and/or wildlife species. No federally listed species, species proposed for federal listing or federally designated critical habitats are documented within the proposed project area. No impacts to federally listed species or critical habitat would occur as the project site is disturbed and paved, and does not contain critical habitat or other suitable habitat for any federally listed species. Source Document(s): 11, 12, and 13
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes No	During the Phase I Environmental Site Assessment, there was no visual evidence during site reconnaissance of unobstructed or unshielded above ground storage tanks (fuel oil, gasoline, propane, etc.) at or immediately adjacent to the project site. The proposed residential uses on-site would not involve explosive or flammable materials or operations and would not be located near sites known to contain toxic or radioactive materials, nor is the project site located near thermal source hazards. The nearest AST to the project site is located at 30 Onondaga Avenue. This tank is approximately 370 feet northeast of the project site and has a 5,200 gallon capacity, which is the largest AST within 0.5 miles of the project site. A dense network of existing buildings occupies 200 feet of length between the tank and project site. The acceptable separation distance (ASD) for the tank was calculated using the HUD Acceptable Separation Distance Electronic Assessment Tool (Attachment 4). The ASD for thermal radiation for people is at least 78.95 feet and for buildings at least 12.63 feet. As the project site is 370 feet from the tank, the ASD is met. Source Document(s): 10, Attachment 4
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes No	The project site consists of urban land; therefore, the project would not affect farmlands (PL 97-98, December 22, 1981). There are no protected farmlands in the City and County of San Francisco. Source Document(s): 14

Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes No	As addressed under Flood Insurance above, the best-available information for flood hazards includes the FEMA completed preliminary FIRM prepared for the City dated June 2, 2014. Based on this FIRM, the project site is located entirely outside of the 100-year and 500-year floodplain. The project site is not considered to be within a floodplain or Special Flood Hazard Area and is therefore in compliance with the Executive Order 11988. Source Document(s): 5 and 6
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	Yes No	The City has consulted with the California State Historic Preservation Officer (SHPO) pursuant to the January 2007 Programmatic Agreement by and among the City and County of San Francisco, the California SHPO, and the Advisory Council on Historic Preservation Regarding Historic Properties Affected by Use of Revenue from the Department of Housing and Urban Development Part 58 Programs. The following discussion summarizes the process and results of this consultation. <u>Archeological Resources</u> The Area of Potential Effects (APE) for the proposed project for archaeological resources as defined at 36 CFR § 800.16 is limited to the legal lot lines of the property described as 4840 Mission Street (APN 695-90-19, 695-90-25, 695-90-26), City and County
		of San Francisco, California. MOHCD requested that the Northwest Information Center of the California Historical Resources System at Sonoma State University, Rohnert Park, California (NWIC), conduct a records search for the APE. According to their project-specific sensitivity assessment and records search (NWIC File No.: 16- 1019), there is a moderate potential for Native American archeological resources and a moderate-to-high potential for historic-period archeological resources to be within the project APE. The NWIC recommended a qualified archeologist conduct further archival and field study to identify cultural resources, especially a good-faith effort to identify those buried deposits that may show no signs on the surface. Due to the potential for encountering subsurface archaeological resources, MOHCD, the SHPO, and the project developer entered into a site-specific Programmatic Agreement (PA) in September of 2020 (see Attachment 3). The site-specific PA

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	includes measures to avoid adverse effects to buried or submerged historical resources. The terms of the PA include preparation of an Archaeological Testing Program. If a significant archaeological resource is present and could be adversely impacted, the PA requires an Archaeological Data Recovery Program. An Archaeological Monitoring Program may be required as determined by a qualified City Staff Archaeologist and should any archeological resource be discovered, the qualified Archaeological Consultant shall prepare and submit a Draft and Final Archeological Resource Report.
	Architectural Resources
	The APE for the proposed project with regard to architectural resources as defined at 36 CFR § 800.16 is limited to the legal lot lines of the properties described as 4840 Mission Street (APN 695-90-19, 695-90-25, 695-90-26), 1991 Alemany (APN 6959-024), and 4834 Mission (APN 6959-029), City and County of San Francisco, California.
	MOHCD commissioned a review of age-eligible properties within the APE. Each of these properties was assessed for eligibility for listing in the National Register.
	The City determined that the Valente, Marini, Perata & Co. Funeral Home on the project site is eligible for inclusion in the National Register of Historic Places (Historic Property) based on the evaluation in the Department of Parks and Recreation 523 Forms dated February 2020 for 4840 Mission Street. As this building is proposed for demolition as part of the project, the City determined that the project would have an adverse effect on a Historic Property.
	On May 2, 2018, the Architectural Review Committee of the City's Historic Preservation Commission (HPC) held a public hearing regarding the Undertaking and preservation alternatives considered. On May 6, 2020, the Mayor's Office of Housing sent a letter seeking public comment regarding the project to businesses, residents and occupants of buildings within 300 feet of 4840 Mission Street (APN 695-90-19, 695-90-25, 695-90-26), and considered comments received on the project.
	In order to resolve adverse effects, MOHCD, the SHPO, and the project developer entered into a site-specific Programmatic Agreement (PA) in September of 2020 (see Attachment 3). The

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	within 3,000 feet of the project site. The Muni Rail K-line, which runs along San Jose Avenue which parallels Mission Street is located approximately 1,800 feet from the project site buildings to the railway centerline.
	Transportation noise for Mission Street and Alemany Boulevard as well as the Muni Rail line were calculated using the HUD DNL Calculator using San Francisco Municipal Transit Authority (SFMTA) traffic volumes and SFMTA train headway schedules. Traffic volumes were obtained from a noise study prepared for a previous project on the existing project site and the adjacent property at 4950 Mission Street.
	Two airports are located within the preliminary screening distance of the project site. San Francisco International Airport (SFO) is located approximately six miles to the southeast and Oakland International Airport (OAK) is located approximately 11 miles to the northeast of the project site. However, the project site is located several miles outside of the 60 dBA and 65 dBA Community Noise Equivalent Level (CNEL) airport noise contours based on each airport's respective noise contour map. Consequently, the contribution of airport noise from SFO and OAK would not materially contribute to the noise environment at the project site and was not included in the HUD DNL Calculator assessment.
	The combined DNL exterior noise from these sources was calculated to be 69 dBA DNL at the project site buildings.
	The resulting exterior noise levels at the project site based on the DNL Calculator would fall within HUD's "normally unacceptable" range, which is from 65 to 75 dBA DNL. Since the project site would be exposed to noise levels exceeding 65 dBA DLN, attenuation measures consistent with State and local law would be required to ensure interior noise standards are met.
	Title 24 of the California Code of Regulations establishes uniform noise insulation standards for multi-family residential projects. Multi-family residences must be designed to limit intruding noise to an interior CNEL (or DNL) of at least 45 dBA. The San Francisco Department of Building Inspection (DBI) would review the final building plans to ensure that the building wall and floor/ceiling assemblies meet state standards regarding sound transmission. Compliance with this requirement would ensure that interior noise levels of the project residential units

would meet the interior noise goal of HUD and the State of California.
Construction Noise
Project construction would require the use of off-road equipment along with other construction-related noise sources, such as vehicle trips for deliveries and construction workers and would be expected to increase noise levels at surrounding noise sensitive receptors. Construction equipment would consist of excavators, hoe rams, graders, rubber tired dozers, tractors/loaders/ backhoes, cranes, forklifts, manlifts, generators, pavers, welders and air compressors. The nearest sensitive land uses within 50 feet of the project site include existing single- and multi-family residences northeast of the project site on Mission Street and single-family residences west of the project on Alemany Boulevard.
Construction noise is regulated by the San Francisco Noise Ordinance (Article 29 of the <i>Police Code</i> ). The ordinance requires that noise levels from individual pieces of construction equipment, other than impact tools, not exceed 80 dBA at a distance of 100 feet from the source. Impact tools (e.g., jackhammers, hoe rams, impact wrenches) must have manufacturer-recommended and City-approved mufflers for both intake and exhaust. Section 2908 of the Ordinance prohibits construction work between 8:00 p.m. and 7:00 a.m. The project would be required to comply with regulations set forth in the Noise Ordinance.
Construction at the project site generally would be limited to daytime hours. Pile driving and/or auger equipment, if required, would utilize intake and exhaust mufflers recommended by the manufacturers. Impact equipment such as pile drivers are exempt from the noise ordinance limits provided that such equipment is equipped with manufacturer recommended intake and exhaust mufflers. Construction activities of the project shall comply with the above identified San Francisco Noise Ordinance and would thus not result in adverse effects.
Operational Noise
Currently the project site is developed with a 98-space surface parking lot and the vacant Valente Marini Perata Funeral Home building. A traffic noise analysis performed for a larger project that included the adjacent property at 4950 Mission Street

		determined that roadside noise level increases associated with a larger project would be 0.6 dBA or less at 19 different roadway segments analyzed. Conversion of the project site from a commercial funeral home to residential use would result in a marginal increase in vehicle noise to surrounding uses that would be below the limits of human perceptibility. Source Document(s): 15, 16a, 16b, 16c, and 16d
Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes No	The project is not served by a U.S. EPA designated sole-source aquifer, is not located within a sole source aquifer watershed, and would not affect a sole-source aquifer. Source Document(s): 17
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes No	The project site contains a vacant mortuary building and parking lot and does not contain wetland or riparian resources. Therefore, the project would not affect wetland or riparian areas. Source Document(s): 18
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes No	No federally designated Wild and Scenic Rivers are located within the City and County of San Francisco; therefore, the project would not affect any wild and scenic rivers. Source Document(s): 19
ENVIRONMENTAL	JUSTICE	
Environmental Justice Executive Order 12898	Yes No	<ul> <li>For purposes of this analysis, the definitions of minority and low-income populations are based on the Council on Environmental Quality's (CEQ's) Guidance for Agencies on Key Terms in Executive Order 12898.</li> <li>A minority population is present within a study area under either of the following conditions:</li> <li>The minority population percentage of the affected area is meaningfully greater than the affected area's general population.</li> </ul>
		• The minority population percentage of the affected area exceeds 50 percent.

<ul> <li>Low-income populations are identified based upon poverty thresholds provided by the U.S. Census Bureau and are identified in one of the following ways (CEQ 1997:25):</li> <li>The population percentage below the poverty level is meaningfully greater than that of the population percentage in the general population.</li> <li>The population percentage below the poverty level in the affected area exceeds 50 percent.</li> <li>Within the County of San Francisco, approximately 54.6 percent of the population is comprised of ethnic minorities and approximately 10 percent of the population has an income below the poverty level. The project site is located in Census Tract 261 of the 2010 U.S. Census. Within this Tract, approximately 82 percent of the population is comprised of ethnic minorities and approximately 5.1 percent of the population has an income below the poverty line. As such, the project site is located within a minority population community, as described above.</li> </ul>
during construction similar to other construction projects throughout the City. These impacts are not considered disproportionate to any one location and would be reduced to minor or less-than-significant levels with applicable laws and mitigation. All operational impacts resulting from the proposed project were determined to be minor or less than significant; therefore, the proposed project would not adversely and disproportionately impact minority or low-income populations. The project would provide new housing for formerly homeless or low-income individuals. In such a way, it would benefit low- income individuals by providing affordable housing opportunities. Source Document(s): 20, 21, 22, 23, and 24

#### Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27]:

Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary

reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. All conditions, attenuation or mitigation measures have been clearly identified.

**Impact Codes**: Use an impact code from the following list to make the determination of impact for each factor.

- (1) Minor beneficial impact
- (2) No impact anticipated
- (3) Minor adverse impact May require mitigation
- (4) Significant or potentially significant impact requiring avoidance or modification, which may require an Environmental Impact Statement

[		
Environmental		
Assessment	Impact	
Factor	Code	Impact Evaluation
LAND DEVELOR		Impact Evaluation
Conformance with Plans /	2	Conformance with Plans/Compatible Land Use and Zoning
Compatible Land Use and Zoning /		The project area contains institutional, commercial, and residential uses,
Scale and Urban		with nearby public open spaces. The adjacent parcel, to the southwest,
Design		contains a Safeway Grocery Store, and the adjacent parcel to the northeast
Design		contains various residential and commercial uses. Residential buildings are
		located across the street to the northwest and commercial buildings are
		located across the street to the southeast. The project proposes residential
		development and a clinic which is compatible with the existing residential
		and commercial uses in the vicinity.
		The project site is currently zoned as Excelsior Outer Mission Street
		Neighborhood Commercial District (NCD) and Residential House, One
		Family (RH-1). The project site is surrounded by NCD to the northeast and
		southwest and by RH-1 to the east and west. The project site is within the
		40-X height and bulk district which generally limits building height to 40
		· · · · · ·
		feet. The proposed project exceeds the existing height and density zoning
		limits for the site but would be allowed under the California State Density
		Bonus Law. The State Density Bonus Law allows for 35 percent additional
		permitted density and two additional stories of permitted height. The
		proposed project would not include off-street parking and is consistent with
		zoning requirements for parking.
		The City of San Francisco General Plan was adopted in 2014 and serves as
		the overall guiding policy for the economic, social, cultural, and esthetic
		values within the City of San Francisco. The San Francisco Planning
		Department assessed the consistency of the project with the existing

