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Oakland Civic Auditorium Rehabilitation Project CEQA Checklist

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OAKLAND CIVIC AUDITORIUM REHABILITATION PROJECT

CEQA Checklist

1. General Project Information

1.1 Project Title

Oakland Civic Auditorium Rehabilitation Project

1.2 Lead Agency Name and Address

City of Oakland
Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

1.3 Project Case File Number

PLN17101

1.4 Contact Person and Phone Number

Mike Rivera, City Planner
Bureau of Planning
mrivera@oaklandnet.com
(510) 238-6417

1.5 Project Location

10-10th Street
Assessor's Parcel No. 018-0450-005-00

1.6 Project Applicant's Name and Address

Orton Development
1475 Powell Street, Suite 101
Emeryville, CA 94608

1.7 Existing General Plan Designations

Central Business District (CBD)

1.8 Existing Zoning

D-LM-4 Lake Merritt Station Area District Mixed Commercial; Lake Merritt Station Area District Height Area (LM-85)

1.9 Requested Permits

Major Conditional Use Permit; Regular Design Review; Grading and other onsite and offsite work permits; Tree Protection Permit; Minor encroachment permits

2. Executive Summary

The proposed Oakland Civic Auditorium Rehabilitation Project (Project) would rehabilitate the vacant Oakland Civic Auditorium (also known as the Henry J. Kaiser Convention Center or Oakland Municipal Auditorium), which consists of a single building with three stories and one basement level and an improved parking area. The property consists of one parcel, Assessor's Parcel Number 018-0450-005-00, located at 10 10th Street, just south of Lake Merritt on the block bounded by Oak, 10th, 12th, and 14th Streets, and the Lake Merritt Channel. This property, collectively with the improvements, is referred to as the "Project Site."

The Project Site is owned by the City of Oakland and is not utilized for any permanent uses. The Project Applicant proposes to revive the unused Project Site with new uses while preserving the envelope of and seismically upgrading the existing historic building. The rehabilitation would create a space intended to house offices for arts organizations and/or non-profits as well as retail uses. The Project will also make interior and exterior façade alterations and improvements to the building and existing walkways/sidewalks, driveways, landscaping and surface parking lots. The Project uses are generally organized within four areas of the building: Theatre, Podium, Basement, and Arena. The Project construction period would last approximately 20 months.

The project site is located within the Lake Merritt Station Area Plan (LMSAP). The City certified an Environmental Impact Report (EIR) for the LMSAP in November 2014 (2014 LMSAP EIR), pursuant to the California Environmental Quality Act (CEQA).[1] The 2014 LMSAP EIR analyzed the environmental impacts of the adoption and implementation of the LMSAP.[2] The Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR, providing the basis for use of an Addendum. Public Resources Code Section 21166 and State CEQA Guidelines Section 15164 state that an Addendum to a certified EIR is allowed if some changes or additions are necessary but none of the conditions for preparation of a subsequent EIR or negative declaration, per Section 15162, have occurred. In addition to, but separately and independently from the foregoing determination, this analysis uses CEQA streamlining and/or tiering provisions afforded under CEQA Guidelines Section 15183 by tiering from the program-level analyses completed in the 2014 LMSAP EIR, the Oakland's 1998 General Plan Land Use and Transportation Element EIR (1998 LUTE EIR), and the 2011 Central District Urban Renewal Plan Amendments EIR (2011 Renewal Plan Amendments EIR). These are referred to collectively, throughout this document as the "Previous CEQA Documents" or "Prior EIRs."

This analysis also assumes the implementation of the City Standard Conditions of Approval (SCAs) included as **Attachment A, as the Project would be required to implement the SCAs** to avoid or reduce potential impacts.

Based on the foregoing and the detailed analyses and conclusions set forth on the following pages, the analyses provided in the Prior EIRs previously analyzed the potential environmental effects

[1] Lake Merritt Station Area Plan Final EIR, Certified November 18, 2014. SCH No. 2012032012. Oakland Case Nos. ZS11225, ER1100-17, GP13287, ZT13288, RZ13289.

[2] Throughout this document, except where necessary for clarity, "2014 LMSAP EIR" encompasses the Initial Study, Draft EIR, and Final EIR for the Lake Merritt Station Area Plan.

associated with this Project and none of the criteria under Sections 15162 or 15163 is present. Therefore, this CEQA Checklist makes findings of consistency with Sections 15164 and 15183. Accordingly, no additional environmental documentation or analysis is required.

3. Background

3.1 Planning Context

The project site is located within the Lake Merritt Station Area Plan (LMSAP), for which the City of Oakland certified an Environmental Impact Report (EIR) in November 2014, pursuant to the California Environmental Quality Act (CEQA).

The LMSAP encompasses approximately 286 acres of area within a half-mile radius of the Lake Merritt BART Station. Its goal is to guide actions to improve the area's vitality and to accommodate and promote future growth over a 25-year period. The 2014 LMSAP EIR analyzed the LMSAP "Development Program," which was the assumed future development for the Plan and consisted of up to 4,900 new housing units, 4,100 new jobs, 404,000 square feet of retail use, and l.3 million square feet of office uses. The project site is included in the LMSAP Development Program and the level of development currently proposed for the site is within the broader development assumptions and thus within the impact envelope of the reasonably foreseeable maximum development program analyzed in the EIR. Specifically, the 2014 LMSAP EIR allows for flexibility in location, amount, and type of future development in terms of the precise mix of newly developed land uses and their location within the Planning Area. This development is tracked by the cumulative trip generation of development projects as they are approved under the Specific Plan. Thus, as long as the trip generation for the overall Plan area remains below the levels estimated in the EIR, the impact analysis presented in the EIR continues to remain valid. As long as the actual plan area buildout stays within the impact envelope analyzed in the EIR, individual development projects need not adhere to the specific site-by-site assumptions in the Development Program.

3.2 CEQA Context

The following describes the Program EIRs that constitute the previous CEQA documents considered in this CEQA Checklist. Each of the following documents is hereby incorporated by reference and can be obtained from the City of Oakland Bureau of Planning at 250 Frank H. Ogawa Plaza, Suite 2114, Oakland, California 94612, and on the City of Oakland Planning and Building Department website at http://www2.oaklandnet.com/government/o/PBN/OurServices/Application/DOWD009157

3.2.1 2014 LMSAP EIR

The 2014 LMSAP EIR anticipated that the environmental review of specific development projects assumed as part of the LMSAP would be streamlined in accordance with CEQA. This CEQA Checklist is an addendum to the 2014 LMSAP EIR which provides the planning level analysis evaluating the potential significant environmental impacts that could result from the reasonably foreseeable maximum development under the Specific Plan. Specifically, it evaluates the physical and land use changes from potential development that could occur with adoption and implementation of the LMSAP. As specified in CEQA Guidelines Section 15168, the 2014 LMSAP EIR is appropriate for a Specific Plan since the degree of specificity in an EIR corresponds to the

degree of specificity in the underlying activity described in the EIR. Preparation of a planning-level document in the Plan area simplifies the task of preparing subsequent project-level environmental documents for future projects under the LMSAP for which the details are currently unknown. As such, the 2014 LMSAP EIR presents an analysis of the environmental impacts of adoption and implementation of the LMSAP. Specifically, it evaluates the physical and land use changes from potential development that could occur with adoption and implementation of the LMSAP. Further, where feasible, and where an adequate level of detail is available such that the potential environmental effects may be understood and analyzed, the 2014 LMSAP EIR provides a project-level analysis to eliminate or minimize the need for subsequent CEQA review of projects that could occur under the LMSAP.

Environmental Effects Summary – 2014 LMSAP EIR

The 2014 LMSAP EIR (including its Initial Study) determined that development consistent with the LMSAP would result in the following impacts that would be **reduced to a less-than-significant level with the implementation of mitigation measures and/or standard conditions of approval** (described in Section 3.3): aesthetics (degradation of existing visual character, adversely affect scenic vistas, new light or glare); air quality (conflicts with the Bay Area Clean Air Plan (CAP)); cultural resources (archaeological, human remains, paleontological); greenhouse gases and global climate change (generation of greenhouse gas emissions); hazards and hazardous materials; geology and soils; hydrology and water quality (flooding, runoff in excess of existing capacity, groundwater depletion); noise (use and density incompatibilities, interior noise levels, violation of noise ordinance); utilities and service systems (impacts on existing stormwater, solid waste, and wastewater facilities); biological resources (fish or wildlife species, riparian habitat, wetlands, trees); public services (except as noted below as significant)[3]; and transportation/circulation (intersection operations Downtown).

Less-than-significant impacts were identified for the following resources in the 2014 LMSAP EIR and Initial Study: land use (adjacent land uses and land use policy); parks and recreation (expansion of existing park facilities on environment and increase demand for facilities); aesthetics (shadow, conflict with existing policies); noise (in excess of applicable standards); and hydrology and water quality (exposure to loss or risk of death). **No impacts** were identified for agricultural or forestry resources, and mineral resources.

Significant unavoidable impacts were identified for the following environmental resources in the 2014 LMSAP EIR: transportation/circulation (roadway segment operations); air quality (exposure of sensitive receptors to TACs, cumulative impacts); and cultural resources (changes to historic resources). Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's certification of the 2014 LMSAP EIR.

[3] The 1998 LUTE EIR addressed effects on solid waste demand and infrastructure facilities for water, sanitary sewer and stormwater drainage under *Public Services*.

3.2.2 Land Use and Transportation Element EIR

The City certified the EIR for its General Plan Land Use and Transportation Element (LUTE) in 1998. The LUTE identifies policies for utilizing Oakland's land as change takes place and sets forth an action program to implement the land use policy through development controls and other strategies. The LUTE identifies five "Showcase Districts" targeted for continued growth; the project site is located within the "Downtown Showcase District" (Downtown), which is intended to promote a mixture of vibrant and unique districts with around-the-clock activity, continued expansion of job opportunities, and growing residential population. The 1998 LUTE EIR is designated a "Program EIR" under CEQA Guidelines Section 15183. As such, subsequent activities under the LUTE are subject to requirements under CEQA Guidelines Section 15183, which are described further in Section 6.

Applicable mitigation measures identified in the 1998 LUTE EIR are largely the same as those identified in the other EIRs prepared *after* the 1998 LUTE EIR, either as mitigation measures or newer standard conditions of approval, the latter of which are described below in Section 3.3.

Environmental Effects Summary – 1998 LUTE EIR

The 1998 LUTE EIR (including its Initial Study) determined that development consistent with the LUTE would result in the following impacts that would be **reduced to a less-than-significant level with the implementation of mitigation measures and/or standard conditions of approval** (described in Section 3.3): aesthetics (views, architectural compatibility and shadow only); air quality (construction dust [including PM10] and emissions Downtown, odors); cultural resources (except as noted below as less than significant); hazards and hazardous materials; land use (use and density incompatibilities); noise (use and density incompatibilities, including from transit/transportation improvements); population and housing (induced growth, policy consistency/clean air plan); public services (except as noted below as significant)[4]; and transportation/circulation (intersection operations Downtown).

Less-than-significant impacts were identified for the following resources in the 1998 LUTE EIR and Initial Study: aesthetics (scenic resources, light and glare); air quality (clean air plan consistency, roadway emissions in Downtown, energy use emissions, local/regional climate change); biological resources; cultural resources (historic context/settings, architectural compatibility); energy; geology and seismicity; hydrology and water quality; land use (conflicts in mixed use projects and near transit); noise (roadway noise Downtown and citywide, multifamily near transportation/transit improvements); population and housing (exceeding household projections, housing displacement from industrial encroachment); public services (water demand, wastewater flows, stormwater quality, parks services); and transportation/circulation (transit demand).