		General Plan and found that it is in conformity with the General Plan,
		including Housing Element Policies 1.7, 1.8, 1.10, 8.1 and 12.2.
		Overall, the project is consistent with relevant land use/zoning plans with consideration of the affordable housing density bonus.
		Scale and Urban Design
		The proposed affordable housing apartment building would be taller than the immediately surrounding residential and commercial buildings but is consistent with expectations for new development in the general area. Along Mission Street, buildings are generally two to four level structures of up to 40 feet in height. The project proposes a five level structure of up to 65 feet in height. The project is 230 feet from the 65-X height and bulk district along Mission Street which extends from Onondaga Avenue to Norton Street/Brazil Avenue. Thus, building heights of up to 65 feet can be anticipated within proximity to the project site in the future. This is evidenced by recent construction of a five-level structure, exceeding 40 feet in height at the corner of Mission Street and Russia Avenue, approximately 350 feet northeast of the project site. The project is consistent with the scale and design expectations for new development and thus would not result in adverse aesthetic effects related to scale and urban design.
		Source Document(s): 1a, 1b, 25, 26, and 27
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	Geology and Soils The project site is located in the Coast Ranges Geomorphic Province, which extends along the California coast south to the Transverse Ranges and north to the Oregon border. The province is characterized by northwest-southeast trending mountains and faults sub-parallel to the San Andreas Fault Zone. The province comprises marine and terrestrial sedimentary deposits underlain by Salinian Block granitic rocks west of the San Andreas Fault Zone and the Franciscan Assemblage east of the San Andreas Fault Zone. The San Francisco Planning Department's CatEx Determination Layers
		Map shows that the project site is not within a designated liquefaction, rupture or landslide hazard zone.
		The San Francisco Building Code (SFBC) derives from the adopted 2013 California Building Code. This code is administered and enforced by the DBI, and compliance is mandatory for all new development and redevelopment in the City. Throughout the permitting, design, and construction phases of a building project, Planning Department staff, DBI engineers, and DBI building inspectors confirm that the SFBC is being

Include <t< th=""><th>Hazards and Nuisances including Site Safety and Noise</th><th>3</th><th>construction would continue to drain into the combined sewer and stormwater system and be treated at the Southeast Water Pollution Control Plant prior to discharge into the San Francisco Bay. Pursuant to the San Francisco Public Works Code, including the Construction Site Runoff Control Ordinance, and the San Francisco Green Building Code, the project sponsor would be required to implement an Erosion and Sediment Control Plan that sets forth BMP measures to reduce potential runoff and erosion impacts. The project would comply with the San Francisco Stormwater Management Ordinance, which requires treatment of all runoff prior to leaving the site. The stormwater management system for the project would collect, detain and potentially retain some stormwater within the project site such that the rate and amount of stormwater runoff from the site does not negatively impact the City's treatment facilities, and in a manner that is consistent with the SFPUC's Stormwater Design Guidelines. Adherence to these requirements would ensure that the proposed project would not substantially degrade water quality during either construction or operation. Source Document(s): 28, 29a, and 29b <u>Hazardous Materials</u> As discussed in the "Contamination and Toxic Substances" discussion above, historical records and potential hazards for the project site and immediate vicinity were reviewed and there are no explosive hazards</th></t<>	Hazards and Nuisances including Site Safety and Noise	3	construction would continue to drain into the combined sewer and stormwater system and be treated at the Southeast Water Pollution Control Plant prior to discharge into the San Francisco Bay. Pursuant to the San Francisco Public Works Code, including the Construction Site Runoff Control Ordinance, and the San Francisco Green Building Code, the project sponsor would be required to implement an Erosion and Sediment Control Plan that sets forth BMP measures to reduce potential runoff and erosion impacts. The project would comply with the San Francisco Stormwater Management Ordinance, which requires treatment of all runoff prior to leaving the site. The stormwater management system for the project would collect, detain and potentially retain some stormwater within the project site such that the rate and amount of stormwater runoff from the site does not negatively impact the City's treatment facilities, and in a manner that is consistent with the SFPUC's Stormwater Design Guidelines. Adherence to these requirements would ensure that the proposed project would not substantially degrade water quality during either construction or operation. Source Document(s): 28, 29a, and 29b <u>Hazardous Materials</u> As discussed in the "Contamination and Toxic Substances" discussion above, historical records and potential hazards for the project site and immediate vicinity were reviewed and there are no explosive hazards
			located within the vicinity of the project site. Based on the Phase I Environmental Site Assessment, construction associated with the proposed project is not anticipated to encounter known hazardous materials sites or contaminated groundwater. <u>Noise</u> Construction noise would be temporary and limited to reasonable hours, in compliance with the City's Noise Ordinance.
		2	The project would meet current state and local codes concerning energy

enforced by the DBI. In addition, San Francisco's Green Building Code places more stringent energy, materials, and construction debris management requirements on new residential buildings than Title 24. New residential buildings are required to achieve at least 75 GreenPoints from the GreenPoints Multi-Family New Construction Checklist, or LEED "Silver" certification. Other than natural gas and coal fuel used to generate the electricity for the project, the project would not have a substantial effect on the use, extraction, or depletion of a natural resource.
Source Document(s): 30

Environmental		
Assessment	Impact	
Factor	Code	Impact Evaluation
SOCIOECONON	4IC	
Employment and Income Patterns	2	The project site contains a vacant two-story building and parking lot with no employment related to the vacant building. As such, no existing employees would be displaced by the project. Construction of the project site would result in temporary, construction job growth at the project site. It is expected that construction work and operational work at the 137-unit apartment complex, clinic, and commercial facilities would be accommodated by the existing employment pool. No adverse impact is anticipated from the project on employment and income within the project area. Source Document(s): N/A
Demographic Character Changes, Displacement	2	<ul> <li><u>Demographics</u></li> <li>The project would provide affordable housing consistent with the needs established in the Regional Housing Need Plan for the San Francisco Bay Area. No adverse demographic changes are anticipated.</li> <li><u>Displacement</u></li> <li>The project site is located on a site with a vacant mortuary building and development of the proposed project would not displace existing residents or businesses. Thus, there would be no impact with respect to displacement.</li> <li>Source Document(s): 31</li> </ul>

Environmental		
Assessment	Impact	
Factor	Code	Impact Evaluation

COMMUNITY F	ACILITI	ES AND SERVICES
Educational and Cultural Facilities	2	The project would not displace educational or cultural facilities. The project area is served by the San Francisco Unified School District (SFUSD). SFUSD assigns students to schools based on a number of factors including parental choice, school capacity, and special program needs; thus, students are not necessarily assigned to the nearest school. SFUSD has conducted long range planning which considers enrollment increases from housing growth through 2040, including below-market-rate units which provide more students than other housing types. It is anticipated that a portion of the residents of the project would already be attending a school within San Francisco and thus not new to the District. If all tenants were new to the City, the project would increase population in the City by up to 0.0004 percent, which would have an insignificant impact on student enrollment. Additionally, the SFUSD assignment process would prevent a significant burden on any one area school. Therefore, the existing educational facilities are sufficient and there is no new need to construct new facilities to accommodate the proposed project. As such, the project would not be expected to result in significant adverse effects on local schools relative to existing overall enrollment.
Commercial Facilities	1	The nearest grocery store is Safeway, located immediately adjacent, south of the project site. Additionally, there are four shopping centers located within three miles of the project site, including West Lake Shopping Center, Stonestown Galleria, Diamond Heights Shopping Center, and Ocean View Village. It is anticipated that some occupants would be existing residents of the City; however, if all tenants were new to the City, the population would not increase more than 0.0004 percent as a result of the proposed project, which would have an insignificant impact on commercial facilities. Therefore, the existing commercial facilities are sufficient and there is no new need to construct new facilities to accommodate the proposed project. Additionally, the introduction of residential and commercial services on the project site would contribute to the economic and social revitalization of the community. Therefore, the project would have a net beneficial impact on commercial facilities.
Health Care and Social Services	1	The project would not impact any health care or social service facilities. The nearest major hospital is the Sutter Pacific Medical Foundation located 2 miles northeast of the project site, and the San Francisco General Hospital

		<ul> <li>is located 3 miles northeast of the project site. Several social services are located within 4 miles of the project site, including Lutheran Social Services, Human Services Agency of San Francisco and St. Anthony's Social Work Center. Therefore, health care and social services are within a convenient and reasonable distance to residents of the project, and are accessible via public transportation available near the project.</li> <li>It is anticipated that some occupants would be existing residents of the City; however, if all tenants were new to the City, population would not increase more than 0.0004 percent as a result of the proposed project, which would have an insignificant impact on existing health care and social services. Therefore, the existing health care and social service facilities are sufficient and there is no new need to construct new facilities to accommodate the proposed project. Additionally, the proposed project includes a clinic which would provide a beneficial impact to health care services in the area. Source Document(s): 1a and 1b</li> </ul>
Solid Waste Disposal / Recycling	2	Recology, Inc. provides residential and commercial solid waste collection, recycling, and disposal services for the City of San Francisco. 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 is transported to a landfill. In September 2015, San Francisco approved an Agreement with Recology, Inc., for the transport and disposal of the City's municipal solid waste at the Recology Hay Road Landfill in Solano County. The City began disposing of its municipal solid waste at the landfill in January 2016, and is anticipated to continue for approximately nine years, with an option to renew the Agreement thereafter for an additional six years. The landfill is permitted to accept up to 2,400 tons of waste per day, and at this maximum rate of acceptance, the landfill is expected to continue to receive waste approximately through the year 2077.
		Construction and demolition (C&D) debris in the City must be transported by a registered transporter to a registered facility that can process mixed C&D debris pursuant to the City and County of San Francisco C&D Ordinance. The Ordinance requires that at least 65 percent of C&D debris from a site go to a registered C&D recycling facility. This requirement has been augmented by the Green Building Ordinance, which requires that at least 75 percent of C&D debris be diverted from landfills. Compliance with

		this regulation would ensure any impact from construction debris is appropriately minimized. During operation, the 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 project would incrementally increase total waste generation from the City by increasing the number of residents at the project site, the increasing rate of diversion through recycling and other methods would result in a decreasing share of total waste that requires deposition into the landfill.
		It is anticipated that some occupants would be existing residents of the City; however, if all tenants were new to the City, population would not increase more than 0.0004 percent as a result of the proposed project, which would have an insignificant impact on the solid waste stream. Therefore, the existing solid waste disposal facilities are sufficient and there is no new need to construct new facilities to accommodate the proposed project.
		Given the size of the project and existing landfill capacity, the project would not be expected to result in significant adverse effects to solid waste services.
		Source Document(s): 33, 34, and 35
Waste Water / Sanitary Sewers	2	The project site is within an urban area that is well served by the combined sewer/stormwater collection, storage and treatment facilities operated by San Francisco Public Utilities Commission (SFPUC). Wastewater generated at the project site would be treated by SFPUC, which provides wastewater collection and transfer service in the City. The project site is located in the Islais Creek Watershed portion of the Bayside Watershed where wastewater is treated at the Southeast Treatment Plan (SEP). The SEP and two other treatment facilities can treat up to 575 million gallons per day of combined wastewater and stormwater. The San Francisco Sewer System Master Plan addresses anticipated demands through 2030. The system has capacity through 2030 for projected dry weather flows when considering population growth.
		It is anticipated that some occupants would be existing residents of the City; however, if all tenants were new to the City, population would not increase more than 0.0004 percent as a result of the proposed project, which would

		Source Document(s): 37a and 37b
Water Supply	2	Water would be provided to the project by SFPUC. SFPUC forecasted future water demand using regional growth projections that incorporate existing land use designations and reasonably foreseeable future projects within San Francisco. According to the 2015 <i>Urban Water Management Plan for the City and County of San Francisco</i> (UWMP) and the retail demand forecasts contained in the <i>2013 Water Availability Study</i> , the SFPUC would be able to meet the future demand in years of average precipitation as well as during a single dry year. In a multiple dry year event, SFPUC could experience shortages (1.2% of total demand) in 2040 during years 2 and 3 without development of additional supply concepts. In the <i>Water Availability Study for the City of San Francisco</i> , SFPUC estimates an additional 500,000 gallons of water per day is needed to keep up with future demand. Since additional water supply is already planned to be developed for San Francisco to match expected future growth, and the project is infill development consistent with anticipated housing needs, the water demand from the project is expected to be accommodated by existing and planned supply. It is anticipated that some occupants would be existing residents of the City; however, if all tenants were new to the City, population would not increase more than 0.0004 percent as a result of the proposed project, which would have an insignificant impact on water facilities. Therefore, the existing water supply facilities are sufficient and there is no new need to construct new facilities to accommodate the proposed project.
Public Safety - Police, Fire and Emergency Medical	2	Police service is provided to the project site primarily by the San Francisco Police Department's (SFPD) Ingleside Station, at 1 Sqt. John V Young Lane (approximately 0.5 miles to the northwest). Fire protection to the project site is provided primarily by the San Francisco Fire Department's Station 43, at 720 Moscow Street (approximately 0.5 miles southeast) or Fire Station 15, at 1000 Ocean Avenue (0.7 miles to the west). If one or more of the engine or truck companies were to be out of service at the time of an alarm, the next closest available unit would respond. Emergency medical transportation to San Francisco hospitals is provided by a fleet of both public and private ambulance services. San Francisco ensures fire safety and emergency accessibility within new and existing developments through provisions of its Building and Fire Codes. Implementation of the project could increase the demand for fire protection, emergency medical and police protection services. However, the increase would be incremental, funded largely through project-related