No impacts were identified for agricultural or forestry resources, and mineral resources.

Significant unavoidable impacts were identified for the following environmental resources in the 1998 LUTE EIR: air quality (regional emissions, roadway emissions Downtown); noise (construction

[4] The 1998 LUTE EIR addressed effects on solid waste demand and infrastructure facilities for water, sanitary sewer and stormwater drainage under *Public Services*.

noise and vibration in Downtown); public services (fire safety); transportation/circulation (roadway segment operations); wind hazards, and policy consistency (clean air plan). Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's certification of the 1998 LUTE EIR.

3.2.3 Central District Urban Renewal Plan Amendments EIR (2011 Renewal Plan Amendments EIR)

The project site is located within the Central District Urban Renewal Plan Area, which generally encompasses the entire Downtown: approximately 250 city blocks (828 acres) in an area generally bounded by Interstate 980 (I-980), Lake Merritt, 27th Street and Embarcadero West. The City Council adopted the Central District Urban Renewal Plan (Renewal Plan) for the Project Area in June 1969. The City prepared and certified an EIR for proposed amendments to the Renewal Plan in 2011, and amended or supplemented the Plan up to April 3, 2012.[5] The 2011 Renewal Plan Amendments EIR was designated a "Program EIR" under CEQA Guidelines Section 15180; as such, subsequent activities are subject to requirements set forth in CEQA Section 15168.

Applicable mitigation measures and standard conditions of approval (described in Section 3.3) identified in the 2011 Renewal Plan Amendments EIR are considered in the analysis in this document and are also largely the same as those identified in the other EIRs described in this Section 3.2.

Environmental Effects Summary – 2011 Renewal Plan Amendments EIR

The 2011 Renewal Plan Amendments EIR determined that development facilitated by the Proposed Amendments would result in the following impacts **that would be reduced to a less-than-significant level with the implementation of identified mitigation measures and/or standard conditions of approval** (described in Section 3.3): aesthetics (light/glare only); air quality (except as noted below as less than significant and significant); biological resources (except no impacts regarding wetlands or conservation plans); cultural resources (except as noted below as significant); geology and soils; greenhouse gas emissions; hazards and hazardous materials; hydrology and water quality (stormwater and 100-year flooding only); noise (exceeding standards – construction and operations only); traffic/circulation (safety and transit only); utilities and service systems (stormwater and solid waste only).

Less-than-significant impacts were identified for the following resources in the 2011 Renewal Plan Amendments EIR: aesthetics (except as noted above as less than significant with standard conditions of approval); air quality (clean air plan consistency); hydrology and water quality (except as noted above as less than significant with standard conditions of approval); land use and planning; population and housing; noise (roadway noise only); public services and recreation;

[5] The 2011 Renewal Plan Amendments EIR addressed two amendments. A 17th Amendment to the Redevelopment Plan to (1) extend the duration of the Plan from 2012 to 2022 and extend the time period that the then-Redevelopment Agency could receive tax increment funds from 2022 to 2032, as allowed by Senate Bill (SB) 211 (codified as Health and Safety Code Section 33333.10 et seq.); (2) increase the cap on the receipt of tax increment revenue to account for the proposed time extensions; and (3) renew the then-Redevelopment Agency's authority to use eminent domain in the Project Area. An 18th Amendment further extended the then-Redevelopment Plan time limit from 2022 to 2023 and extended the time period that the then-Redevelopment Agency could receive tax increment funds from 2032 to 2033, as allowed by Health and Safety Code Section 33331.5.

traffic/circulation (air traffic and emergency access); and utilities and service systems (except as noted above as less than significant with standard conditions of approval).

No impacts were identified for agricultural or forestry resources, and mineral resources.

The 2011 Renewal Plan Amendments EIR determined that the Proposed Amendments combined with cumulative development would have **significant unavoidable impacts** on the following environmental resources: air quality (toxic air contaminant exposure and odors); cultural resources (historic); and traffic/circulation (roadway segment operations).[6] Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's certification of the 2011 Renewal Plan Amendments EIR.

3.2.4 Previous Mitigation Measures and Current Standard Conditions of Approval (SCAs)

The CEQA Checklist provided in Section 7 of this document evaluates the potential project-specific environmental effects of the Project, and evaluates whether such impacts were adequately covered by the 2014 LMSAP EIR (as well as the Prior EIRs previously described in Section 3.2) to allow the provisions afforded by Guidelines Sections 15183, 15162, 15164, and 15168 to apply. The analysis conducted incorporates by reference the information contained in each of the Previous CEQA Documents. The Project is legally required to incorporate and/or comply with the applicable requirements of the mitigation measures identified in the 2014 LMSAP EIR. Therefore, the mitigation measures are herein assumed to be included as part of the Project, including those that have been modified to reflect the City's current standard language and requirements, as discussed below.

3.2.5 SCA Application in General

The City established its *Standard Conditions of Approval and Uniformly Applied Development Standards* (SCAs) in 2008, and they have since been amended and revised several times.[7] The City's SCAs are incorporated into new and changed projects as conditions of approval regardless of a project's environmental determination. The SCAs incorporate policies and standards from various adopted plans, policies, and ordinances (such as the Oakland Planning and Municipal Codes, Oakland Creek Protection Ordinance, Stormwater Water Management and Discharge Control Ordinance, Oakland Protected Trees Ordinance, Oakland Grading Regulations, National Pollutant Discharge Elimination System (NPDES) permit requirements, California Building Code and Uniform Fire Code, among others), which have been found to substantially mitigate environmental effects. The SCAs are adopted as requirements of an individual project when it is approved by the City and are designed to, and will, substantially mitigate environmental effects.

[6] The 2011 Renewal Plan Amendments EIR also identified significant and unavoidable noise effects specifically associated with the potential development of a new baseball stadium at Victory Court, and multimodal safety at at-grade rail crossings, both near the Oakland Estuary. These effects would not pertain to the Project given the distance and presumably minimal contribution of multimodal trips affecting these impacts.

[7] A revised set of SCAs was recently published by the City of Oakland on November 5, 2018.

3.2.6 SCA Application in this CEQA Checklist

Mitigation measures identified in the 2014 LMSAP EIR that would apply to the Project are listed in Attachment A to this document, which is incorporated by reference into this CEQA Checklist. In addition, SCAs identified in the 2014 LMSAP EIR, as updated, that would apply to the Project are listed in Attachment A to this document (see Section 3.2.5 above). Because the SCAs are mandatory City requirements, the impact analysis for the Project assumes that they will be imposed and implemented, which the Project Applicant has agreed to do or ensure as part of the Project. If this CEQA Checklist or its attachments inaccurately identifies or fails to list a mitigation measure or SCA, the applicability of that mitigation measure or SCA to the Project is not affected as each independently applies to the Project.

Most of the SCAs that are identified for the Project were also identified in the 2014 LMSAP EIR, and the 2011 Renewal Plan Amendments EIR; the 1998 LUTE EIR was developed prior to the City's application of SCAs. As discussed specifically in Attachment A to this document, since certification of the 2014 LMSAP EIR, the City of Oakland has revised its SCAs, and the most current SCAs are identified in this CEQA Checklist. All mitigation measures identified in the 2014 LMSAP EIR that would apply to the Project are also identified in Attachment A to this document.

4. Purpose and Determination

4.1 Purpose

This environmental review document is intended to assist the City to determine the appropriate CEQA documentation for the Project—either a CEQA addendum / exemption or an EIR.[8] It does not address every applicable CEQA topic or significance threshold but focuses on those most pertinent to the City's assessment of whether an addendum and/or exemption (in particular, Community Plan Consistency exemption) is suitable for the Project.

The analysis in this environmental review document supports determinations that the Project, as separate and independent bases, qualifies for (1) CEQA Guidelines Section 15164 (Addendum to an EIR or Negative Declaration), (2) CEQA Guidelines Section 15183 (Projects Consistent with a Community Plan or Zoning); and (3) streamlining and/or tiering provisions under CEQA Guidelines Section 15168 (Program EIRs) and 15180 (Redevelopment Projects), which provide that the 2011 Renewal Plan Amendments EIR can be used as a Program EIR.

4.2 Determination

The information presented in this environmental review document supports that the Project meets all requirements under CEQA Guidelines Section 15164 and Section 15183. As a result, no supplemental environmental review is required in accordance with Public Resources Code Section 21083.3 and Section 21166, and CEQA Guidelines Sections 15162 through 15164, as well as 15168.

[8] City staff considered and applied its discretion to dismiss the suitability of a Negative Declaration or Mitigated Negative Declaration for the Project.

5. Project Description

5.1 Oakland Civic Project Site

5.1.1 Project Location

The Oakland Civic Auditorium project site (project site) is located at 10 10th Street, just south of Lake Merritt on the block bounded by Oak Street, 10th Street, Lake Merritt Boulevard, and the Lake Merritt Channel (see **Figure 1**). The project site is approximately 4.79 acres and comprised of one parcel owned by the City of Oakland (Assessor's Parcel Number 018-0450-005-00).

5.1.2 Existing Site Conditions

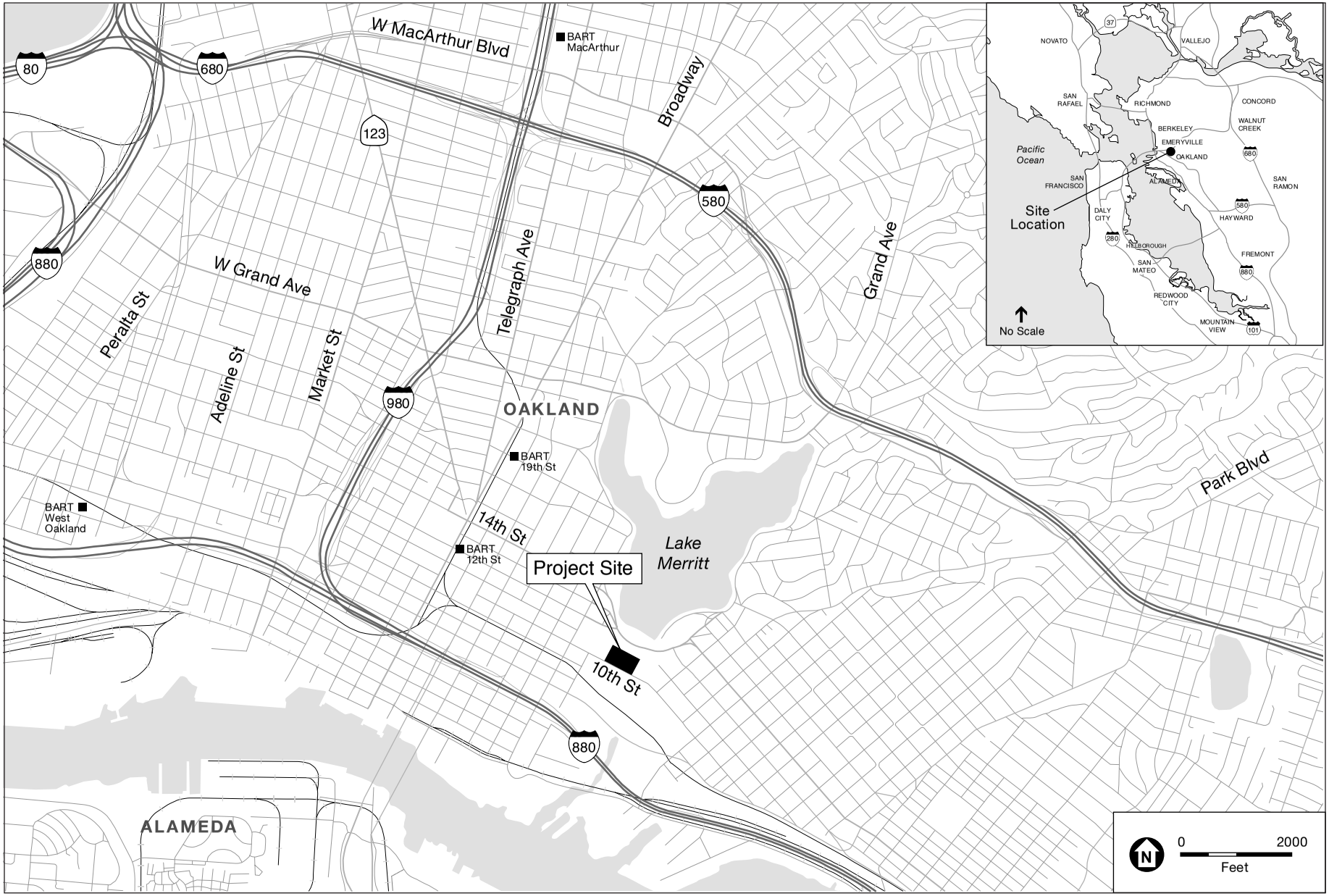
The project site is occupied by the existing vacant Oakland Civic Auditorium, which consists of a single building with three stories and one basement level. Oakland Civic Auditorium originally opened in 1914 as a multi-purpose Arena and closed in 2005 after approximately 90 years of operation as a venue for a variety of cultural events and entertainment. The project site is listed as a Local Landmark as the Oakland Municipal Auditorium. There is a parking lot on the north and east sides of the project site with approximately 185 spaces. Access to the parking lot is via two driveways on 10th Street, and an additional driveway on Lake Merritt Boulevard. The driveway on the western side of the project site from 10th Street contains a vegetated median. There are approximately 71 trees on the project site, along walkways and in the parking lot.

The parking lot is currently temporarily used as one of the City's TUFF Shed Shelter/Community Cabin sites. These sites were developed in response to persistent public health and safety hazards at existing large homeless encampments and provide temporary shelters in insulated cabins and wrap-around services (such as sanitary and garbage service). The goal is to help people end their unsheltered status by having them move in, receive services, and move on to the next step on the path to housing. The TUFF Shed Shelter/Community Cabin site at the project site was opened October 2018 and plans to close November 2019.

5.1.3 Surrounding Context

The area immediately surrounding the project site contains primarily institutional and open space land uses.

- Lake Merritt and the Lake Merritt Amphitheater are located north of the project site. Lake Merritt was declared a Wildlife Refuge under the California Wildlife Act in 1870 and plays an important role as a recreational asset for the City. The trails around the lake are regularly used for walking and jogging.
- Laney College, the largest of the four Peralta Community Colleges in Alameda County, is located south of the project site on approximately 60 acres of land, bounded by the Lake Merritt Channel, 7th, 10th, and Fallon Streets. The school serves a student population of over 14,000 students each semester, as well as more than 400 full-time and adjunct staff and employees.



SOURCE: ESA, 2018

Figure 1
Project Location

- Peralta Park and the Lake Merritt Channel are located east of the project site, and contain a multi-use path along water quality basins and restored tidal marsh along the Lake Merritt Channel. The Lake Merritt Channel connects Lake Merritt to the Estuary and San Francisco Bay.
- The Oakland Museum of California (OMCA) is located adjacent and west of the project site. OMCA contains three levels of galleries, with gardens on each level, and has a parking garage with an entrance on Oak Street between 10th and 12th Streets.

The Bay Area Rapid Transit District (BART) Lake Merritt station is located 0.13 miles from the project site, on Fallon Street at 9th Street. The Alameda-Contra Costa County Transit District (AC Transit) provides bus lines and major transfer points along 10th and 12th Streets, adjacent to the project site. Access to Interstate 880 (I-880) South is approximately two and one half blocks east and four blocks south of the project site (via 5th Avenue and Embarcadero), and access to I-880 North is approximately two blocks east and four blocks south of the project site (at 6th and Madison Streets).

The project site is located within the LMSAP. The Oakland Civic Auditorium was identified as a "key asset" in the LMSAP and adaptive reuse of the building was anticipated in the 2014 LMSAP EIR.[9] The City certified the 2014 LMSAP EIR in November 2014, pursuant to the California Environmental Quality Act (CEQA).

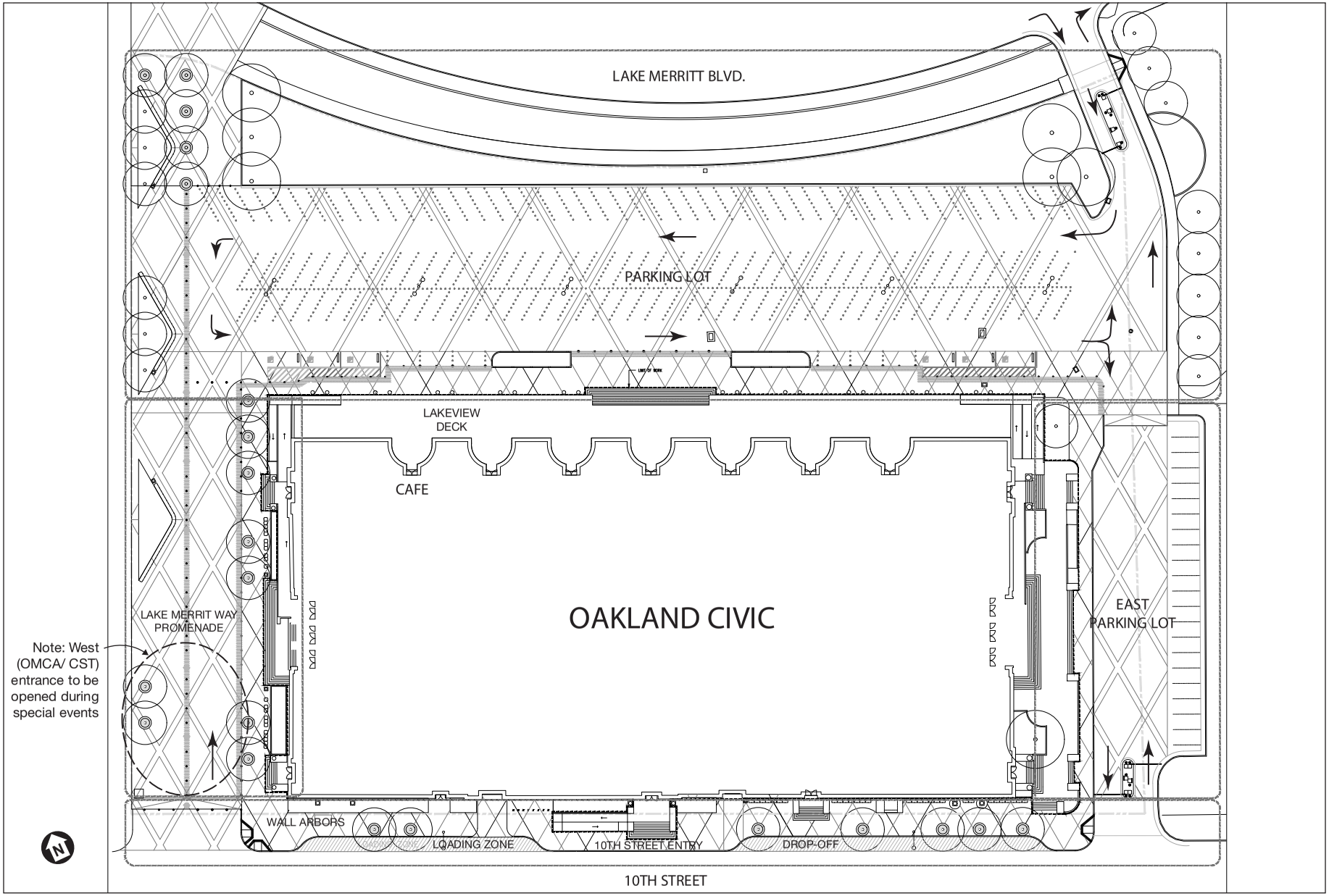
5.2 Project Characteristics

5.2.1 Overview

The project analyzed in this CEQA Checklist is referred to as the Oakland Civic Auditorium Rehabilitation Project (or Project). The Project Applicant proposes to rehabilitate the vacant Oakland Civic Auditorium (also known as the Henry J. Kaiser Convention Center or Oakland Municipal Auditorium) to provide new uses while preserving the existing building. The Project would preserve the existing building envelope, seismically upgrade the existing building, and add a podium along the north side of the building. It would rehabilitate the approximately 1,500 seat Calvin Simmons Theatre, the Theatre's ancillary spaces, and two third-floor ballrooms (approximate total capacity of 2,400 attendees). The Project would adaptively reuse other portions of the existing building and new roof signs would also be located on the north and south sides of the roof indicating the directions of the Arena and Theatre components of the building. As described in Section 5.2.6 below, and depicted in **Figure 2**, the Project would update the surrounding surface parking area.

The Project uses are generally organized in four areas of the Project building: Theatre, Podium, Basement, and Arena. A summary of Project land uses is included in **Table 1** and **Table 2**.

[9] Lake Merritt Station Area Plan Final EIR, Certified November 18, 2014. SCH No. 2012032012. Oakland Case Nos. ZS11225, ER1100-17, GP13287, ZT13288, RZ13289.



SOURCE: Heller Manus Architects

Figure 2
Site, Landscape, and Circulation Plan

ESA

TABLE 1
PROJECT LAND USE PROGRAMS

Building Area	Proposed Land Use	Building Floor	Approximate Size (sf)	Total (sf)
Oakland Civic Auditorium				
Basement	Office/Conference Room Space	Basement	17,000	**44,000**
	Small-scale Production Space for artisan and/or custom products	Basement	3,000	
	Music/Arts Practice Rooms	Basement	14,000	
	(Existing) General tenant/building storage	Basement	10,000	
Podium	Restaurant seating/public space	Ground	3,500	**11,000**
	Public space	Ground	7,500	
Theatre	(Existing) Calvin Simmons Theatre Storage	Basement	8,000	**72,300**
	(Existing) Calvin Simmons Theatre	Ground	23,000	
	Full-service restaurant with ABC sales	Ground	4,000	
	(Existing) Calvin Simmons Theatre	2nd	14,000	
	(Existing) Olympic Room: Bar	2nd	3,500	
	(Existing) Upper Tier Seating	3rd	3,800	
	(Existing) Gold Room: Calvin Simmons Theatre	3rd	7,000	
	(Existing) Ball Room: Calvin Simmons Theatre	3rd	9,000	
Arena[1]	Small Local Retail	Ground	2,000	**69,000**
	Office	Ground	42,000	
	Office/Optional Retail	2nd	25,000	

NOTES:

sf = square feet

[1] The technical analyses in this CEQA Checklist for air quality and portions of the traffic analysis rely on a more intensive land use scenario for the Arena as the basis of evaluation and thus provide a conservative analysis under CEQA. The more intensive land use is no longer under consideration by the City or Project Applicant and is not currently depicted in the Project Plans.