		increases to the City's tax base, and would not be substantial given the overall demand for such services on a citywide basis. Fire protection, emergency medical, and police protection resources are regularly redeployed based on need in order to maintain acceptable service ratios. It is anticipated that some occupants would be existing residents of the City; however, if all tenants were new to the City, population would not increase more than 0.0004 percent as a result of the proposed project. The current police, fire, and emergency medical facilities are sufficient to address this minimal increase and thus there is no new need to construct new facilities to maintain service levels. As such, the project would not be expected to result in significant adverse effects on public safety. Source Document(s): 39 and 40
Parks, Open Space and Recreation	2	The proposed project would not displace parks or other recreation opportunities. There are several park and recreation facilities and open space within 0.5 miles of the project site. These include Balboa Park and Excelsior Playground. Additionally, the proposed project includes a courtyard with a play area for use by residents. It is anticipated that some occupants would be existing residents of the City and population would not increase more than 0.0004 percent as a result of the proposed project. The current parks, open space and recreational facilities are sufficient to address this minimal increase and there is no new need to construct new facilities to accommodate the proposed project. Therefore, the project is not anticipated to result in adverse impacts on open spaces or recreational facilities within the City. Source Document(s): 1b
Transportation and Accessibility	2	The project site is adequately served by pedestrian, bicycle, transit, and parking facilities. The closest San Francisco Municipal Transportation Agency (SFMTA) Muni Metro station to the project site is the corner of Mission Street and Ocean Street approximately 0.25 miles to the northeast. The closest BART station entrance to the project site is the Balboa Park Station, approximately 0.45 miles to the west. In addition, several on-street MUNI bus lines operate within a few blocks of the site: 6-Parnassus, 9-San Bruno, 12-Folsom/Pacific, 14-Mission, 19-Polk, 21- Hayes, 47-Van Ness, and 71-Haight/Noriega. The 14-Mission, 14L-Mission Limited, and 14XMission Express MUNI lines all run by the project site on Mission Street. The San Francisco Ferry Terminal is located approximately 5.7 miles northeast of the project site and the Cal Train Station is located approximately 4.5 miles northeast of the project site.

It is anticipated that some occupants would be existing residents of the City and population would not increase more than 0.0004 percent as a result of the proposed project. Existing transportation facilities are sufficient to address this minimal increase and there is no new need to construct new facilities to accommodate the proposed project.
<u>Vehicle Miles Traveled</u> San Francisco uses vehicle miles traveled (VMT) as a screening criteria for determining if a project would have a significant effect on the transportation environment. According to the City's Transportation Information Map, the existing average daily VMT per capita for the transportation analysis zone (TAZ) in which the project site is located (TAZ 48), is 10.3 for residential uses, which is below the existing regional VMT per capita minus 15 percent of 14.6. The proposed project is located within an area of the City where the existing VMT is more than 15 percent below the regional VMT thresholds; therefore, the proposed project would not generate a substantial increase in VMT and is not anticipated to result in adverse impacts related to VMT. Source Document(s): 41, 42, 43, and 44

	li -	
Environmental		
Assessment	Impact	
Factor	Code	Impact Evaluation
NATURAL FEA	TURES	
Unique Natural Features, Water Resources	2	The project site is relatively flat and entirely paved with a single vacant two-story building. No known unique natural, or water features are present onsite. Implementation of the project would not affect water resources, nor would it increase demands on groundwater resources. As noted above, water service would be provided by SFPUC. No surface waters (e.g., lakes, rivers, ponds) are located on or adjacent to the project site.
		Source Document(s): 18, 19, and 36
Vegetation, Wildlife	2	The project site is relatively flat and entirely paved with a single vacant two-story building and does not support sensitive vegetation and/or wildlife species. Source Document(s): 11, 12, and 13
Other Factors		N/A

### **Additional Studies Performed:**

**Field Inspection** (Date and completed by): Group Delta, September 3, 2015 (Geotechnical Study); Group Delta, April 21, 2017 (Phase I Environmental Site Assessment); ESA, January 30, 2017, May 15, 2020 and September 8, 2020 (Environmental Assessment).

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- 44. City of San Francisco, San Francisco Transportation Information Map, Vehicles and Parking Report for 4840 Mission Street. Available at: <u>https://sfplanninggis.org/TIM/</u>. Accessed on September 17, 2020

#### Attachments:

- 1. Air Quality Models
- 2. DNL Calculator
- 3. Programmatic Agreement between the City and County of San Francisco and the California State Historic Preservation Officer regarding 4840 Mission Street Affordable Housing Development, San Francisco, California
- 4. Acceptable Separation Distance Calculator

#### List of Permits Obtained: N/A

#### Public Outreach [24 CFR 50.23 & 58.43]:

Public meetings were held as part of the environmental review for the proposed project. These meetings are as follows:

- On May 2, 2018, public comments were received at the San Francisco Historic Preservation Commission Architectural Review Committee meeting regarding cultural resources.
- A letter seeking public comment was sent to businesses, residents and occupants of buildings within 300 feet of the project site on May 8, 2020.
- MOHCD conducted outreach and solicited comments from Native American Tribes

Lastly, a notice of availability of the EA and FONSI will be published in the San Francisco Examiner, a local and regional paper of general circulation. The EA and FONSI will be available for public review on MOHCD's website at: <u>https://sfmohcd.org/environmental-reviews</u>.

#### Cumulative Impact Analysis [24 CFR 58.32]:

A cumulative impact is the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result

from individually minor but collectively significant actions taking place over a period of time. No major construction activities or redevelopment is anticipated on adjacent or nearby parcels.

The project would not result in adverse impacts for certain issues areas including: airport hazards, coastal resources, biological resources, floodplains, agricultural resources, land use, geology and soils, environmental justice, socioeconomics; thus, the project would not contribute to potentially adverse cumulative impacts for these issues.

For noise, public services and utilities (police, fire, solid waste, water, wastewater, stormwater) and transportation, City-wide resources and thresholds were considered. The Proposed Action does not contribute significantly to these issues on a City-wide basis and impacts would be mitigated by an increased tax base (for public services, utilities and transportation) and by compliance with the San Francisco Noise Ordinance (for noise).

Impacts associated with hazardous materials and cultural resources are generally site-specific and not cumulative in nature. The project would comply with the site-specific PA; federal, state and local regulations; and Mitigation Measure 1 (PCB Inspection) to ensure that the project's contribution to any cumulative impacts is not significant.

Regarding air quality, the project-specific thresholds take into consideration the entire cumulative air basin and thus are considered indicative of whether a project contributes significantly to a cumulative impact. Project emissions are below applicable thresholds and thus the project would not contribute to potentially adverse cumulative impacts.

In sum, the project would not contribute significantly to an identified cumulative impact.

#### Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]:

A larger development could have greater impacts on the human environment although they could potentially be mitigated depending on the size of the development. A smaller development would not maximize the potential use of the property for affordable housing and would not necessarily avoid any impacts.

Three historic preservation alternatives for the project were considered. These alternatives would require extensive seismic upgrades to the funeral home building, including drilling foundation piers into bedrock, underpinning the building's' foundation system, and tying the buildings structural systems to the new foundation. This complex process is exacerbated by the high liquefaction susceptibility of the soils of this area and the fact that the funeral home includes two structures and two structural systems built over 25 years. These alternatives were rejected from further consideration due to the infeasibility of seismically upgrading the building. Additionally, these alternatives would not fully meet the project objective of providing affordable family housing.

#### No Action Alternative [24 CFR 58.40(e)]:

The no action alternative would mean that the project site would not be developed with affordable housing and the existing building and infrastructure would not be demolished. Due to the lack of available

development sites within the City it is likely that the project site would be developed with either residential, commercial, office, or mixed uses.

#### **Summary of Findings and Conclusions:**

With applicable laws, authorities, factors or other enforceable measures, all potentially significant impacts would be reduced to a less-than-significant level. Implementation of Mitigation Measure 1 would reduce impacts related to contamination and toxic substances to less than significant. Implementation of the site-specific PA would resolve impacts to cultural resources. As such, no impacts are potentially significant to the extent that an Environmental Impact Statement would be required. The project would result primarily in less than significant impacts to the environment with beneficial socioeconomic impacts.

#### Mitigation Measures and Conditions [40 CFR 1505.2(c)]:

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

#### Mitigation Measure 1: Inspect Hydraulic Elevators for PCBs

Prior to demolition, the hydraulic elevators shall be inspected for PCBs, and, if necessary, their contents shall be managed using best management practices according to the prevailing regulatory agency requirements.

Law, Authority, or Factor	Mitigation Measure
San Francisco Building Code	The San Francisco Building Code derives from the adopted 2013 California Building Code. This code is administered and enforced by the San Francisco DBI, and compliance with all provisions is mandatory for all new development and redevelopment in the City. Throughout the permitting, design, and construction phases of a building project, Planning Department staff, DBI engineers, and DBI building inspectors confirm that the SFBC is being implemented by project architects, engineers, and contractors, including seismic and soil investigations and recommendations.
San Francisco Public Works Code, including the Construction Site Runoff Control Ordinance, and the San Francisco Green Building Code	These codes and ordinances require that the project develop and implement an Erosion and Sediment Control Plan that sets forth BMP measures to reduce potential runoff and erosion impacts.
BAAQMD Regulation 11, Rule 2, Asbestos and Section 3406 of the San Francisco Building Code	Any project demolition which may encounter asbestos must adhere to Regulation 11, Rule 2, which controls emissions of asbestos to the atmosphere during demolition, renovation, milling and

	manufacturing and establish appropriate waste disposal procedures. Projects constructed on or before December 31, 1978 are subject to additional measures under Section 3406 of the San Francisco Building Code.
San Francisco Construction Dust Control Ordinance (San Francisco Health Code Article 22B, and San Francisco Building Code Section 106.3.2.6)	All site preparation work, demolition, or other construction in San Francisco that could create dust or expose or disturb more than 10 cubic yards or 500 square feet of soil, must comply with specified dust control measures.
San Francisco Noise Ordinance (Article 29 of the Police Code)	The ordinance established acceptable noise levels for construction activities unless a special permit is authorized by the Director of Public Works.
24 CFR Part 51 Subpart B	It is a HUD goal that the interior auditory environment shall not exceed a day-night average sound level of 45 decibels.
Title 24 of the California Code of Regulations	Residences must be designed to limit intruding noise to an interior CNEL (or DNL) of at least 45 decibels.
Site-Specific Programmatic Agreement (PA; Attachment 3)	The PA includes measures to resolve potential adverse effects to buried or submerged historical resources and to historic architectural resources.
	The site-specific PA includes measures to avoid adverse effects to buried or submerged historical resources. The terms of the PA include preparation of an Archaeological Testing Program. If a significant archaeological resource is present and could be adversely impacted, the PA requires an Archaeological Data Recovery Program. An Archaeological Monitoring Program may be required as determined by a qualified City Staff Archaeologist and should any archeological resource be discovered, the qualified Archaeological Consultant shall prepare and submit a Draft and Final Archeological Resource Report. The site-specific PA includes preparation of Historic American Building Survey-like documentation of the Historic Property including, but not limited to, the following: HABS Historical Report, HABS-Level Photographs, measured drawings, video recordation, softcover book production and an on-site interpretive program.

## **Determination:**

**Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27] The project will not result in a significant impact on the quality of the human environment.

**Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27] The project may significantly affect the quality of the human environment.

Preparer Signature: \_\_\_\_\_\_ Date: 9/24/2020 Name/Title/Organization: <u>Jennifer Wade, Program Manager, ESA</u>

Certifying Officer Signature: <u>B</u>\_\_\_\_\_Date: \_Sepember 25, 2020\_\_\_\_

Name/Title: \_\_\_\_\_Brian Cheu, Deputy Director, MOHCD\_\_\_\_\_

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

Signature: Brian Cheu eu (Sep 24, 2020 13:23 PDT)

Email: brian.cheu@sfgov.org

# **Cal**ifornia Emissions Estimator Model<sup>®</sup>

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(https://www.addtoany.com/share#url=http%3A%2F%2Fwww.aqmd.gov%2Fcaleemod%

The **Cal**ifornia **E**missions **E**stimator **Mod**el® (CalEEMod) is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Further, the model identifies mitigation measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from measures chosen by the user.

#### 4840 Mission Street

San Francisco County, Annual

# **1.0 Project Characteristics**

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	10.00	1000sqft	0.00	10,000.00	0
Enclosed Parking with Elevator	17.45	1000sqft	0.00	17,455.00	0
Apartments High Rise	137.00	Dwelling Unit	1.48	162,914.00	290
Strip Mall	5.73	1000sqft	0.00	5,726.00	0

#### **1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	4.6	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2022
Utility Company	City and County of San Fr	rancisco			
CO2 Intensity (Ib/MWhr)	76.28	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity (Ib/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

CalEEMod Version: CalEEMod.2016.3.2

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#### 4840 Mission Street - San Francisco County, Annual

Project Characteristics -

Land Use - Adjustments to acreage and square footage per 2/20/29 Bridge Housing Plan Set. Population adjustment per PD.

Construction Phase - Construction Schedule as detailed in 02/2018 Noise Study by Placeworks.

Off-road Equipment - Equipment mix as detailed in 02/2018 Noise Study by Placeworks.

Off-road Equipment - Equipment mix as detailed in 02/2018 Noise Study by Placeworks.

Off-road Equipment - Equipment mix as detaimed in 5/2018 Noise Report by Placeworks. Other equipment is hoe ram.

Off-road Equipment - Equipment mix as detailed in 02/2018 Noise Study by Placeworks.

Off-road Equipment - Equipment mix as detailed in 02/2018 Noise Study by Placeworks.

Off-road Equipment - Equipment mix as detailed in 02/2018 Noise Study by Placeworks.

**Demolition** -

Grading - Excavation volume based on 23,230 per sf of parking basememt (02/2019 Bridge housing plan), 12 ft heigth and 25% expansion factor.

Road Dust - CARB Method 7.9

Woodstoves - No hearths or woodstoves

Consumer Products - SF specific ROG factor

Energy Use - Adjusted default residential electricity down 2 percent and natural gas down 5% to account for 2019 Title 24 reductions.

Water And Wastewater - WW treatment all aerobic. No eptic or lagoons in SF.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	63.00
tblConstructionPhase	NumDays	2.00	63.00
tblConstructionPhase	NumDays	4.00	85.00
tblConstructionPhase	NumDays	200.00	435.00
tblConstructionPhase	NumDays	10.00	412.00
tblConstructionPhase	NumDays	10.00	23.00
tblConsumerProducts	ROG_EF	2.14E-05	1.51E-05
tblEnergyUse	T24E	426.45	417.92

tblEnergyUse	T24NG	6,115.43	5,809.66
l			
tblFireplaces	NumberGas	20.55	0.00
tblFireplaces	NumberNoFireplace	5.48	137.00
tblFireplaces	NumberWood	23.29	0.00
tblGrading	AcresOfGrading	31.88	1.50
tblGrading	AcresOfGrading	23.63	1.00
tblGrading	MaterialExported	0.00	12,906.00
tblLandUse	LandUseSquareFeet	17,450.00	17,455.00
tblLandUse	LandUseSquareFeet	137,000.00	162,914.00
tblLandUse	LandUseSquareFeet	5,730.00	5,726.00
tblLandUse	LotAcreage	0.23	0.00
tblLandUse	LotAcreage	0.40	0.00
tblLandUse	LotAcreage	2.21	1.48
tblLandUse	LotAcreage	0.13	0.00
tblLandUse	Population	392.00	290.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblRoadDust	RoadSiltLoading	0.1	0.096
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	2.74	0.00
tblWoodstoves	NumberNoncatalytic	2.74	0.00
	-		

# 2.0 Emissions Summary

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#### 4840 Mission Street - San Francisco County, Annual

#### 2.1 Overall Construction

#### Unmitigated Construction

	ROG	NOx	СО	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					ton	s/yr							MT	/yr		
2021	1.0980	5.5450	4.3901	9.2700e- 003	0.8348	0.2500	1.0848	0.4098	0.2337	0.6436	0.0000	830.4472	830.4472	0.1807	0.0000	834.9653
2022	1.0104	2.4025	2.7874	5.8100e- 003	0.1408	0.1060	0.2468	0.0378	0.1015	0.1393	0.0000	511.8143	511.8143	0.0769	0.0000	513.7374
Maximum	1.0980	5.5450	4.3901	9.2700e- 003	0.8348	0.2500	1.0848	0.4098	0.2337	0.6436	0.0000	830.4472	830.4472	0.1807	0.0000	834.9653

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Tota	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr									MT/yr						
2021	1.0980	5.5450	4.3901	9.2700e- 003	0.8348	0.2500	1.0848	0.4098	0.2337	0.6436	0.0000	830.4465	830.4465	0.1807	0.0000	834.9646
2022	1.0104	2.4025	2.7874	5.8100e- 003	0.1408	0.1060	0.2468	0.0378	0.1015	0.1393	0.0000	511.8139	511.8139	0.0769	0.0000	513.7370
Maximum	1.0980	5.5450	4.3901	9.2700e- 003	0.8348	0.2500	1.0848	0.4098	0.2337	0.6436	0.0000	830.4465	830.4465	0.1807	0.0000	834.9646
	ROG	NOx	со	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	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	3.3110	3.3110
2	4-1-2021	6-30-2021	1.3355	1.3355
3	7-1-2021	9-30-2021	1.0069	1.0069
4	10-1-2021	12-31-2021	1.0109	1.0109
5	1-1-2022	3-31-2022	0.9194	0.9194
6	4-1-2022	6-30-2022	0.9259	0.9259
7	7-1-2022	9-30-2022	0.9361	0.9361
		Highest	3.3110	3.3110

# 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												МТ	7/yr		
Area	0.6475	0.0118	1.0186	5.0000e- 005		5.6300e- 003	5.6300e- 003		5.6300e- 003	5.6300e- 003	0.0000	1.6622	1.6622	1.6000e- 003	0.0000	1.7024
Energy	7.4100e- 003	0.0640	0.0317	4.0000e- 004		5.1200e- 003	5.1200e- 003		5.1200e- 003	5.1200e- 003	0.0000	103.2183	103.2183	0.0128	3.7000e- 003	104.6392
Mobile	0.2555	0.9989	2.7277	9.6100e- 003	0.8090	0.0108	0.8198	0.2186	0.0101	0.2287	0.0000	883.2613	883.2613	0.0381	0.0000	884.2127
Waste		, ,				0.0000	0.0000		0.0000	0.0000	35.9375	0.0000	35.9375	2.1239	0.0000	89.0337
Water	n	,       				0.0000	0.0000		0.0000	0.0000	3.7522	2.7275	6.4796	0.0140	8.3700e- 003	9.3240
Total	0.9104	1.0746	3.7780	0.0101	0.8090	0.0216	0.8306	0.2186	0.0209	0.2394	39.6897	990.8693	1,030.559 0	2.1902	0.0121	1,088.911 9

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#### 4840 Mission Street - San Francisco County, Annual

# 2.2 Overall Operational

### Mitigated Operational

	ROG	NOx	С	0	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exha PM2		PM2.5 Total	Bio- CO2	NBio- CO	2 Total CO2	2 CH4	N2O	CO2e
Category		tons/yr											MT/yr					
Area	0.6475	0.0118	1.0	186 5.	.0000e- 005		5.6300e- 003	5.6300e- 003	1 1 1	5.630 00		5.6300e- 003	0.0000	1.6622	1.6622	1.6000e- 003	0.0000	1.7024
Energy	7.4100e- 003	0.0640	0.0	317 4.	.0000e- 004		5.1200e- 003	5.1200e- 003		5.120 00		5.1200e- 003	0.0000	103.2183	103.2183	0.0128	3.7000e- 003	104.6392
Mobile	0.2555	0.9989	2.7	277 9.	0.6100e- 003	0.8090	0.0108	0.8198	0.2186	0.01	01	0.2287	0.0000	883.2613	883.2613	0.0381	0.0000	884.2127
Waste	F,			·	· · · · · · · · · · · · · · · · · · ·		0.0000	0.0000		0.00	000	0.0000	35.9375	0.0000	35.9375	2.1239	0.0000	89.0337
Water	F,			·	· · · · · · · · · · · · · · · · · · ·		0.0000	0.0000		0.00	000	0.0000	3.7522	2.7275	6.4796	0.0140	8.3700e- 003	9.3240
Total	0.9104	1.0746	3.7	780 (	0.0101	0.8090	0.0216	0.8306	0.2186	0.02	209	0.2394	39.6897	990.8693	1,030.559 0	2.1902	0.0121	1,088.911 9
	ROG		NOx	СО	so					ugitive PM2.5	Exhau PM2			CO2 NBio	o-CO2 Tota	I CO2 C	H4 N	20 CO2
Percent Reduction	0.00		0.00	0.00	0.0	0 0	.00 0	.00 0	.00	0.00	0.0	0 0.0	0 0.(	0 00	.00 0	.00 0.	00 0.	00 0.0

# 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	1/2/2021	3/31/2021	5	63	
2	Site Preparation	Site Preparation	1/2/2021	3/31/2021	5	63	
3	Grading	Grading	1/2/2021	5/1/2021	5	85	
4	Building Construction	Building Construction	4/1/2021	11/30/2022	5	435	
5	Architectural Coating	Architectural Coating	5/2/2021	11/29/2022	5	412	
6	Paving	Paving	11/30/2022	12/30/2022	5	23	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 329,901; Residential Outdoor: 109,967; Non-Residential Indoor: 23,589; Non-Residential Outdoor: 7,863; Striped Parking Area: 1,047 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	3	6.00	158	0.38
Demolition	Graders	1	6.00	187	0.41
Demolition	Other Construction Equipment	1	6.00	172	0.42
Demolition	Rubber Tired Dozers	2	6.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	6.00	97	0.37
Site Preparation		0		0	
Site Preparation	Graders	1	6.00	187	0.41
Site Preparation	Rubber Tired Dozers	2	6.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	3	6.00	97	0.37
Grading	Excavators	3	6.00	158	0.38
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	2	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	6.00	97	0.37
Building Construction	Aerial Lifts	1	10.00	63	0.31
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Generator Sets	1	10.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	6.00	97	0.37
Building Construction	Welders	4	4.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	0	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Architectural Coating	Air Compressors	1	8.00	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	10	25.00	0.00	139.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	1,613.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	12	111.00	20.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	22.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

#### **3.1 Mitigation Measures Construction**

3.2 Demolition - 2021

	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					ton	s/yr							MT	/yr		
Fugitive Dust					0.0163	0.0000	0.0163	2.4600e- 003	0.0000	2.4600e- 003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0996	1.0489	0.7204	1.2900e- 003		0.0503	0.0503		0.0463	0.0463	0.0000	113.5521	113.5521	0.0367	0.0000	114.4702
Total	0.0996	1.0489	0.7204	1.2900e- 003	0.0163	0.0503	0.0666	2.4600e- 003	0.0463	0.0488	0.0000	113.5521	113.5521	0.0367	0.0000	114.4702

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# 3.2 Demolition - 2021

#### Unmitigated Construction Off-Site

	ROG	NOx	СО	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					ton	s/yr							МТ	/yr		
Hauling	5.3000e- 004	0.0224	7.3400e- 003	6.0000e- 005	1.1700e- 003	6.0000e- 005	1.2300e- 003	3.2000e- 004	6.0000e- 005	3.8000e- 004	0.0000	6.0985	6.0985	1.1200e- 003	0.0000	6.1264
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	2.2400e- 003	1.4300e- 003	0.0164	6.0000e- 005	6.2200e- 003	5.0000e- 005	6.2700e- 003	1.6600e- 003	4.0000e- 005	1.7000e- 003	0.0000	5.7029	5.7029	1.2000e- 004	0.0000	5.7058
Total	2.7700e- 003	0.0239	0.0237	1.2000e- 004	7.3900e- 003	1.1000e- 004	7.5000e- 003	1.9800e- 003	1.0000e- 004	2.0800e- 003	0.0000	11.8013	11.8013	1.2400e- 003	0.0000	11.8322

	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					ton	s/yr							MT	/yr		
Fugitive Dust					0.0163	0.0000	0.0163	2.4600e- 003	0.0000	2.4600e- 003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0996	1.0489	0.7204	1.2900e- 003		0.0503	0.0503		0.0463	0.0463	0.0000	113.5519	113.5519	0.0367	0.0000	114.4701
Total	0.0996	1.0489	0.7204	1.2900e- 003	0.0163	0.0503	0.0666	2.4600e- 003	0.0463	0.0488	0.0000	113.5519	113.5519	0.0367	0.0000	114.4701

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#### 3.2 Demolition - 2021

#### Mitigated Construction Off-Site

	ROG	NOx	СО	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					ton	s/yr							МТ	/yr		
Hauling	5.3000e- 004	0.0224	7.3400e- 003	6.0000e- 005	1.1700e- 003	6.0000e- 005	1.2300e- 003	3.2000e- 004	6.0000e- 005	3.8000e- 004	0.0000	6.0985	6.0985	1.1200e- 003	0.0000	6.1264
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	2.2400e- 003	1.4300e- 003	0.0164	6.0000e- 005	6.2200e- 003	5.0000e- 005	6.2700e- 003	1.6600e- 003	4.0000e- 005	1.7000e- 003	0.0000	5.7029	5.7029	1.2000e- 004	0.0000	5.7058
Total	2.7700e- 003	0.0239	0.0237	1.2000e- 004	7.3900e- 003	1.1000e- 004	7.5000e- 003	1.9800e- 003	1.0000e- 004	2.0800e- 003	0.0000	11.8013	11.8013	1.2400e- 003	0.0000	11.8322

3.3 Site Preparation - 2021

	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					ton	s/yr							MT	∵/yr		
Fugitive Dust					0.2851	0.0000	0.2851	0.1565	0.0000	0.1565	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0734	0.7927	0.3927	7.8000e- 004		0.0375	0.0375		0.0345	0.0345	0.0000	68.5636	68.5636	0.0222	0.0000	69.1180
Total	0.0734	0.7927	0.3927	7.8000e- 004	0.2851	0.0375	0.3226	0.1565	0.0345	0.1910	0.0000	68.5636	68.5636	0.0222	0.0000	69.1180

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#### 3.3 Site Preparation - 2021

#### Unmitigated Construction Off-Site

	ROG	NOx	СО	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					ton	s/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	1.3400e- 003	8.6000e- 004	9.8200e- 003	4.0000e- 005	3.7300e- 003	3.0000e- 005	3.7600e- 003	9.9000e- 004	3.0000e- 005	1.0200e- 003	0.0000	3.4217	3.4217	7.0000e- 005	0.0000	3.4235
Total	1.3400e- 003	8.6000e- 004	9.8200e- 003	4.0000e- 005	3.7300e- 003	3.0000e- 005	3.7600e- 003	9.9000e- 004	3.0000e- 005	1.0200e- 003	0.0000	3.4217	3.4217	7.0000e- 005	0.0000	3.4235