TABLE 2
PROJECT SQUARE FOOTAGE BY LAND USE

Land Use	Project	Optional Retail
Restaurant	11,000	11,000
Retail	2,000	27,000
Public Space (Podium)	7,500	7,500
Theatre	40,800	40,800
Ballroom	16,000	16,000
Other (artisan workshops, arts/music practice space)	17,000	17,000
Office	84,000	59,000
Storage	18,000	18,000
Total	**196,300**	**196,300**

5.2.2 Theatre

Under the Project, the existing approximately 2,400-person capacity Calvin Simmons Theatre and Ballrooms would be rehabilitated preserving the primary historic architectural details and the acoustics of the space. The rehabilitated Calvin Simmons Theatre would function as a performing arts center, hosting live performances and events while providing performance and practice spaces for arts organizations.

The Calvin Simmons Theatre and ancillary spaces occupy approximately 23,000 square feet on west side of the ground floor. To the north of the theatre, also on the ground floor, an approximately 4,000 square foot restaurant would be added that would serve the building tenants and the surrounding Lake Merritt Area. The restaurant would also possibly provide service to events hosted at the Calvin Simmons Theatre such as performances and fundraisers.

At the 2nd floor, the existing 14,000 square feet of the Calvin Simmons Theatre would be retained as would the existing Olympic Room—a 3,500 square-foot limited service former restaurant and café space. At the 3rd floor, the existing approximately 3,800 square feet of Upper Tier Seating would be retained and restored as well as the 7,000 square foot Gold Room, and the 9,000 square foot North Ball Room both of which are ancillary spaces supporting the Calvin Simmons Theatre.

5.2.3 Podium

A new, approximately 11,000 square foot outdoor podium would be added to the north façade of the building. This outdoor podium would add seating for the restaurant and other public facing uses. Approximately 7,500 square feet of the eastern portion of this new outdoor podium would be dedicated to public seating while the western 3,500 square foot portion would be dedicated seating for café and restaurant uses.

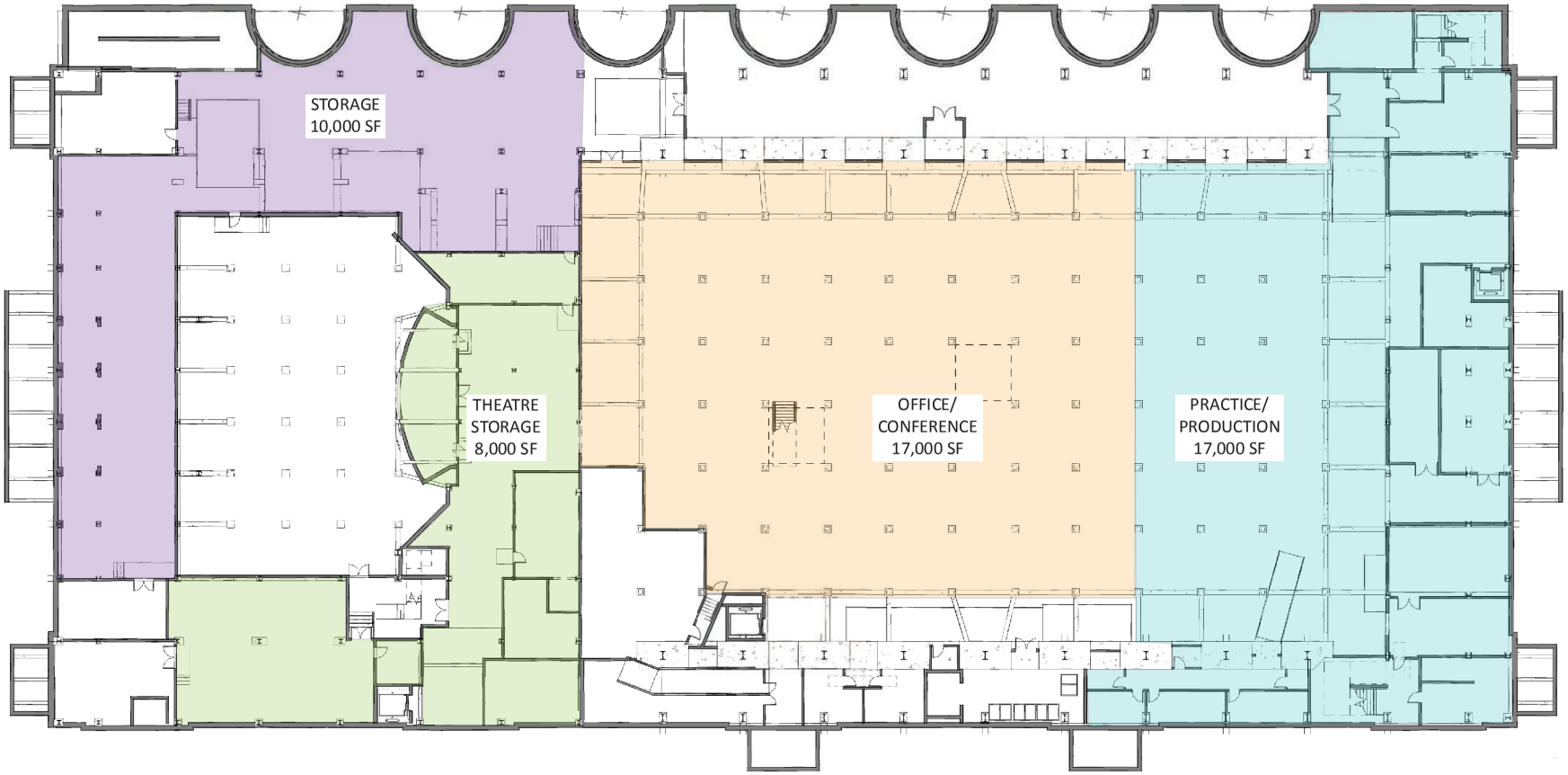
5.2.4 Basement

The existing building has a large basement area that would be renovated and adaptively re-used. The basement area would include office and conference room space totaling approximately 17,000 square feet; small-scale production of artisan and/or custom products, music and arts practice rooms totaling approximately 17,000 square feet; and the existing 10,000 square feet of general tenant/building storage.

5.2.5 Arena

The building includes an area previously used as an arena. This exact use of this area is still being finalized. Following the rehabilitation and renovation proposed by the Project there would be approximately 2,000 square feet of retail space and 42,000 square feet of office space on the ground floor and 25,000 square feet of available area on the second floor. However, for the purposes of a conservative analysis, more intensive use scenarios are being considered in some of the technical analyses in this CEQA Checklist. While the final interior design will be constrained by required approvals from the State Historic Preservation Office, National Parks Service, and City of Oakland Landmarks Board, among others; the analysis herein provides for flexibility of use (either office or retail), particularly for the 25,000 square feet in the second floor of the Arena.

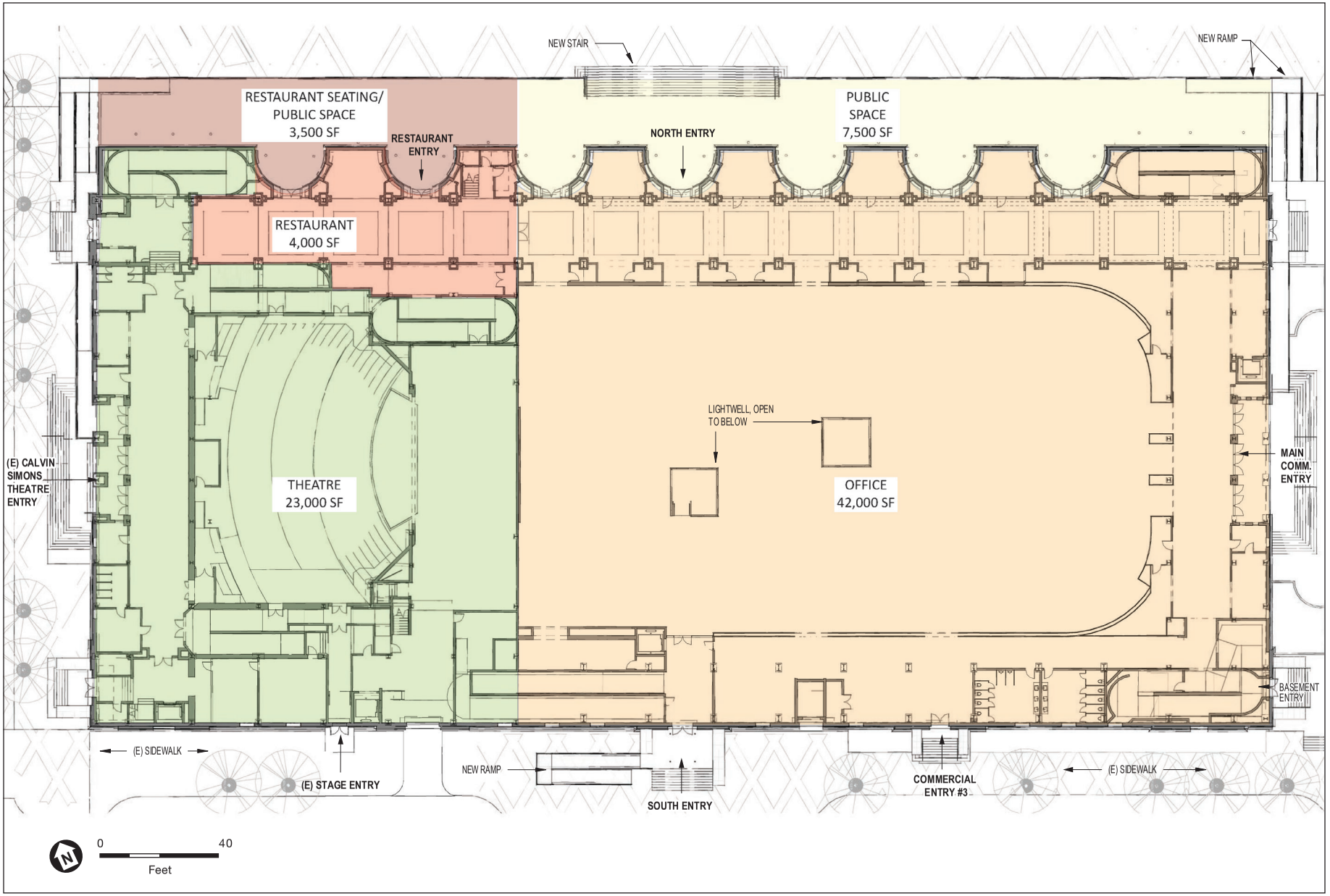
Figures 3 through **6** show the Project's proposed floor plans. **Figures 7** and **8** show project elevations that were prepared to illustrate the exterior elevations of the Project.