	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					ton	s/yr							МТ	/yr		
Fugitive Dust					0.2851	0.0000	0.2851	0.1565	0.0000	0.1565	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0734	0.7927	0.3927	7.8000e- 004		0.0375	0.0375		0.0345	0.0345	0.0000	68.5636	68.5636	0.0222	0.0000	69.1179
Total	0.0734	0.7927	0.3927	7.8000e- 004	0.2851	0.0375	0.3226	0.1565	0.0345	0.1910	0.0000	68.5636	68.5636	0.0222	0.0000	69.1179

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#### 3.3 Site Preparation - 2021

# Mitigated Construction Off-Site

	ROG	NOx	СО	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					ton	s/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	1.3400e- 003	8.6000e- 004	9.8200e- 003	4.0000e- 005	3.7300e- 003	3.0000e- 005	3.7600e- 003	9.9000e- 004	3.0000e- 005	1.0200e- 003	0.0000	3.4217	3.4217	7.0000e- 005	0.0000	3.4235
Total	1.3400e- 003	8.6000e- 004	9.8200e- 003	4.0000e- 005	3.7300e- 003	3.0000e- 005	3.7600e- 003	9.9000e- 004	3.0000e- 005	1.0200e- 003	0.0000	3.4217	3.4217	7.0000e- 005	0.0000	3.4235

3.4 Grading - 2021

	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					ton	s/yr							MT	/yr		
Fugitive Dust					0.3866	0.0000	0.3866	0.2114	0.0000	0.2114	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1210	1.2755	0.8427	1.5500e- 003		0.0606	0.0606		0.0558	0.0558	0.0000	135.8979	135.8979	0.0440	0.0000	136.9967
Total	0.1210	1.2755	0.8427	1.5500e- 003	0.3866	0.0606	0.4472	0.2114	0.0558	0.2672	0.0000	135.8979	135.8979	0.0440	0.0000	136.9967

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# 3.4 Grading - 2021

# Unmitigated Construction Off-Site

	ROG	NOx	со	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					ton	s/yr							MT	/yr		
Hauling	6.1100e- 003	0.2604	0.0852	6.6000e- 004	0.0135	7.5000e- 004	0.0143	3.7100e- 003	7.1000e- 004	4.4300e- 003	0.0000	70.7684	70.7684	0.0130	0.0000	71.0930
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	2.7800e- 003	1.7800e- 003	0.0203	8.0000e- 005	7.7200e- 003	6.0000e- 005	7.7800e- 003	2.0500e- 003	5.0000e- 005	2.1100e- 003	0.0000	7.0788	7.0788	1.5000e- 004	0.0000	7.0824
Total	8.8900e- 003	0.2622	0.1055	7.4000e- 004	0.0213	8.1000e- 004	0.0221	5.7600e- 003	7.6000e- 004	6.5400e- 003	0.0000	77.8472	77.8472	0.0131	0.0000	78.1754

	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					ton	s/yr							МТ	/yr		
Fugitive Dust					0.3866	0.0000	0.3866	0.2114	0.0000	0.2114	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1210	1.2755	0.8427	1.5500e- 003		0.0606	0.0606		0.0558	0.0558	0.0000	135.8978	135.8978	0.0440	0.0000	136.9966
Total	0.1210	1.2755	0.8427	1.5500e- 003	0.3866	0.0606	0.4472	0.2114	0.0558	0.2672	0.0000	135.8978	135.8978	0.0440	0.0000	136.9966

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# 3.4 Grading - 2021

#### 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					ton	s/yr							МТ	/yr		
Hauling	6.1100e- 003	0.2604	0.0852	6.6000e- 004	0.0135	7.5000e- 004	0.0143	3.7100e- 003	7.1000e- 004	4.4300e- 003	0.0000	70.7684	70.7684	0.0130	0.0000	71.0930
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	2.7800e- 003	1.7800e- 003	0.0203	8.0000e- 005	7.7200e- 003	6.0000e- 005	7.7800e- 003	2.0500e- 003	5.0000e- 005	2.1100e- 003	0.0000	7.0788	7.0788	1.5000e- 004	0.0000	7.0824
Total	8.8900e- 003	0.2622	0.1055	7.4000e- 004	0.0213	8.1000e- 004	0.0221	5.7600e- 003	7.6000e- 004	6.5400e- 003	0.0000	77.8472	77.8472	0.0131	0.0000	78.1754

3.5 Building Construction - 2021

	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	s/yr							МТ	/yr		
Off-Road	0.1994	1.7137	1.7470	2.8600e- 003		0.0884	0.0884		0.0841	0.0841	0.0000	242.6195	242.6195	0.0524	0.0000	243.9282
Total	0.1994	1.7137	1.7470	2.8600e- 003		0.0884	0.0884		0.0841	0.0841	0.0000	242.6195	242.6195	0.0524	0.0000	243.9282

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#### 3.5 Building Construction - 2021

# 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					ton	s/yr							МТ	/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	6.0100e- 003	0.2258	0.0689	5.2000e- 004	0.0129	5.1000e- 004	0.0134	3.7200e- 003	4.8000e- 004	4.2100e- 003	0.0000	53.8380	53.8380	7.1400e- 003	0.0000	54.0166
Worker	0.0311	0.0199	0.2273	8.7000e- 004	0.0864	6.5000e- 004	0.0871	0.0230	6.0000e- 004	0.0236	0.0000	79.1775	79.1775	1.6200e- 003	0.0000	79.2181
Total	0.0371	0.2457	0.2962	1.3900e- 003	0.0993	1.1600e- 003	0.1004	0.0267	1.0800e- 003	0.0278	0.0000	133.0155	133.0155	8.7600e- 003	0.0000	133.2347

	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					ton	s/yr							МТ	/yr		
Off-Road	0.1994	1.7137	1.7470	2.8600e- 003		0.0884	0.0884		0.0841	0.0841	0.0000	242.6192	242.6192	0.0524	0.0000	243.9279
Total	0.1994	1.7137	1.7470	2.8600e- 003		0.0884	0.0884		0.0841	0.0841	0.0000	242.6192	242.6192	0.0524	0.0000	243.9279

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#### 3.5 Building Construction - 2021

#### 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					ton	s/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	6.0100e- 003	0.2258	0.0689	5.2000e- 004	0.0129	5.1000e- 004	0.0134	3.7200e- 003	4.8000e- 004	4.2100e- 003	0.0000	53.8380	53.8380	7.1400e- 003	0.0000	54.0166
Worker	0.0311	0.0199	0.2273	8.7000e- 004	0.0864	6.5000e- 004	0.0871	0.0230	6.0000e- 004	0.0236	0.0000	79.1775	79.1775	1.6200e- 003	0.0000	79.2181
Total	0.0371	0.2457	0.2962	1.3900e- 003	0.0993	1.1600e- 003	0.1004	0.0267	1.0800e- 003	0.0278	0.0000	133.0155	133.0155	8.7600e- 003	0.0000	133.2347

3.5 Building Construction - 2022

	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					ton	s/yr							МТ	'/yr		
	0.2180	1.8775	2.0872	3.4600e- 003		0.0907	0.0907		0.0864	0.0864	0.0000	293.2036	293.2036	0.0625	0.0000	294.7662
Total	0.2180	1.8775	2.0872	3.4600e- 003		0.0907	0.0907		0.0864	0.0864	0.0000	293.2036	293.2036	0.0625	0.0000	294.7662

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#### 3.5 Building Construction - 2022

# 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					ton	s/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	6.8000e- 003	0.2583	0.0817	6.2000e- 004	0.0156	5.4000e- 004	0.0161	4.5000e- 003	5.2000e- 004	5.0100e- 003	0.0000	64.1840	64.1840	8.5100e- 003	0.0000	64.3968
Worker	0.0355	0.0217	0.2559	1.0200e- 003	0.1044	7.8000e- 004	0.1052	0.0278	7.2000e- 004	0.0285	0.0000	92.1044	92.1044	1.7700e- 003	0.0000	92.1488
Total	0.0423	0.2800	0.3377	1.6400e- 003	0.1199	1.3200e- 003	0.1213	0.0323	1.2400e- 003	0.0335	0.0000	156.2884	156.2884	0.0103	0.0000	156.5456

	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					ton	s/yr							МТ	/yr		
Off-Road	0.2180	1.8775	2.0872	3.4600e- 003		0.0907	0.0907	1 1 1	0.0864	0.0864	0.0000	293.2032	293.2032	0.0625	0.0000	294.7658
Total	0.2180	1.8775	2.0872	3.4600e- 003		0.0907	0.0907		0.0864	0.0864	0.0000	293.2032	293.2032	0.0625	0.0000	294.7658

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#### 3.5 Building Construction - 2022

#### 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					ton	s/yr							МТ	/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	6.8000e- 003	0.2583	0.0817	6.2000e- 004	0.0156	5.4000e- 004	0.0161	4.5000e- 003	5.2000e- 004	5.0100e- 003	0.0000	64.1840	64.1840	8.5100e- 003	0.0000	64.3968
Worker	0.0355	0.0217	0.2559	1.0200e- 003	0.1044	7.8000e- 004	0.1052	0.0278	7.2000e- 004	0.0285	0.0000	92.1044	92.1044	1.7700e- 003	0.0000	92.1488
Total	0.0423	0.2800	0.3377	1.6400e- 003	0.1199	1.3200e- 003	0.1213	0.0323	1.2400e- 003	0.0335	0.0000	156.2884	156.2884	0.0103	0.0000	156.5456

3.6 Architectural Coating - 2021

	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					ton	s/yr							MT	/yr		
Archit. Coating	0.5235					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0255	0.1781	0.2121	3.5000e- 004		0.0110	0.0110		0.0110	0.0110	0.0000	29.7880	29.7880	2.0400e- 003	0.0000	29.8391
Total	0.5490	0.1781	0.2121	3.5000e- 004		0.0110	0.0110		0.0110	0.0110	0.0000	29.7880	29.7880	2.0400e- 003	0.0000	29.8391

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#### 3.6 Architectural Coating - 2021

#### Unmitigated Construction Off-Site

	ROG	NOx	СО	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					ton	s/yr							МТ	/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	5.4800e- 003	3.5000e- 003	0.0400	1.5000e- 004	0.0152	1.1000e- 004	0.0153	4.0500e- 003	1.1000e- 004	4.1500e- 003	0.0000	13.9403	13.9403	2.9000e- 004	0.0000	13.9475
Total	5.4800e- 003	3.5000e- 003	0.0400	1.5000e- 004	0.0152	1.1000e- 004	0.0153	4.0500e- 003	1.1000e- 004	4.1500e- 003	0.0000	13.9403	13.9403	2.9000e- 004	0.0000	13.9475

	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					ton	s/yr							МТ	/yr		
Archit. Coating	0.5235					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0255	0.1781	0.2121	3.5000e- 004		0.0110	0.0110		0.0110	0.0110	0.0000	29.7879	29.7879	2.0400e- 003	0.0000	29.8390
Total	0.5490	0.1781	0.2121	3.5000e- 004		0.0110	0.0110		0.0110	0.0110	0.0000	29.7879	29.7879	2.0400e- 003	0.0000	29.8390

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#### 3.6 Architectural Coating - 2021

#### Mitigated Construction Off-Site

	ROG	NOx	СО	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					ton	s/yr							МТ	'/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	5.4800e- 003	3.5000e- 003	0.0400	1.5000e- 004	0.0152	1.1000e- 004	0.0153	4.0500e- 003	1.1000e- 004	4.1500e- 003	0.0000	13.9403	13.9403	2.9000e- 004	0.0000	13.9475
Total	5.4800e- 003	3.5000e- 003	0.0400	1.5000e- 004	0.0152	1.1000e- 004	0.0153	4.0500e- 003	1.1000e- 004	4.1500e- 003	0.0000	13.9403	13.9403	2.9000e- 004	0.0000	13.9475

3.6 Architectural Coating - 2022

	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					ton	s/yr							MT	/yr		
Archit. Coating	0.7090					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0323	0.2225	0.2866	4.7000e- 004		0.0129	0.0129		0.0129	0.0129	0.0000	40.3414	40.3414	2.6300e- 003	0.0000	40.4071
Total	0.7413	0.2225	0.2866	4.7000e- 004		0.0129	0.0129		0.0129	0.0129	0.0000	40.3414	40.3414	2.6300e- 003	0.0000	40.4071

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#### 3.6 Architectural Coating - 2022

#### Unmitigated Construction Off-Site

	ROG	NOx	СО	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					ton	s/yr							МТ	/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	7.0000e- 003	4.2800e- 003	0.0505	2.0000e- 004	0.0206	1.5000e- 004	0.0208	5.4800e- 003	1.4000e- 004	5.6200e- 003	0.0000	18.1782	18.1782	3.5000e- 004	0.0000	18.1870
Total	7.0000e- 003	4.2800e- 003	0.0505	2.0000e- 004	0.0206	1.5000e- 004	0.0208	5.4800e- 003	1.4000e- 004	5.6200e- 003	0.0000	18.1782	18.1782	3.5000e- 004	0.0000	18.1870