SOURCE: Heller Manus Architects

Figure 3
Basement Floor Plan

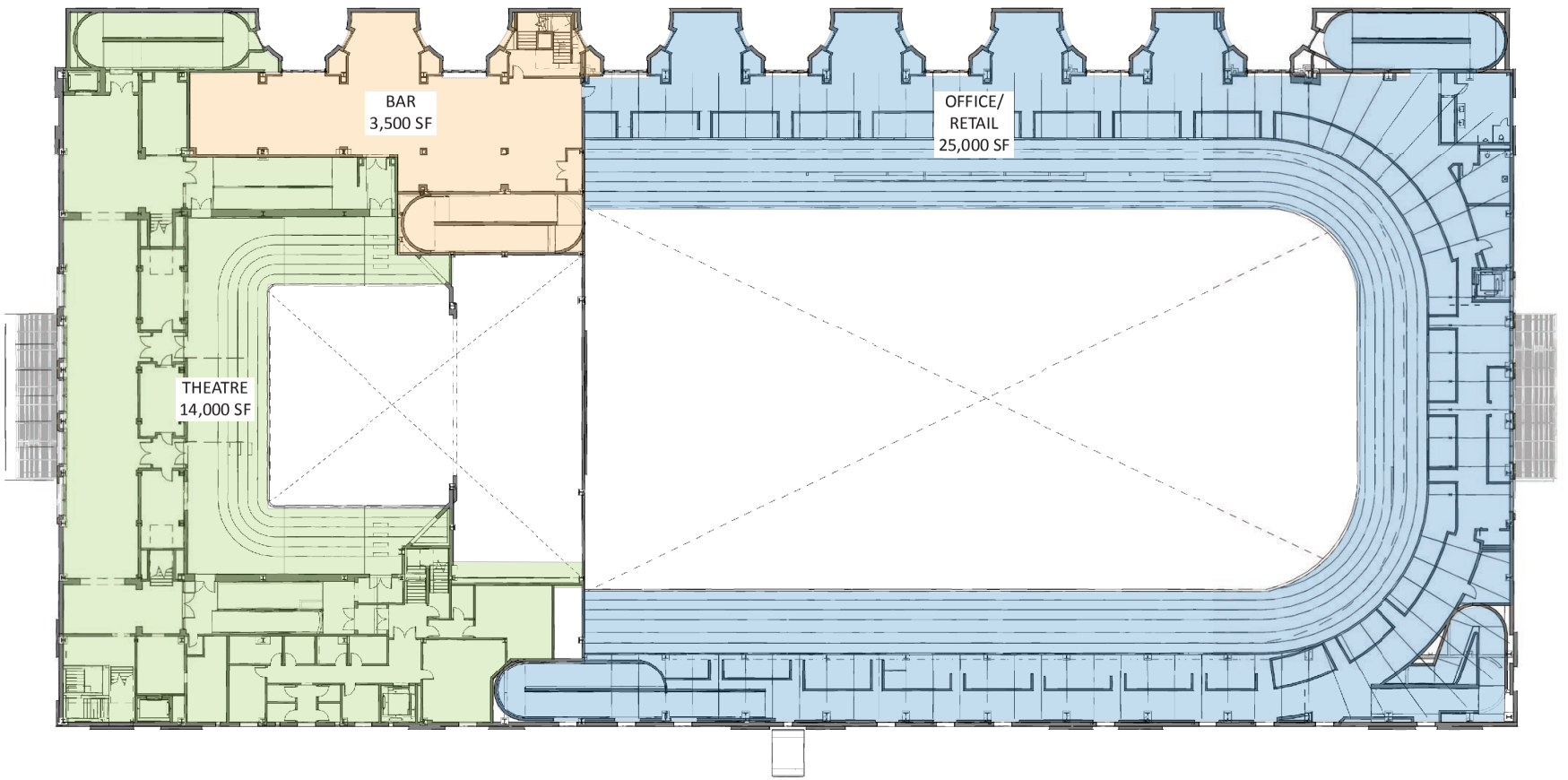
ESA



SOURCE: Heller Manus Architects

Figure 4
Ground Floor Plan

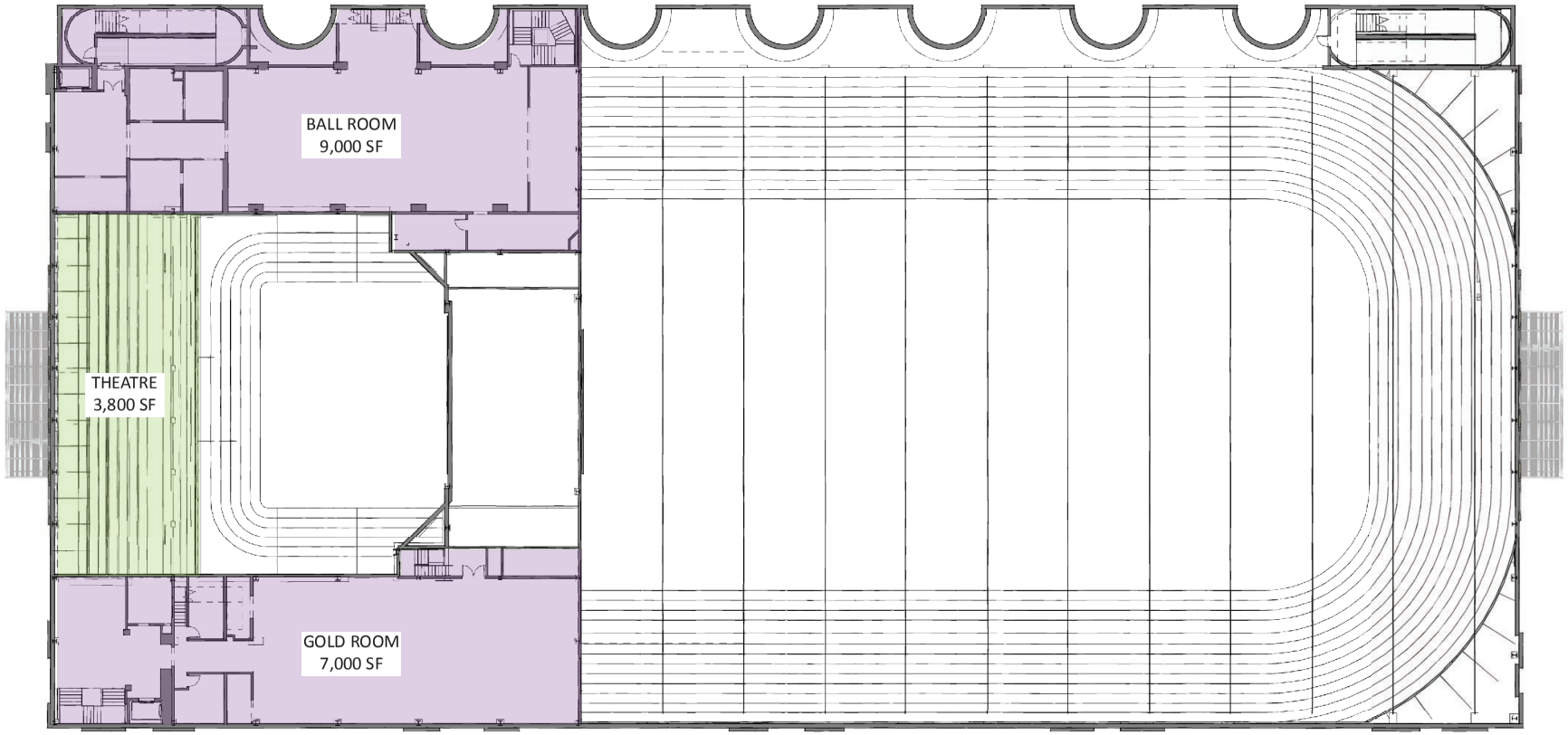
ESA



SOURCE: Heller Manus Architects

Figure 5
2nd Floor Plan

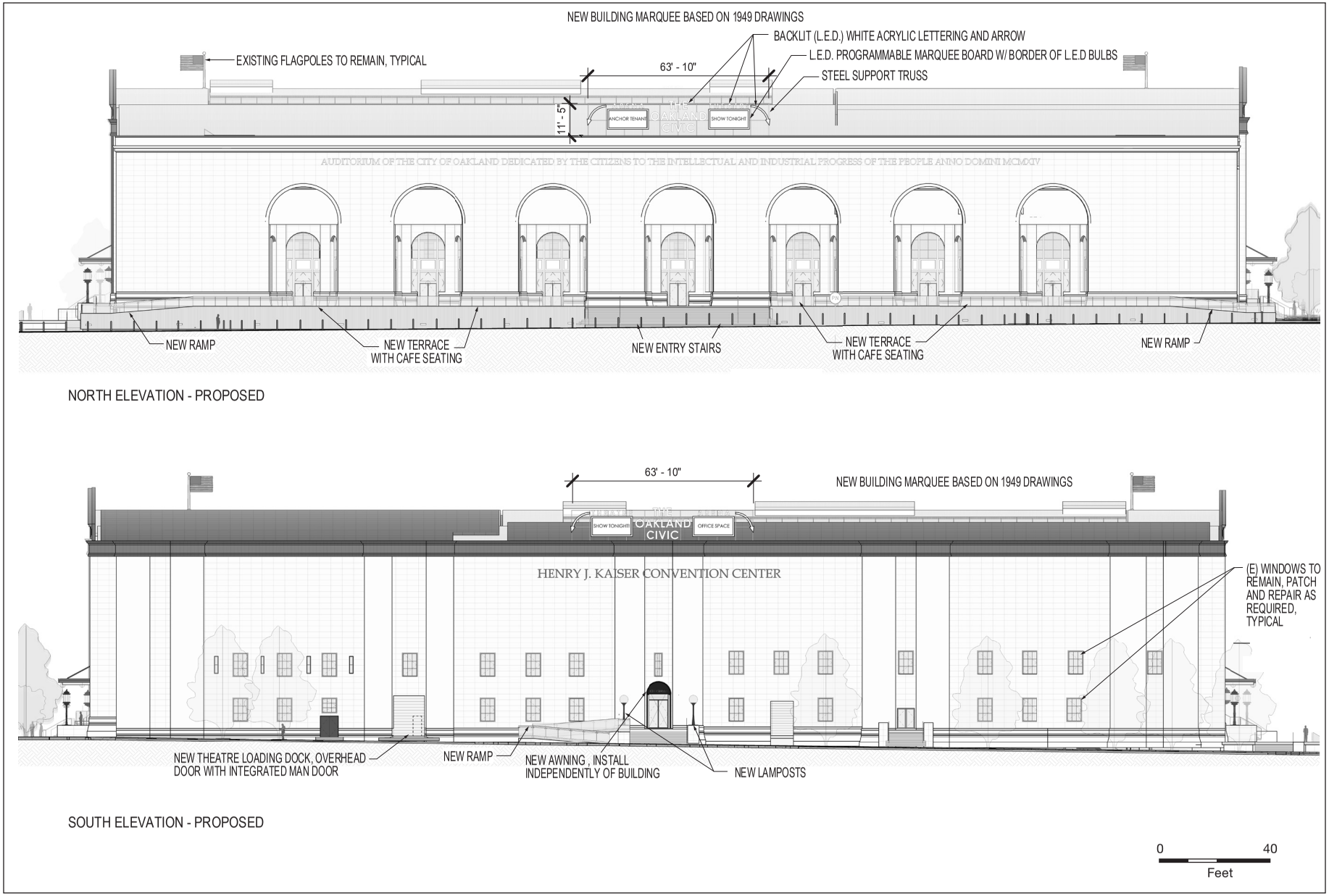
ESA



SOURCE: Heller Manus Architects

Figure 6
3rd Floor Plan

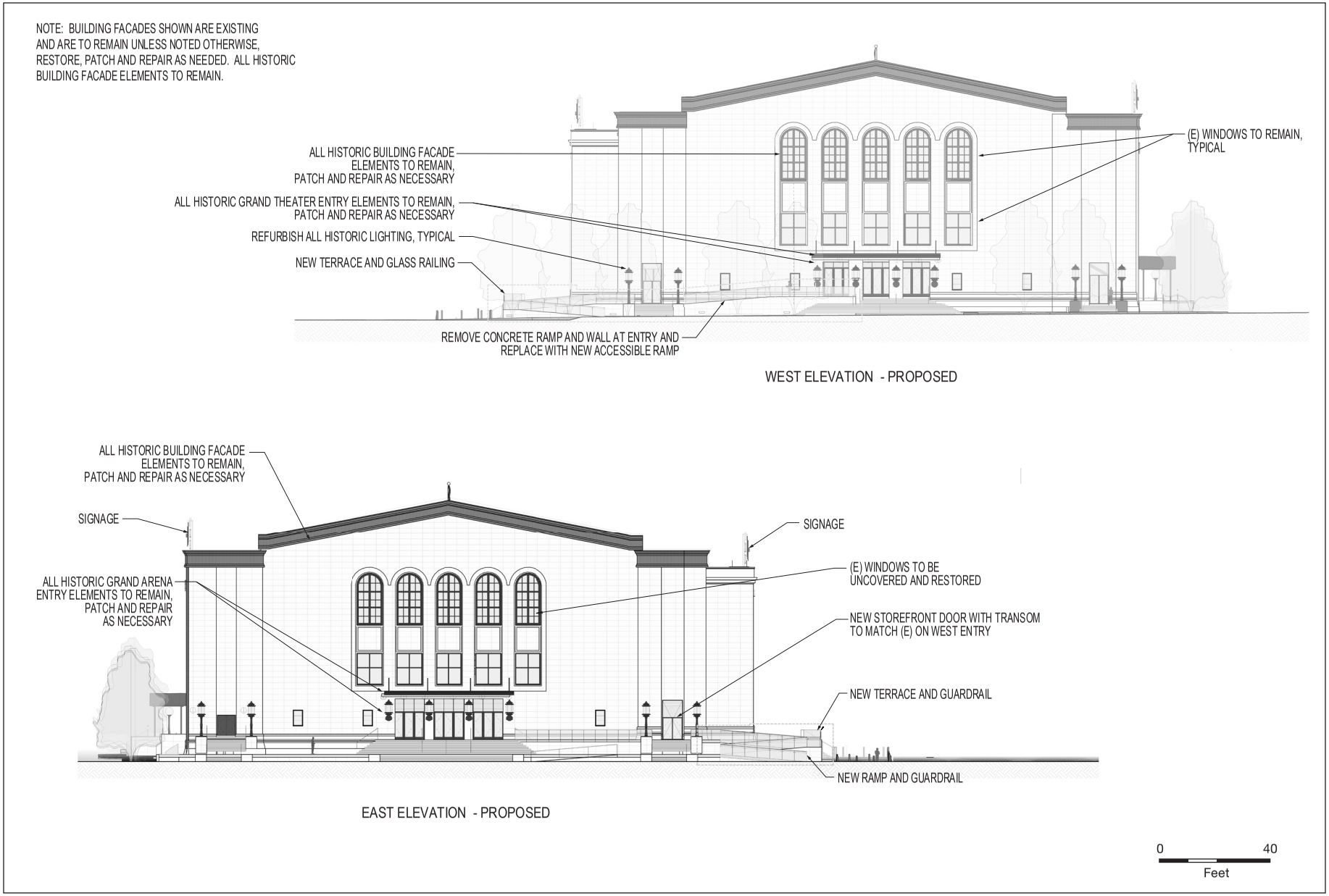
ESA



SOURCE: Heller Manus Architects

Figure 7
North-South Elevations

ESA



SOURCE: Heller Manus Architects

Figure 8
East-West Elevations

ESA

5.2.6 Other Characteristics of the Project

Demolition Plan

The Project involves the renovation and rehabilitation of the existing building. These building renovations would include demolition of various elements in the existing building to open the space for circulation, natural light, and new uses. Demolition in the basement would be minimal and would remove and replace the existing HVAC equipment to make room for structural and accessibility upgrades.

In the Calvin Simmons Theatre, ground floor seating risers (bleachers) would be removed to allow for new seating arrangements (greater spacing between rows of chairs), improved accessibility, updated technology, and expanded orchestra pit. The existing orchestra pit and surrounding floor area would be demolished to increase the size of the pit from approximately 16 musicians to 40 musicians. Back-of-house areas such ramps and hallways in the Calvin Simmons Theatre mezzanine level would be reconfigured to accommodate new loge seating and to allow for modern and accessible use.

Miscellaneous demolition within the Arena concourse would be required to repurpose former concession stands, restrooms, and storage areas. Portions of the ground floor and the stage lift would also be removed to allow for new light wells to the basement. On the second floor, a portion of the Arena seating and partition walls would be removed and the intermediate diagonal steel beams would be removed to open the floor area. The main diagonal steel beams would remain. On the third floor, partition walls would be removed while the Arena seating would remain. Finally, a portion of the roof would be removed to allow for new skylights within the historic skylight footprint, and coverings over existing windows would be removed to allow for window restoration, as needed. All proposed demolition requires approval from and is currently under review by the State Historic Preservation Officer at the Office of Historic Preservation (OHP) and the National Park Service (NPS).

Exterior Lighting

The artwork in the seven niches on the north side of the building would be visible at night through the restoration of existing light fixtures. Additional lighting would be added to provide necessary code-required exit lighting from each of the niche doors and paths of travel. The existing historic exterior light fixtures would be restored and re-lamped. The lighting underneath the awnings at the east and west entrances would be replaced to provide adequate exit lighting and distinguish the area as prominent entrances. The Project would include the addition of two new lighted roof signs located on the north and south facades of the building indicating the directions of the Arena and Theatre components of the building. The roof signs would be LED-bulbed with two LED screens with 19-mm resolution and would measure approximately 64 feet long by 12 feet high.

Landscaping, Open Space, and Tree Removal

There are approximately 71 trees on the project site. To accommodate construction of the Project and the proposed landscape plan, all existing trees would be removed. The Project would install new street trees, as required, along all of the street frontages for a total of 36 trees. New open space

and amenity areas would be created in the approximately 7,500 square foot public terrace on the outdoor podium along the north side of the building (see **Figure 2**).

Parking and Circulation

The existing surface parking lot located to the north and east of the building would be reconfigured and up to 187 vehicle parking spaces would be provided. Long-term and short-term bicycle parking space would be provided to meet the City code requirement for the respective use. Traffic circulation, including loading and drop-off zones, is illustrated in **Figure 2**.

Vehicular Access. Vehicular access to the project site would remain as it is under existing conditions. Ingress and egress to the reconfigured surface parking lots would be provided via driveways located from the north along Lake Merritt Boulevard and from the south off of the eastern side of 10th Street. A passenger drop-off area would be provided along the southern side of 10th Street. The existing curb cuts would be retained.

Pedestrian Access. Primary pedestrian access to the Project site would be from 10th Street and 12th Street/Lake Merritt Boulevard. Access would be provided through entrance lobbies on the north, south, east, and west sides of the building. The main entrance to the Arena would be located on the east side of the building. The main entrance to the basement would be located on the south of the building. The main entrance to the Calvin Simmons Theatre would be located on the west side of the building (see **Figure 8**). Secondary entries to all areas would be provided on the north and south side of the building.

5.3 Sustainability and Efficiency

The Project classifies as a Major Non-Residential Additions and Alterations Project on the City's *Green Building Compliance Standards Table Beginning July 1, 2014*. The Project Applicant intends to meet LEED Silver certification standards or equivalent and thus comply with the Green Building ordinance and requirements, such as reduction in indoor and outdoor water use. Through the building retrofits, the Project would optimize the efficiency of its building envelope, and through the use of efficient lighting and HVAC systems it would reduce energy use. The Project would meet the Building Energy Efficiency Standards in compliance with the Historic Building Code.

5.4 Construction and Phasing

Project construction is anticipated to last a period of approximately 20 months. Construction activities on the project site would consist of interior demolition and renovations to the existing building, construction of the podium, reconfiguration of the parking lot, landscaping, and finishing interiors.

5.5 Discretionary Project Approvals Requested

The Project Applicant requests, and the Project would require, a number of discretionary actions/ approvals, as well as ministerial permits/approvals, as listed below.

5.5.1 Actions by the City of Oakland

- **Planning and other Discretionary Development Permits**: Major Conditional Use Permit, Regular Design Review for site and building alterations, Tree Protection Permit, and minor encroachment permits.
- **Site and Encroachment Permits by other City agencies**.

5.5.2 Actions by Other Agencies

- **Regional Water Quality Control Board, San Francisco Bay Region (RWQCB)**: Acceptance of a Notice of Intent to obtain coverage under the General Construction Activity Storm Water Permit, and Notice of Termination after construction is complete. Granting of required clearances to confirm that all applicable standards, regulations, and conditions for all previous contamination at the site have been met.
- **Office of Historic Preservation (OHP)**: Approval of an Historic Rehabilitation 20% Tax Credit Application.
- **National Parks Service**: Determination of eligibility for the National Register of Historic Places.

6. Summary of Findings

An evaluation of the Project is provided in the CEQA Checklist in Section 7 that follows. This evaluation concludes that the Project qualifies for an addendum as well as an exemption from additional environmental review. It is consistent with the development density and land use characteristics established by the City of Oakland General Plan, and any potential environmental impacts associated with its development were adequately analyzed and covered by the analysis in the 2014 LMSAP EIR, and in the Prior EIRs.

The Project would be required to comply with the applicable mitigation measures and City of Oakland SCAs identified in the 2014 LMSAP EIR and presented in Attachment A to this document. With implementation of the applicable mitigation measures and SCAs, the Project would not result in a substantial increase in the severity of previously identified significant impacts in the 2014 LMSAP EIR, the applicable Prior EIRs, or result in any new significant impacts that were not previously identified in any of those Previous CEQA Documents.

In accordance with California Public Resources Code Sections 21083.3, and 21166; and CEQA Guidelines Sections 15162, 15164, 15168, and 15183, and as set forth in the CEQA Checklist below, the Project qualifies for an addendum and one or more exemptions because the following findings can be made:

- **Addendum.** The 2014 LMSAP EIR analyzed the impacts of development within the LMSAP. The Project would not result in substantial changes or involve new information not already analyzed in the 2014 LMSAP EIR because the level of development now proposed for the site is within the broader development assumptions analyzed in the EIR. The Project would not cause new significant impacts not previously identified in the 2014 LMSAP EIR, or result in a substantial increase in the severity of previously identified significant impacts. No new mitigation measures would be necessary to reduce significant impacts. No changes have occurred with respect to circumstances surrounding the LMSAP that would cause significant environmental impacts to which the Project would contribute considerably, and no new information has been put forward that shows that the Project would cause significant environmental impacts. Therefore, no supplemental environmental review is required in accordance with Public Resources Code Section 21166, and CEQA Guidelines Sections 15162 through 15164, as well as 15168.

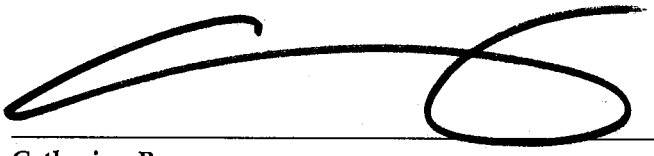
- **Community Plan Exemption.** The Project would not result in significant impacts that (1) are peculiar to the Project or project site; (2) were not previously identified as significant Project-level, cumulative, or offsite effects in the 2014 LMSAP EIR, or in the applicable Previous CEQA Documents: 1998 LUTE EIR, the 2011 Renewal Plan Amendments EIR; or (3) were previously identified as significant effects, but—as a result of substantial new information not known at the time the 2014 LMSAP EIR was prepared, or when the Prior EIRs were certified—would increase in severity beyond that described in those EIRs. Therefore, the Project would meet the criteria to be exempt from further environmental review in accordance with Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183.