	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					ton	s/yr							МТ	/yr		
Archit. Coating	0.7090					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0323	0.2225	0.2866	4.7000e- 004		0.0129	0.0129		0.0129	0.0129	0.0000	40.3414	40.3414	2.6300e- 003	0.0000	40.4070
Total	0.7413	0.2225	0.2866	4.7000e- 004		0.0129	0.0129		0.0129	0.0129	0.0000	40.3414	40.3414	2.6300e- 003	0.0000	40.4070

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#### 3.6 Architectural Coating - 2022

#### Mitigated Construction Off-Site

	ROG	NOx	со	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					ton	s/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	7.0000e- 003	4.2800e- 003	0.0505	2.0000e- 004	0.0206	1.5000e- 004	0.0208	5.4800e- 003	1.4000e- 004	5.6200e- 003	0.0000	18.1782	18.1782	3.5000e- 004	0.0000	18.1870
Total	7.0000e- 003	4.2800e- 003	0.0505	2.0000e- 004	0.0206	1.5000e- 004	0.0208	5.4800e- 003	1.4000e- 004	5.6200e- 003	0.0000	18.1782	18.1782	3.5000e- 004	0.0000	18.1870

3.7 Paving - 2022

	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					ton	s/yr							МТ	/yr		
Off-Road	1.7800e- 003	0.0181	0.0249	4.0000e- 005		8.6000e- 004	8.6000e- 004		7.9000e- 004	7.9000e- 004	0.0000	3.5622	3.5622	1.1500e- 003	0.0000	3.5910
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.7800e- 003	0.0181	0.0249	4.0000e- 005		8.6000e- 004	8.6000e- 004		7.9000e- 004	7.9000e- 004	0.0000	3.5622	3.5622	1.1500e- 003	0.0000	3.5910

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#### 3.7 Paving - 2022

#### Unmitigated Construction Off-Site

	ROG	NOx	СО	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					ton	s/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	9.0000e- 005	6.0000e- 005	6.7000e- 004	0.0000	2.7000e- 004	0.0000	2.7000e- 004	7.0000e- 005	0.0000	7.0000e- 005	0.0000	0.2406	0.2406	0.0000	0.0000	0.2407
Total	9.0000e- 005	6.0000e- 005	6.7000e- 004	0.0000	2.7000e- 004	0.0000	2.7000e- 004	7.0000e- 005	0.0000	7.0000e- 005	0.0000	0.2406	0.2406	0.0000	0.0000	0.2407

	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					ton	s/yr							MT	/yr		
Off-Road	1.7800e- 003	0.0181	0.0249	4.0000e- 005		8.6000e- 004	8.6000e- 004		7.9000e- 004	7.9000e- 004	0.0000	3.5622	3.5622	1.1500e- 003	0.0000	3.5910
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.7800e- 003	0.0181	0.0249	4.0000e- 005		8.6000e- 004	8.6000e- 004		7.9000e- 004	7.9000e- 004	0.0000	3.5622	3.5622	1.1500e- 003	0.0000	3.5910

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# 3.7 Paving - 2022

#### Mitigated Construction Off-Site

	ROG	NOx	СО	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					ton	s/yr							МТ	/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	9.0000e- 005	6.0000e- 005	6.7000e- 004	0.0000	2.7000e- 004	0.0000	2.7000e- 004	7.0000e- 005	0.0000	7.0000e- 005	0.0000	0.2406	0.2406	0.0000	0.0000	0.2407
Total	9.0000e- 005	6.0000e- 005	6.7000e- 004	0.0000	2.7000e- 004	0.0000	2.7000e- 004	7.0000e- 005	0.0000	7.0000e- 005	0.0000	0.2406	0.2406	0.0000	0.0000	0.2407

# 4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	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					ton	s/yr							МТ	'/yr		
Mitigated	0.2555	0.9989	2.7277	9.6100e- 003	0.8090	0.0108	0.8198	0.2186	0.0101	0.2287	0.0000	883.2613	883.2613	0.0381	0.0000	884.2127
Unmitigated	0.2555	0.9989	2.7277	9.6100e- 003	0.8090	0.0108	0.8198	0.2186	0.0101	0.2287	0.0000	883.2613	883.2613	0.0381	0.0000	884.2127

# 4.2 Trip Summary Information

	Ave	rage Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	575.40	682.26	500.05	1,339,345	1,339,345
Enclosed Parking with Elevator	0.00	0.00	0.00		
Medical Office Building	361.30	89.60	15.50	534,497	534,497
Strip Mall	253.95	240.89	117.06	358,106	358,106
Total	1,190.65	1,012.75	632.61	2,231,948	2,231,948

# 4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.605720	0.039347	0.191789	0.088945	0.014469	0.004989	0.029396	0.009044	0.004299	0.004006	0.006568	0.000937	0.000492
Enclosed Parking with Elevator	0.605720	0.039347	0.191789	0.088945	0.014469	0.004989	0.029396	0.009044	0.004299	0.004006	0.006568	0.000937	0.000492
Medical Office Building	0.605720	0.039347	0.191789	0.088945	0.014469	0.004989	0.029396	0.009044	0.004299	0.004006	0.006568	0.000937	0.000492
Strip Mall	0.605720	0.039347	0.191789	0.088945	0.014469	0.004989	0.029396	0.009044	0.004299	0.004006	0.006568	0.000937	0.000492

# 5.0 Energy Detail

#### 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	29.9061	29.9061	0.0114	2.3500e- 003	30.8914			
Electricity Unmitigated	F1					0.0000	0.0000		0.0000	0.0000	0.0000	29.9061	29.9061	0.0114	2.3500e- 003	30.8914			
NaturalGas Mitigated	7.4100e- 003	0.0640	0.0317	4.0000e- 004		5.1200e- 003	5.1200e- 003		5.1200e- 003	5.1200e- 003	0.0000	73.3122	73.3122	1.4100e- 003	1.3400e- 003	73.7478			
NaturalGas Unmitigated	7.4100e- 003	0.0640	0.0317	4.0000e- 004		5.1200e- 003	5.1200e- 003	 , , ,	5.1200e- 003	5.1200e- 003	0.0000	73.3122	73.3122	1.4100e- 003	1.3400e- 003	73.7478			

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#### 5.2 Energy by Land Use - NaturalGas

#### <u>Unmitigated</u>

	NaturalGa s 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					ton	MT/yr										
Apartments High Rise	1.15418e +006	6.2200e- 003	0.0532	0.0226	3.4000e- 004		4.3000e- 003	4.3000e- 003		4.3000e- 003	4.3000e- 003	0.0000	61.5914	61.5914	1.1800e- 003	1.1300e- 003	61.9574
Enclosed Parking with Elevator	0	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
Medical Office Building	193300	1.0400e- 003	9.4800e- 003	7.9600e- 003	6.0000e- 005		7.2000e- 004	7.2000e- 004		7.2000e- 004	7.2000e- 004	0.0000	10.3152	10.3152	2.0000e- 004	1.9000e- 004	10.3765
Strip Mall	26339.6	1.4000e- 004	1.2900e- 003	1.0800e- 003	1.0000e- 005	,,,,,,,	1.0000e- 004	1.0000e- 004		1.0000e- 004	1.0000e- 004	0.0000	1.4056	1.4056	3.0000e- 005	3.0000e- 005	1.4139
Total		7.4000e- 003	0.0640	0.0317	4.1000e- 004		5.1200e- 003	5.1200e- 003		5.1200e- 003	5.1200e- 003	0.0000	73.3122	73.3122	1.4100e- 003	1.3500e- 003	73.7478

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# 5.2 Energy by Land Use - NaturalGas

#### Mitigated

	NaturalGa s 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					ton		MT/yr									
Apartments High Rise	1.15418e +006	6.2200e- 003	0.0532	0.0226	3.4000e- 004		4.3000e- 003	4.3000e- 003		4.3000e- 003	4.3000e- 003	0.0000	61.5914	61.5914	1.1800e- 003	1.1300e- 003	61.9574
Enclosed Parking with Elevator	0	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
Medical Office Building	193300	1.0400e- 003	9.4800e- 003	7.9600e- 003	6.0000e- 005		7.2000e- 004	7.2000e- 004		7.2000e- 004	7.2000e- 004	0.0000	10.3152	10.3152	2.0000e- 004	1.9000e- 004	10.3765
Strip Mall	26339.6	1.4000e- 004	1.2900e- 003	1.0800e- 003	1.0000e- 005		1.0000e- 004	1.0000e- 004		1.0000e- 004	1.0000e- 004	0.0000	1.4056	1.4056	3.0000e- 005	3.0000e- 005	1.4139
Total		7.4000e- 003	0.0640	0.0317	4.1000e- 004		5.1200e- 003	5.1200e- 003		5.1200e- 003	5.1200e- 003	0.0000	73.3122	73.3122	1.4100e- 003	1.3500e- 003	73.7478

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# 5.3 Energy by Land Use - Electricity

# <u>Unmitigated</u>

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		ΜT	7/yr	
Apartments High Rise	577244	19.9727	7.5900e- 003	1.5700e- 003	20.6307
Enclosed Parking with Elevator	102286	3.5391	1.3500e- 003	2.8000e- 004	3.6557
Medical Office Building	124800	4.3181	1.6400e- 003	3.4000e- 004	4.4603
Strip Mall	60008.5	2.0763	7.9000e- 004	1.6000e- 004	2.1447
Total		29.9061	0.0114	2.3500e- 003	30.8914

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# 5.3 Energy by Land Use - Electricity

# **Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		ΜT	7/yr	
Apartments High Rise	577244	19.9727	7.5900e- 003	1.5700e- 003	20.6307
Enclosed Parking with Elevator	102286	3.5391	1.3500e- 003	2.8000e- 004	3.6557
Medical Office Building	124800	4.3181	1.6400e- 003	3.4000e- 004	4.4603
Strip Mall	60008.5	2.0763	7.9000e- 004	1.6000e- 004	2.1447
Total		29.9061	0.0114	2.3500e- 003	30.8914

# 6.0 Area Detail

6.1 Mitigation Measures Area

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	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					ton	s/yr							МТ	/yr		
Mitigated	0.6475	0.0118	1.0186	5.0000e- 005		5.6300e- 003	5.6300e- 003		5.6300e- 003	5.6300e- 003	0.0000	1.6622	1.6622	1.6000e- 003	0.0000	1.7024
Unmitigated	0.6475	0.0118	1.0186	5.0000e- 005		5.6300e- 003	5.6300e- 003	 - - -	5.6300e- 003	5.6300e- 003	0.0000	1.6622	1.6622	1.6000e- 003	0.0000	1.7024

# 6.2 Area by SubCategory

#### <u>Unmitigated</u>

	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					ton	MT/yr										
Architectural Coating	0.1233					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4934					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.0308	0.0118	1.0186	5.0000e- 005		5.6300e- 003	5.6300e- 003		5.6300e- 003	5.6300e- 003	0.0000	1.6622	1.6622	1.6000e- 003	0.0000	1.7024
Total	0.6475	0.0118	1.0186	5.0000e- 005		5.6300e- 003	5.6300e- 003		5.6300e- 003	5.6300e- 003	0.0000	1.6622	1.6622	1.6000e- 003	0.0000	1.7024

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#### 6.2 Area by SubCategory

#### 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					ton			МТ	MT/yr							
Architectural Coating	0.1233					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4934					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.0308	0.0118	1.0186	5.0000e- 005		5.6300e- 003	5.6300e- 003	1 1 1 1 1	5.6300e- 003	5.6300e- 003	0.0000	1.6622	1.6622	1.6000e- 003	0.0000	1.7024
Total	0.6475	0.0118	1.0186	5.0000e- 005		5.6300e- 003	5.6300e- 003		5.6300e- 003	5.6300e- 003	0.0000	1.6622	1.6622	1.6000e- 003	0.0000	1.7024

# 7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category		MT	ī/yr	
initigated	6.4796	0.0140	8.3700e- 003	9.3240
Guinigatou	6.4796	0.0140	8.3700e- 003	9.3240

### 7.2 Water by Land Use

<u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		МТ	ī/yr	
Apartments High Rise	8.9261 / 5.62732	5.5107	0.0118	7.0500e- 003	7.9065
Enclosed Parking with Elevator	0/0	0.0000	0.0000	0.0000	0.0000
	1.25481 / 0.239011	0.7078	1.6300e- 003	9.9000e- 004	1.0424
Strip Mall	0.424436 / 0.260138		5.6000e- 004	3.4000e- 004	0.3750
Total		6.4796	0.0140	8.3800e- 003	9.3240

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#### 7.2 Water by Land Use

#### Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		МТ	ī/yr	
Apartments High Rise	8.9261 / 5.62732	5.5107	0.0118	7.0500e- 003	7.9065
Enclosed Parking with Elevator	0/0	0.0000	0.0000	0.0000	0.0000
Medical Office Building	1.25481 / 0.239011	0.7078	1.6300e- 003	9.9000e- 004	1.0424
Strip Mall	0.424436 / 0.260138		5.6000e- 004	3.4000e- 004	0.3750
Total		6.4796	0.0140	8.3800e- 003	9.3240

#### 8.0 Waste Detail

8.1 Mitigation Measures Waste

CalEEMod Version: CalEEMod.2016.3.2

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#### Category/Year

	Total CO2	CH4	N2O	CO2e
		МТ	7/yr	
Intigatoa	35.9375	2.1239	0.0000	89.0337
gener	35.9375	2.1239	0.0000	89.0337