- **Other Applicable Previous CEQA Documents - Prior EIRs and Redevelopment Projects.** The analysis in the 2011 Renewal Plan Amendments EIR and in this CEQA Checklist demonstrates that the Project would not result in substantial changes or involve new information that would warrant preparation of a subsequent EIR, per CEQA Guidelines Section 15162, because the level

of development now proposed for the site is within the broader development assumptions analyzed in the EIR. The effects of the Project have been addressed in that EIR and no further environmental documents are required in accordance with CEQA Guidelines Sections 15168.

Overall, based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR, as well as those of the 1998 LUTE EIR, and the 2011 Renewal Plan Amendments EIR—all of which are summarized in the CEQA Checklist in Section 7 of this document—the potential environmental impacts associated with the Project have been adequately analyzed and covered in the 2014 LMSAP EIR and other Previous CEQA Documents. Therefore, no further review or analysis under CEQA is required.

Each of the above findings provides a separate and independent basis for CEQA compliance.



Catherine Payne
Environmental Review Officer

3/1/19
Date

7. CEQA Checklist

7.1 Overview

The analysis in this CEQA Checklist provides a summary of the potential environmental impacts that may result from the Project. The analysis in this CEQA Checklist also summarizes the impacts and findings of the certified 2014 LMSAP EIR, as well as the Prior EIRs that covered the environmental effects of various projects encompassing the project site and that are still applicable for the Project. The Prior EIRs are referred collectively throughout this CEQA Checklist as the "Previous CEQA Documents" or "Prior EIRs" and include the 1998 LUTE EIR and the 2011 Renewal Plan Amendments EIR. Given the timespan between the preparations of these EIRs, there are variations in the specific environmental topics addressed and significance criteria; however, as discussed above in Section 3 and throughout this Checklist, the overall environmental effects identified in each are largely the same; any significant differences are noted.

Several SCAs would apply to the Project because of the Project's characteristics. All SCAs identified in the 2014 LMSAP EIR that would apply to the Project are listed in Attachment A to this document, which is incorporated by reference into this CEQA Checklist. Because the SCAs are mandatory City requirements, the impact analysis for the Project assumes that they will be imposed and implemented, which the Project Applicant has agreed to do or ensure as part of the Project. If this CEQA Checklist or its attachments inaccurately identifies or fails to list a mitigation measure or SCA, the applicability of that mitigation measure or SCA to the Project is not affected.

Most of the SCAs that are identified for the Project were also identified in the 2014 LMSAP EIR and the 2011 Renewal Plan Amendments EIR; the 1998 LUTE EIR was developed prior to the City's application of SCAs. As discussed specifically in Attachment A to this document, since certification of the 2014 LMSAP EIR, the City of Oakland has revised its SCAs, and the most current SCAs are identified in this CEQA Checklist. All mitigation measures identified in the 2014 LMSAP EIR that would apply to the Project are also identified in Attachment A to this document.

This CEQA Checklist hereby incorporates by reference the discussion and analysis of all potential environmental impact topics as presented in the certified 2014 LMSAP EIR and the Previous CEQA Documents. This CEQA Checklist provides a determination of whether the Project would result in:

- Equal or Less Severity of Impact Previously Identified in the Previous CEQA Documents;
- Substantial Increase in Severity of Previously Identified Significant Impact in the Previous CEQA Documents; and/or
- New Significant Impact.

Where the severity of the impacts of the Project would be the same as or less than the severity of the impacts described in the 2014 LMSAP EIR and the Previous CEQA Documents, the checkbox for "Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents" is checked.

Were the checkbox for "Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents" or "New Significant Impact" checked, there would be significant impacts that are:

- Peculiar to project or project site (per CEQA Guidelines Section 15183);
- Not identified in the previous 1998 LUTE EIR, 2011 Renewal Plan Amendments EIR, or 2014 LMSAP EIR (per CEQA Guidelines Section 15183), including offsite and cumulative impacts (per CEQA Guidelines Section 15183);
- Due to substantial changes in the Project (per CEQA Guidelines Section 15162 and 15168);
- Due to substantial changes in circumstances under which the Project will be undertaken (per CEQA Guidelines Sections 15162 and 15168); and/or
- Due to substantial new information not known at the time the Previous CEQA Documents were certified (per CEQA Guidelines Sections 15162, 15168, or 15183).

However, none of the aforementioned conditions were found for the Project, as demonstrated throughout the following CEQA Checklist and in its supporting attachments (Attachments A through C) that specifically describe how the Project meets the criteria and standards specified in the CEQA Guidelines Sections 15162 through 15164, and 15168.

7.2 Aesthetics, Shadow, and Wind

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Have a substantial adverse effect on a public scenic vista; substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, located within a state or locally designated scenic highway; substantially degrade the existing visual character or quality of the site and its surroundings; or create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area;	☒	☐	☐
b. Introduce landscape that would now or in the future cast substantial shadows on existing solar collectors (in conflict with California Public Resource Code sections 25980-25986); or cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors;	☒	☐	☐
c. Cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space; or, cast shadow on an historical resource, as defined by CEQA Guidelines Section 15064.5(a), such that the shadow would materially impair the resource's historic significance;	☒	☐	☐
d. Require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code, and the exception causes a fundamental conflict with policies and regulations in the General Plan, Planning Code, and Uniform Building Code addressing the provision of adequate light related to appropriate uses; or	☒	☐	☐
e. Create winds that exceed 36 mph for more than one hour during daylight hours during the year. The wind analysis only needs to be done if the project's height is 100 feet or greater (measured to the roof) and one of the following conditions exist: (a) the project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located in Downtown.	☒	☐	☐

7.2.1 Previous CEQA Documents Findings

Scenic vistas, scenic resources, visual character, light and glare, and shadow were analyzed in each of the Previous CEQA Documents, which found that the effects to these resources would be less than significant. The 2011 Renewal Plan Amendments EIR cited applicable SCAs that would ensure the less-than-significant visual quality effects. The 1998 LUTE EIR identified mitigation measures

that are functionally equivalent to the SCAs to reduce certain potential effects to less-than-significant levels. The 1998 LUTE EIR also identified significant and unavoidable impacts regarding wind hazards.

7.2.2 2014 LMSAP EIR Findings

Adaptive reuse of the Oakland Civic Auditorium, which was identified as an asset to be retained, was contemplated and analyzed in the 2014 LMSAP EIR (see Figure 2.1-2 in the 2014 LMSAP EIR).

The 2014 LMASP EIR determined that with implementation of SCAs, impacts related to aesthetics would be less than significant with development occurring under the LMSAP. Individual projects would be subject to the design guidelines outlined in the LMSAP and would be required to comply with the height limits identified in the LMSAP. The 2014 LMSAP EIR did not analyze potential wind hazards, determining that such analysis shall be undertaken for specific projects, as applicable pursuant to the City of Oakland's thresholds of significance.

7.2.3 Project Analysis

The adaptive reuse of the Oakland Civic Auditorium was anticipated in the 2014 LMSAP EIR and the Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR.

Aesthetics (Criterion 1a)

The Project would rehabilitate the vacant Oakland Civic Auditorium to seismically upgrade and provide new uses while preserving the existing building envelope. The existing Oakland Civic Auditorium is an approximately 103-foot tall building. The Project would make no additions to the building envelope that would increase the overall building height. All existing historic building façade elements would be retained, and all grand entry elements and windows would be restored, patched, and repaired as necessary. Additionally, since the Project involves the renovation of a City Landmark, the Project design would be reviewed by the Landmarks Preservation Advisory Board.

The Project would include some changes to the exterior of the building and surrounding site. Changes are proposed to include a new podium on the first level of the north façade that would accommodate a 7,500 square foot public terrace. The Project would reconfigure the existing surface parking lot located to the north, west, and east of the building. New street trees would be installed, as required, along all of the street frontages and new landscaping, as approved by OHP and the City, would surround the building. While these additions would change the appearance of the currently vacant building and surrounding site, it would not be considered an adverse change with respect to aesthetic resources.

The Project would include the addition of two new lighted roof signs located on the north and south sides of the building indicating the directions of the Arena and Theatre components of the building. The roof signs will be LED-bulbed with internally illuminated changeable lettering and will measure approximately 64 feet long by 1 feet and 3 inches high, a significant reduction in size from the previously installed 1949 roof sign that totaled roughly 185 feet long by 21 feet high. The

new roof signs would not illuminate any upper stories, would be removed from street level and thus not interfere with traffic, would not obstruct each other and would be compatible with the existing building's architecture and character, as well as the character of existing buildings surrounding the Project. Therefore, the new roof signs would be consistent with the LMASP Design Guidelines. As required by SCA AES-4, Lighting, all proposed exterior lighting fixtures would be shielded to a point below the blub and reflector to prevent unnecessary glare. The LMSAP EIR identified less than significant effects with respect to light and glare given the thoroughly urbanized character of the Plan area and SCA AES-4. Consistent with this finding, the amount of light generated by the new roof signs and other required exterior lights would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

As shown in the Project plans in **Figures 2** through **8**, the Project would not have an adverse effect on the visual character of the LMSAP Area as the Project would be constructed within the existing building envelope within a built urban area. Although active use of the project site would activate the surrounding neighborhood, the Project would not alter street patterns, existing views, or the existing visual character or quality of the site and its surroundings. Development of the Project also would be required to comply with the City of Oakland SCAs. SCA AES-1, Trash and Blight Removal, would require the Project site to be maintained free of blight, and trash receptacles near public entryways to be installed and maintained, as needed, to provide sufficient capacity for building users. SCA AES-2, Graffiti Control, would require landscaping, approved anti-graffiti coating, and ongoing graffiti removal using the gentlest means possible (consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties #7) in order to protect the aesthetics and physical integrity of the building. SCA AES-3, Landscape Plans, would require review and approval of detailed landscape plans in addition to implementation and ongoing landscape maintenance. SCA UTIL-2, Underground Utilities, requires any new utilities to be placed underground and SCA AES-4, Lighting, would ensure new exterior lighting is properly shielded. SCA AES-5, Public Art for Private Development, would require a public art contribution of one percent of the building development costs in accordance with City of Oakland Ordinance No. 13275 C.M.S. Together these SCAs would protect the visual character of the project site and LMSAP Area. Therefore, the visual impacts of the Project would be less than significant.

Shadow (Criteria 1b through 1d)

Except for the 1998 LUTE EIR, each of the Previous CEQA Documents found less-than-significant shadow effects, assuming incorporation of applicable SCAs. The 1998 LUTE EIR identified mitigation measures, functionally equivalent to the SCAs, to reduce potential shadow effects to less-than-significant levels. The Project would be limited to the existing building envelope and thus no new or substantial shadow would be cast on nearby public open spaces and/or historic resources. Therefore, the potential impacts of the Project regarding shadows would be similar to, or less severe than, those identified in the 2014 LMSAP EIR and the Previous CEQA Documents considered in this analysis.