### 8.2 Waste by Land Use

<u>Unmitigated</u>

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		МТ	/yr	
Apartments High Rise	63.02	12.7925	0.7560	0.0000	31.6929
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Medical Office Building	108	21.9230	1.2956	0.0000	54.3134
Strip Mall	6.02	1.2220	0.0722	0.0000	3.0275
Total		35.9375	2.1238	0.0000	89.0337

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#### 4840 Mission Street - San Francisco County, Annual

#### 8.2 Waste by Land Use

#### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		МТ	/yr	
Apartments High Rise	63.02	12.7925	0.7560	0.0000	31.6929
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Medical Office Building	108	21.9230	1.2956	0.0000	54.3134
Strip Mall	6.02	1.2220	0.0722	0.0000	3.0275
Total		35.9375	2.1238	0.0000	89.0337

#### 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

#### **10.0 Stationary Equipment**

#### Fire Pumps and Emergency Generators

Equipment Type Number Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
---------------------------------	------------	-------------	-------------	-----------

#### **Boilers**

|--|

**User Defined Equipment** 

CalEEMod Version: CalEEMod.2016.3.2

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Equipment Type Number

11.0 Vegetation

1/4

Home (/) > Programs (/programs/) > Environmental Review (/programs/environmental-review/) > DNL Calculator

# **DNL** Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/).

# Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

# **DNL Calculator**

Site ID	4840 Mission Street
Record Date	04/14/2020
User's Name	C. Sanchez

Road # 1 Name:	Mission Street

#### Road #1

/ehicle Type	Cars 🗹	Medium Trucks 🗹	Heavy Trucks 🗹
ffective Distance	40	40	40
Distance to Stop Sign			
Warada Shaad	25	25	25

14/2020	DNL Ca	alculator - HUD Exchange	
Average speed	23	23	23
Average Daily Trips (ADT)	16361	337	169
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	64	58	67
Calculate Road #1 DNL	69	Reset	

Road # 2 Name:	Alemany Boulevard

#### Road #2

Vehicle Type	Cars 🗹	Medium Trucks 🗹	Heavy Trucks 🗹
Effective Distance	295	295	295
Distance to Stop Sign			
Average Speed	25	25	25
Average Daily Trips (ADT)	20380	420	210
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	52	46	54
Calculate Road #2 DNL	57	Reset	

Railroad #1 Track Identifier:	SF Muni K line		
Rail # 1			
Train Type	Electric 🗹	Diesel	

	DNL Calculate	or - HUD Exchange		
Average Train Speed	35			
Engines per Train	1			
Railway cars per Train	2			
Average Train Operations (ATO)	205			
Night Fraction of ATO	15			
Railway whistles or horns?	Yes:	No: 🗹		Yes: No:
Bolted Tracks?	Yes:	No: 🗹		Yes: No:
Train DNL	39		0	
Calculate Rail #1 DNL	39		Reset	
Add Road Source Add Rail Source				
Airport Noise Level				
Loud Impulse Sounds?		Ŷes ●No		
Combined DNL for all Road and Rail sources		69		
Combined DNL including Airport				
		N/A		
Site DNL with Loud Impulse Sound				

Calculate Reset

Mitigation Options

https://www.hudexchange.info/environmental-review/dnl-calculator/

If your site DNL is in Excess of 65 decibels, your options are:

- No Action Alternative: Cancel the project at this location
- Other Reasonable Alternatives: Choose an alternate site
- Mitigation
  - Contact your Field or Regional Environmental Officer (/programs/environmental-review/hudenvironmental-staff-contacts/)
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
  - Incorporate natural or man-made barriers. See *The Noise Guidebook (/resource/313/hud-noise-guidebook/)*
  - Construct noise barrier. See the Barrier Performance Module (/programs/environmentalreview/bpm-calculator/)

## **Tools and Guidance**

Day/Night Noise Level Assessment Tool User Guide (/resource/3822/day-night-noise-level-assessment-tool-user-guide/)

Day/Night Noise Level Assessment Tool Flowcharts (/resource/3823/day-night-noise-level-assessment-tool-flowcharts/)

#### PROGRAMMATIC AGREEMENT BETWEEN THE CITY AND COUNTY OF SAN FRANCISCO (City) AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER (SHPO) REGARDING 4840 MISSION STREET AFFORDABLE HOUSING DEVELOPMENT, SAN FRANCISCO, CALIFORNIA

WHEREAS, the Mayor's Office of Housing and Community Development of the City and County of San Francisco (City) has determined that the development (Undertaking) of an affordable housing development at 4840 Mission Street, San Francisco, California, by BRIDGE Housing Corporation (Consulting Party) may have an effect on yet unidentified subsurface properties; and

WHEREAS, the BRIDGE Housing Corporation (Consulting Party) has been invited to be signatory to this agreement as a Consulting Party; and

WHEREAS, the Consulting Party is applying for Section Eight project-based housing vouchers which are subject to regulation by 24 CFR Part 58; and

WHEREAS, the City and County of San Francisco (City) has assumed responsibility for environmental review responsibilities for programs and activities subject to regulation under Part 58; and

WHEREAS, the Director of the Mayor's Office of Housing and Community Development has been designated the Agency Official under Section 106 of the National Historic Preservation Act (NHPA) and the Certifying Officer under Part 58; and

WHEREAS, the City has consulted with the California State Historic Preservation Officer (SHPO) pursuant to the January 2007 Programmatic Agreement (Part 58 PA) by and among the City and County of San Francisco, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Historic Properties Affected by Use of Revenue from the Department of Housing and Urban Development Part 58 Programs; and

WHEREAS, pursuant to the PA, the City and the SHPO have agreed that resolution of potential adverse effects cannot be resolved through a Standard Mitigation Measures Agreement (SMMA); and

WHEREAS, the City is a Certified Local Government pursuant to Section 101(c)(1) of the NHPA; and

WHEREAS, the City has established the Area of Potential Effects (APE) for the Undertaking for archaeological resources as defined at 36 CFR § 800.16 to be limited to the legal lot lines of the property described as 4840 Mission Street (APN 695-90-19, 695-90-25, 695-90-26), City and County of San Francisco, California; and

WHEREAS, the Northwest Information Center (NWIC) at Sonoma State University has advised the City that there is a moderate potential of identifying Native American archeological resources and a moderate to high potential of identifying historic-period archeological resources in the APE and has recommended a qualified archeologist conduct further archival and field study to identify cultural resources, especially a good-faith effort to identify those buried deposits that may show no signs on the surface (NWIC File No. 16-1019); and

WHEREAS, the NWIC has further advised the City that if archeological resources are encountered during construction, that work should be temporarily halted in the vicinity of discovered materials and workers should avoid altering the materials and their context until a qualified professional archeologist has evaluated the situation and provided appropriate recommendations; and

WHEREAS, the San Francisco Planning Department employs staff who are appropriately qualified to coordinate the reviews of resources and historic properties as applicable to the resources and historic properties being addressed and who meet the Secretary of the Interior's Professional Qualifications Standards and have the knowledge to assess the resources within an Undertaking's APE; and

WHEREAS, the Staff Archeologist has reviewed archival research, and site sensitivity in regards to prehistoric and historical archeological resources; and

WHEREAS, pursuant to the Advisory Council on Historic Preservation's (ACHP) Section 106 regulations and the PA for Part 58, the City has conducted outreach and has actively sought and requested the comments and participation of members of the Ohlone/Costanoan Indian tribe; and

WHEREAS, in accordance with 36 CFR § 800(6)(a)(1), the City has informed the ACHP of its potential adverse effect determination with specified documentation, and the ACHP has chosen not to participate in the consultation pursuant to 36 CFR § 800.6(a)(1)(iii); and

WHEREAS, the City and the SHPO have agreed to the procedures and methodology that the City will use to avoid any adverse effects from the proposed project on buried or submerged historic properties; and

WHEREAS, the City has established the Area of Potential Effects for the Undertaking with regard to architectural resources as defined at 36 CFR § 800.16 to be limited to the legal lot lines of the properties described as 4840 Mission Street (APN 695-90-19, 695-90-25, 695-90-26), 1991 Alemany (APN 6959-024), and 4834 Mission (APN 6959-029); and

WHEREAS, the City, with public participation, has identified and evaluated historic properties located within the APE; and

WHEREAS, the City has determined that the Valente, Marini, Perata & Co. Funeral Home (4840 Mission Street) is eligible for inclusion in the National Register of Historic Places (Historic Property) based on the evaluation in the Department of Parks and Recreation 523 Forms dated February 2020 for 4840 Mission Street; and

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WHEREAS, the City has determined that the demolition of the Valente, Marini, Perata & Co. Funeral Home (4840 Mission Street) will have an adverse effect upon the Historic Property; and

WHEREAS, on May 2, 2018, the Architectural Review Committee of the City's Historic Preservation Commission (HPC) held a public hearing regarding the Undertaking and preservation alternatives considered.

WHEREAS, on May 6, 2020, the Mayor's Office of Housing sent a letter seeking public comment regarding the Undertaking to businesses, residents and occupants of buildings within 300 feet of 4840 Mission Street (APN 695-90-19, 695-90-25, 695-90-26), and considered comments received on the Undertaking.

NOW, THEREFORE, the City and the SHPO agree that the Undertaking shall be implemented according to the following stipulations in order to take into account the effects the Undertaking may have on historic properties.

Execution of this PA by the City and the SHPO, and implementation of its terms, evidence that the City has taken into account the effects of the Undertaking on historic properties and afforded the ACHP an opportunity to comment. Based on the reasonable assumption that the Undertaking may cause alterations in the character or use of historic properties and in accordance with the requirements of Stipulation XI of the PA (Consideration and Treatment of Archeological Resources) and IX Resolution of Adverse Effects, the following measures shall be undertaken to avoid any adverse effects from the proposed project on buried or submerged historic properties as well as the demolition of the Valente, Marini, Perata & Co. Funeral Home (4840 Mission Street):

#### STIPULATIONS

The City will ensure that the following measures are carried out.

- I. Qualified Archeological Consultant Responsibilities
- A. The City shall ensure that all work carried out pursuant to this Agreement shall be done by or under the direct supervision of historic preservation professionals who meet the Secretary of the Interior's Professional Qualifications Standards for Prehistoric and Historic Archeology.
- B. The Project Developers will retain the services of an Archeological Consultant from the rotational Department Qualified Archeological Consultants List (QACL) maintained by the San Francisco Planning Department;
- C. All work carried out pursuant to this Agreement shall meet the Secretary of the Interior's Standards for Archeology and Historic Preservation (SOI's Standards);
- D. The Archeological Consultant shall undertake such archival research and conduct field studies as deemed necessary by the Staff Archeologist.
- E. The Archeological Consultant shall develop an Archeological Testing Plan.
- F. The Archeological Consultant shall undertake the archeological testing program as specified herein. In addition, the Archeological Consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure.
- G. The Archeological Consultant's work shall be conducted in accordance with this measure at the direction of the Staff Archeologist.
- H. All plans and reports prepared by the Archeological Consultant as specified herein shall be submitted first and directly to the Staff Archeologist for review and comment, and shall be considered draft reports subject to revision until final approval by the Staff Archeologist.
- II. Consultation with Descendant Communities

On discovery of an archeological site associated with descendant Native Americans, Overseas Chinese, or other descendant group, an appropriate representative of the descendant group and the Staff Archeologist shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to consult with the Staff Archeologist 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 Archeological Resources Report shall be provided to the representative of the descendant group;

#### III. Archeological Testing Program

A. The archeological testing program shall be conducted in accordance with the Archeological Testing Plan (ATP) as approved by the Staff Archeologist. The ATP will identify the types of expected archeological resource(s) that potentially could be adversely affected by the proposed project, the testing methods to be used, and the locations recommended for testing.

B. 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 historic property using the criteria of the National Register of Historic Places (NRHP).

C. At the completion of the archeological testing program, the Archeological Consultant shall submit a written report of the findings to the Staff Archeologist. If based on the archeological testing program the Archeological Consultant finds that significant archeological resources may be present, the Staff Archeologist 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 archeologist. If the Staff Archeologist 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 Developers either:

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

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

D. Archeological Data Recovery Program

1. If archeological resources are identified and determined by the Staff Archeologist to be significant under NRHP Criterion D, an archeological data recovery program shall be conducted in accordance with an archeological data recovery plan (ADRP). The Archeological Consultant, Project Developers, and Staff Archeologist 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 Staff Archeologist. 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.

2. Data recovery, in general, should be limited to archeological properties determined to be significant, following application of all NRHP criteria, as defined above, and portions of the historic 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;

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- 3. The scope of the ADRP shall include the following elements:
  - a) Field Methods and Procedures. Descriptions of proposed field strategies, procedures, and operations.
  - b) Cataloguing and Laboratory Analysis. Description of selected cataloguing system and artifact analysis procedures.
  - c) Discard and Deaccession Policy. Description of and rationale for field and post-field discard and deaccession policies.
  - d) Interpretive Program. Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
  - e) Security Measures. Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
  - f) Final Report. Description of proposed report format and distribution of results.
  - g) 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.

#### IV. Evaluation of Archeological Resources

The City shall use the NRHP criteria for evaluating the significance of the archeological resources and their eligibility for listing on the NRHP. The criteria for evaluation are the quality of significance in American history, architecture, archeology, engineering, and culture, and may be present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

- (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) that are associated with the lives of persons significant in our past; or
- (c) that embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) that have yielded, or may be likely to yield, information important in prehistory or history.

If an archeological resource is encountered that the City determines is eligible for inclusion in the NRHP, the City shall act in accordance with the applicable provisions of the Part 58 PA. The property and eligibility determination will be submitted to the SHPO for review pursuant to the terms of Stipulation V.

If resources are found that the Staff Archeologist determines to meet significance Criterion D, and if preservation in place is not feasible, an Archeological Data Recovery Program shall be implemented in accordance with Stipulation XI of the Part 58 PA. If resources are found to meet Criteria A and/or B and/or C, then representatives of the appropriate descendant community or the appropriate community member shall be notified immediately upon the determination. Upon

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such notification and in consultation with appropriate descendant community representatives, the Staff Archeologist will identify appropriate treatment and will be implemented by the Archeological Consultant and Project Developers. If after fifteen days of notification to the descendant community does not respond to the request for consultation then the appropriate treatment, as approved by the Staff Archeologist, will be implemented by the Archeological Consultant and Project Developers.

V. Archeological Monitoring Program (AMP)

A. If the Staff Archeologist (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:

1. The Archeological Consultant, Project Developers, and Staff Archeologist shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing.

2. The Staff Archeologist (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 archeological resources and to their depositional context.

3. 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.

4. Archeological monitor(s) (Monitors) under the supervision of the Archeological Consultant and as approved by the Staff Archeologist shall be present on the project site according to a schedule agreed upon by the Archeological Consultant and the Staff Archeologist until the Staff Archeologist has (in consultation with the Archeological Consultant) determined that project construction activities could have no effects on significant archeological deposits.

5. The Monitors shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis.

6. If an intact archeological resource is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The 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 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 Staff Archeologist. The Archeological Consultant shall immediately notify the Staff Archeologist 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 Staff Archeologist.

7. 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 Staff Archeologist.

#### VI. Human Remains and Associated or Unassociated Funerary Objects

If human remains are discovered at any time during the implementation of the Undertaking, the agency shall follow the provisions of the Native American Graves Protection and Repatriation Act (25 USC § 3001) and the California Health and Human Safety Code (Human Remains) Section 7050.5 as well as local laws as appropriate. This shall include immediate notification of the Office of the Medical Examiner of the City and County of San Francisco and in the event of the Medical Examiner'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) (PRC Section 5097.98). The Staff Archeologist, Archeological Consultant, Project Developers, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects. 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.

#### VII. Final Archeological Resources Report

A. The Archeological Consultant shall submit a Draft Final Archeological Resources Report (FARR) to the Staff Archeologist that evaluates the historic 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.

B. Once approved by the Staff Archeologist, copies of the FARR shall be distributed as follows: the California Historical Resources Information System, NWIC shall receive one (1) copy and the Staff Archeologist 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 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 NRHP or the California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the Staff Archeologist may require a different final report content, format, and distribution than that presented above.

VIII. Addressing Adverse Effects of the Undertaking on the Valente, Marini, Perata & Co. Funeral Home (4840 Mission Street).

 A. Prior to the issuance of demolition or site permits, the Project Sponsor shall prepare, or cause to be prepared, Historic American Building Survey-like (HABSlike) documentation of the Historic Property proposed for demolition located at 4840 Mission Street, San Francisco, California. This documentation shall be undertaken by a professional who meets the Secretary of the Interior's Professional Qualification Standards for Architectural History, History, or Architecture. The specific scope of the documentation shall be reviewed and approved by the Planning Department but shall include the following elements at a minimum: :

- 1. **HABS Historical Report** A written historical narrative and report shall be provided in accordance with the HABS Historical Report Guidelines. The written history shall follow an outline format that begins with a statement of significance supported by the development of the architectural and historical context in which the structure was built and subsequently evolved. The report shall also include an architectural description and bibliographic information. Information from any previous reports may be included to fulfill the requirements for descriptive and historical requirements.
- 2. Historic American Buildings Survey-Level Photographs Either Historic American Buildings standard format or digital photography shall be used. The scope of the photography shall be reviewed by Planning Department Preservation staff for concurrence, and all digital photography shall be conducted according to the latest National Park Service (NPS) standards. The photography shall be undertaken by a qualified professional with demonstrated experience in HABS photography. Photograph views for the data set shall include contextual views; views of each side of the building; and interior views, including any original interior features, where possible; oblique views of the building; and detail views of character-defining features. All views shall be referenced on a photographic key. This photographic key shall be on a map of the property and shall show the photograph number with an arrow to indicate the direction of the view. Historic photographs shall also be collected, reproduced, and included in the data set.
- 3. **Measured Drawings** A set of measured drawings shall be prepared that depict the existing size, scale, and dimension of the historic resource. Planning Department Preservation staff will accept original architectural drawings or an as-built set of architectural drawings (e.g., plans, sections, elevations). Planning Department Preservation staff will assist the consultant in determining the appropriate level of measured drawings.
- 4. Video Recordation Video recordation shall be undertaken before demolition or site permits are issued. The project sponsor shall undertake video documentation of the affected historical resource and its setting. The documentation shall be conducted by a professional videographer with experience recording architectural resources. The documentation shall be narrated by a qualified professional who meets the standards for history, architectural history, or architecture set forth by the Secretary of the Interior's Professional Qualification Standards (36 Code of the Federal Regulations Part 61). The documentation shall include as much

information as possible—using visuals in combination with narration about the materials, construction methods, current condition, historic use, and historic context of the historical resource. This mitigation measure would supplement the HABS-like documentation and would enhance the collection of reference materials that would be available to the public and inform future research.

- 5. **Softcover Book** A Print-on-Demand softcover book shall be produced that includes the content from the historical report, historical photographs, HABS photography, measured drawings, and field notes. The Print-on-Demand book shall be made available to the public for distribution.
- B. The project sponsor shall contact the History Room of the San Francisco Public Library, San Francisco Architectural Heritage, the San Francisco Planning Department, and the Northwest Information Center to inquire as to whether the research repositories would like to receive a hard or digital copy of said documentation. Labeled hard copies and/or digital copies of the final book, containing the photograph sets, narrative report, and measured drawings, shall be provided to these repositories in their preferred format. The project sponsor shall prepare documentation for review and approval by the San Francisco Planning Department's preservation staff, along with the final HABS-like dataset, that outlines the outreach, response, and actions taken with regard to the repositories listed above. The documentation shall also include any research conducted to identify additional interested groups and the results of that research. The project sponsor shall make digital copies of the final dataset available to additional interested organizations, if requested.
- C. The Project Sponsor will prepare and implement an interpretive program within the new building that highlights information related to the history of the site. previous buildings on the site, and the surrounding historical context of the neighborhood. The interpretive program shall include, but not be limited to, the installation of at least one permanent on-site interpretive display or screen in a publicly accessible location. Historical photographs and some of the HABS-level photographs required above may be used to illustrate the site's history. The interpretive display(s) will be located in a publicly accessible location in the new building. The interpretive program should be developed and implemented by a qualified professional with demonstrated experience in displaying information and graphics to the public in a visually interesting manner. This program shall be initially outlined in a proposal for an interpretive plan subject to review and approval by Planning Department Preservation staff. The proposal shall include the proposed format and location of the interpretive content, as well as highquality graphics and written narratives. The proposal prepared by the qualified consultant describing the general parameters of the interpretive program shall be approved by Planning Department Preservation staff prior to issuance of the architectural addendum to the site permit. The detailed content, media, and other characteristics of such interpretive program shall be approved by Planning

Department Preservation staff prior to issuance of a Temporary Certificate of Occupancy.

#### IX. Objections

A. Should any signatory object at any time to the manner in which the terms of this agreement are implemented, the City shall consult with the objecting party(ies) to resolve the objection and inform the other signatories of the objection. If the City determines within fifteen (15) calendar days of receipt that such objection's cannot be resolved, the City will forward all documentation relevant to the dispute to the ACHP in accordance with 36 CFR § 800.2(b)(2). The City in reaching a final decision regarding the dispute shall take any ACHP comment provided into account. The City's responsibility to carry out all other actions under this PA that are not the subjects of the disputed will remain unchanged.

B. At any time during implementation of the measures situated in this agreement, should an objection to any such measure or its manner of implementation be raised in writing by a member of the public, the City shall take the objection into account and consult, as needed, with the objecting party and the SHPO, as needed, for a period of time not to exceed fifteen (15) calendar days and inform the other signatories of the objection. If the City is unable to resolve the conflict, the City shall forward all documentation relevant to the dispute to the ACHP in accordance with 36 CFR 800.2(b)(2).

C. If any signatory believes that the terms of this agreement cannot be carried out, or than an amendment to its terms should be made, that signatory shall immediately consult with the other parties to develop amendments pursuant to 36 CFR § 800.6(c)(7) and 800.6(c)(8). If this agreement is not amended as provided for in this stipulation, any signatory may terminate it, whereupon the City shall proceed in accordance with 36 CFR 800.6(c).

X. Duration of the agreement.

This PA is in effect for five (5) years from the date of execution. At any time, the signatories can agree to amend the PA in accordance with the amendment process referenced in Stipulation XII, below.

XI. Post-Review Discoveries.

After all archeological work has concluded there is the possibility that unanticipated discovery of archeological deposits and/or features could occur during additional construction efforts. It is possible that such actions could unearth, expose, or disturb subsurface archeological, historical, or Native American resources that were not observable during previous archeological phases. To facilitate compliance with regulatory requirements, project personnel shall be alerted to the possibility of encountering archeological materials and/or human remains during construction,

and apprised of the proper procedures to follow in the event that such materials are found in accordance with 36 CFR 800.13(a)(3).

#### XII. Dispute Resolution:

A. Should any signatory or concurring party to this PA object at any time to any actions proposed or the manner in which the terms of this PA are implemented, City shall consult with such party to resolve the objection. If the City determines that such objection cannot be resolved, the City will:

1. Forward all documentation relevant to the dispute, including the City's proposed resolution, to the ACHP. The ACHP shall provide the City with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, the City shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and concurring parties, and provide them with a copy of this written response. The City will then proceed according to its final decision.

2. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period; the City may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, the City shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the PA, and provide them and the ACHP with a copy of such written response.

3. The City's responsibility to carry out all other actions subject to the terms of this PA that are not the subject of the dispute remain unchanged.

#### XIII. AMENDMENTS, NONCOMPLIANCE, AND TERMINATION

A. If any signatory believes that the terms of this PA cannot be carried out or that an amendment to its terms should be made, that signatory shall immediately consult with the other parties to develop amendments pursuant to 36 CFR § 800.6(c)(7). If this PA is not amended as provided for in this stipulation, any signatory may terminate it, whereupon the City shall proceed in accordance with 36 CFR § 800.6(c)(8).

B. If either the terms of this PA or the Undertaking have not been carried out within five (5) years of the execution of this agreement, the signatories shall reconsider its terms. If signatories agree to amend the PA, they shall proceed in accordance with the amendment process outlined in stipulation XII.A.

Execution and implementation of this agreement evidence that the City has taken into account the effects of the Undertaking on historic properties, and the City has satisfied its responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations.

CITY AND COUNTY OF SAN FRANCISC MAYOR'S OFFICE OF HOUSING AND COMMUNITY DEVELOPMENT By:	O <u> <u> </u> </u>	9 - 9 - 2020 Date
CALIFORNIA STATE HISTORIC PRESRVATION OFFICER By:	Julianne Polanco	9/4/20 Date
BRIDGE Housing Corporation (Consulting Party) By: Its: Executive Vice President	DocuSigned by: সায়িংগ্রেক্ট প্রকার প্রকার জনবার্গ বিশেষ প্রকার প্রকার জনবার্গ বিশেষ প্রকার প্রকার প্রকার প্রকার প্রায় বিশেষ প	9/9/2020 Date

Home (/) > Programs (/programs/) > Environmental Review (/programs/environmentalreview/) > ASD Calculator

## Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft<sup>2</sup> - hr - people and 10,000 BTU/ft<sup>2</sup> - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

**Note:** Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

### **Acceptable Separation Distance Assessment Tool**

Is the container above ground?	Yes: 🗹 No: 🗌
Is the container under pressure?	Yes: 🗆 No: 🗹
Does the container hold a cryogenic liquified gas?	Yes: No:
Is the container diked?	Yes: 🗹 No: 🗌
What is the volume (gal) of the container?	
What is the Diked Area Length (ft)?	25
What is the Diked Area Width (ft)?	8
Calculate Acceptable Separation Distance	
Diked Area (sqft)	200
ASD for Blast Over Pressure (ASDBOP)	

ASD for Thermal Radiation for People (ASDPPU)	
ASD for Thermal Radiation for Buildings (ASDBPU)	
ASD for Thermal Radiation for People (ASDPNPD)	78.95
ASD for Thermal Radiation for Buildings (ASDBNPD)	12.63

# **For mitigation options, please click on the following link:** Mitigation Options (/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

### **Providing Feedback & Corrections**

After using the ASD Assessment Tool following the directions in this User Guide, users are encouraged to provide feedback on how the ASD Assessment Tool may be improved. Users are also encouraged to send comments or corrections for the improvement of the tool.

Please send comments or other input using the **Contact Us** (https://www.hudexchange.info/contact-us/) form.

### **Related Information**

- ASD User Guide (/resource/3839/acceptable-separation-distance-asd-assessment-tooluser-guide/)
- ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)