Wind (Criterion 1e)

The City of Oakland considers a significant wind impact to occur if a project were to "create winds exceeding 36 miles per hour (mph) for more than one hour during daylight hours during the year."

The Project would be limited to the existing building envelope and would not involve new building construction, additional building height, or changes to the existing facades that would create new winds or increase existing ground-level wind speeds. Therefore, the potential impacts of the Project regarding wind would be similar to, or less severe than, those identified in the 2014 LMSAP EIR and the Previous CEQA Documents considered in this analysis.

7.2.4 Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents, implementation of the Project would not substantially increase the severity of significant impacts identified in the 2014 LMSAP EIR or the Previous CEQA Documents, nor would it result in new significant impacts related to aesthetics, shadow, or wind that were not identified in the 2014 LMSAP EIR or the Previous CEQA Documents. **SCAs AES-1**, **Trash and Blight Removal**; **AES-2**, **Graffiti Control**; **AES-3**, **Landscape Plan**; **AES-4 Lighting**; **AES-5**, **Public Art for Private Development**; and **SCA UTIL-2**, **Underground Utilities** (see Attachment A) would be applicable to and would be implemented by the Project and would further ensure that aesthetics-related impacts would be less than significant. No mitigation measures are required.

7.3 Air Quality

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. During project construction result in average daily emissions of 54 pounds per day of ROG, NO_X, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; during project operation result in average daily emissions of 54 pounds per day of ROG, NO_X, or $PM_{2.5}$, or 82 pounds per day of PM_{10}; result in maximum annual emissions of 10 tons per year of ROG, NO_X, or $PM_{2.5}$, or 15 tons per year of PM_{10}; or	☒	☐	☐
b. For new sources of Toxic Air Contaminants (TACs), during either project construction or project operation expose sensitive receptors to substantial levels of TACs under project conditions resulting in (a) an increase in cancer risk level greater than 10 in one million, (b) a noncancer risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average $PM_{2.5}$ of greater than 0.3 microgram per cubic meter; or, under cumulative conditions, resulting in (a) a cancer risk level greater than 100 in a million, (b) a noncancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 microgram per cubic meter; or expose new sensitive receptors to substantial ambient levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 100 in a million, (b) a noncancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 microgram per cubic meter.	☒	☐	☐

7.3.1 Previous CEQA Documents Findings

Construction and Operational Emissions and Odors

The 1998 LUTE EIR identified mitigation measures that would address operational emissions effects to less-than-significant levels, and it found significant and unavoidable cumulative effects regarding increased criteria pollutants from increased traffic regionally. The 2011 Renewal Plan Amendments EIR found that emissions associated with construction and operations resulting from increased criteria pollutants would result in less-than-significant effects with implementation of SCAs. The 2011 Renewal Plan Amendments EIR also identified effective SCAs to address potentially significant effects regarding dust/particulate matter $(PM)_{10}$, odors, and consistency with the applicable regional clean air plan.

Toxic Air Contaminants

Analysis of Toxic Air Contaminants was not required when the 1998 LUTE EIR was prepared and thus the EIR did not quantify or address cumulative health risks. The 2011 Renewal Plan

Amendments EIR identified significant and unavoidable impacts regarding cumulative health risks after the consideration of SCAs.

7.3.2 2014 LMSAP EIR Findings

Adaptive reuse of the Oakland Civic Auditorium, which was identified as an asset to be retained, was contemplated and analyzed in the 2014 LMSAP EIR (see Figure 2.1-2 in the 2014 LMSAP EIR). The 2014 LMSAP EIR identified less-than-significant impacts regarding consistency with the current Bay Area 2010 Clean Air Plan (Clean Air Plan), with implementation of applicable SCAs. The 2014 LMSAP EIR also identified impacts associated with potential exposure of sensitive receptors to substantial health risks from toxic air contaminants (TACs) from sources including both diesel particulate matter (DPM) and gaseous emissions. The 2014 LMSAP EIR identified SCAs to reduce DPM exposure to less-than-significant levels, but risk from gaseous TACs (plan and cumulative level) would be a significant and unavoidable impact. The 2014 LMSAP EIR also identified potential impacts associated with the installation of back-up generators (a source of TACs) and identified SCAs to reduce the potential effect to less-than-significant levels.

The 2014 LMSAP EIR did not quantitatively assess criteria air pollutants from construction or operation, determining that such analysis shall be undertaken for specific projects, as applicable pursuant to the City of Oakland's thresholds of significance.

7.3.3 Project Analysis

The adaptive reuse of the Oakland Civic Auditorium was anticipated in the 2014 LMSAP EIR and the Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR.

Construction and Operational Emissions (Criterion 2a)

Construction Air Emissions

Methodology and Assumptions

The analysis presented below used the following methodology and assumptions to calculate the average daily construction emissions associated with the Project:[10]

- Construction emissions were estimated using CalEEMod (version 2016.3.2) assuming construction to begin in August 2018 and last for approximately 20 months.[11] The lengths of the various construction phases (e.g., demolition, grading, building construction, etc.) were provided by the Project Applicant;
- The number and types of construction equipment used for each phase, their activity level as well as the number of on-road vehicle trips (worker, vendor and hauling trips) during each phase were also provided by the Project Applicant;

[10] Construction and Operation emissions were based on a larger project proposed at the time of the analysis. It is likely that the volume of demolition and offhaul/import material will be less than what was modeled for the analysis resulting in slightly reduced construction emissions.

[11] Project construction is now estimated to start September 2019. A later construction start date is could result in more stringent regulations and slightly reduced construction emissions.

- Demolition of 25,000 square feet of existing structure within the buildings;
- Off-haul and import of 600 and 400 cubic yards of material, respectively.

Analysis

The average daily construction-related emissions for the Project, as estimated using CalEEMod based on the assumptions above, are presented in **Table AIR-1**. As shown in the table, annual average daily construction emissions for the Project would not exceed the City's Thresholds for ROG NO_x, PM_{10} or $PM_{2.5}$. These thresholds were developed to represent a cumulatively considerable contribution to regional air quality, and, as such, represent not only a project level threshold but a cumulative threshold as well. The 2014 LMSAP EIR did not quantitatively assess criteria air pollutants from construction. As shown in Table AIR-1, the Project would have less-than-significant project-level impacts with respect to construction emissions. The Project would be required to implement SCA AIR-1, Dust Controls – Construction-Related; SCA AIR-2, Criteria Air Pollutant Controls – Construction Related; and SCA AIR-3, Diesel Particulate Matter Controls – Construction Related during construction, which would further reduce emissions from criteria air pollutants. Therefore, the Project would not result in a new or more severe significant impact compared with the 2014 LMSAP EIR.

TABLE AIR-1
UNMITIGATED EMISSIONS FROM CONSTRUCTION (average lbs per day)[a, b]

Construction Year (phase)	ROG	NO_x	PM_{10}	$PM_{2.5}$
Project				
Average Daily Construction Emissions	12.4	24.9	0.9	0.9
City of Oakland Thresholds	54	54	82	54
Significant (Yes or No)?	**No**	**No**	**No**	**No**

[a] Project construction emissions estimates were made using CalEEMod, version 2016.3.2. Emissions are average daily pounds per day and are estimated by dividing the total construction emissions generated by the Project with the total number of construction workdays.
[b] Construction emissions were derived using a larger project that was proposed at the time of the analysis. It is likely that the volume of demolition and off haul/import material will be less than what was modeled for the analysis resulting in slightly reduced construction emissions.

SOURCE: ESA, 2018.

Operational Air Emissions

Methodology and Assumptions

The analysis presented below used the following assumptions to calculate the daily operational emissions associated with the Project:

- The vehicle trip generation rates include a reduction of 46.9 percent assumed based on the City's Guidelines for development in an urban environment within 0.5 miles of a BART station and on Census commute data for Alameda County from the 2014 5-Year Estimates of the American Community Survey. In addition, a further reduction in trips is assumed to account for pass-by trips associated with restaurant and retail uses (see Section 7.13, *Transportation and Circulation*, below);
- Default energy consumption rates reflecting 2016 update to Title 24, which became effective on January 1, 2017;

- All wastewater generated was assumed to be aerobically processed at EBMUD plant. Septic and lagoons contributions were set to a zero percentage;
- Twenty percent reduction in indoor water use was assumed for all uses to account for required compliance with the City's CalGreen code;
- All other inputs in CalEEMod were based on model default values; and
- At the time the analysis was conducted, two backup diesel generators were assumed pursuant to California Building Code Requirements for buildings in excess of 70 feet. The generators were assumed to have a rating of 750 kW-hr (1000 horsepower [hp]) and was assumed to be operated for testing and maintenance purposes for 1 hour per test day and a maximum of 50 hours per year. These generators are no longer proposed as a part of the Project.

Analysis

The daily operational emissions for the Project, based on the assumptions above, are presented in **Table AIR-2**. As shown in the table, annual average daily regional emissions for the Project would not exceed the City's thresholds for ROG, NOx, PM_{10} or $PM_{2.5}$. As with the construction thresholds, these thresholds were developed to represent a cumulatively considerable contribution to regional air quality and, as such, represent not only a project-level threshold but a cumulative threshold as well. The 2014 LMSAP EIR did not quantitatively assess criteria air pollutants from operation under the LMSAP. As shown in Table AIR-2, the Project would have less-than-significant project-level impacts with respect to operational emissions. It would not result in a new or more severe significant impact compared with the 2014 LMSAP EIR.

TABLE AIR-2
UNMITIGATED EMISSIONS FROM OPERATION (LBS PER DAY)[a]

	ROG	NO_x	PM_{10}	$PM_{2.5}$
Area Source Emissions (lbs/day)	7.8	<0.01	<0.01	<0.01
Energy Emissions (lbs/day)	0.2	1.9	0.1	0.1
Project Mobile Source Emissions[b] (lbs/day)	3.5	15.8	8.6	2.4
Backup Diesel Generators (lbs/day)	0.4	2.0	0.07	0.07
Average Daily Emissions (lbs/day)	**11.9**	**19.8**	**8.8**	**2.6**
City of Oakland Thresholds	54	54	82	54
Significant (Yes or No)?	**No**	**No**	**No**	**No**
Annual Emissions (tons/year)	**2.2**	**3.6**	**1.6**	**0.5**
City of Oakland Thresholds	10	10	15	10
Significant (Yes or No)?	**No**	**No**	**No**	**No**

NOTE: Totals may not add up due to rounding.

[a] Project operational emissions estimates were made using CalEEMod, version 2016.3.2. As noted above, backup diesel generators were assumed at the time this analysis was conducted. These generators are no longer proposed as a part of the Project.

[b] The vehicle trip rates used to calculate the emissions accounts for mode split and internal capture as recommended by the City of Oakland for projects located in dense, urban environments such as the project site. Trips rates were also reduced to account for pass-by trips (see Section 7.13, *Transportation and Circulation*, below).

[c] The technical analyses in this CEQA Checklist for air quality, including trip generation used to derive operational emissions, and portions of the traffic analysis rely on a more intensive land use scenario for the Arena as the basis of evaluation and thus provide a conservative analysis under CEQA. The more intensive land use is no longer under consideration by the City or Project Applicant and is not currently depicted in the Project Plans.

SOURCE: ESA, 2018.

Toxic Air Contaminants (Criterion 2b)

Assumptions and Methodology

Toxic Air Contaminants (TACs) are types of air pollutants that can cause health risks. TACs do not have ambient air quality standards, but are regulated using a risk-based approach. This approach uses a health risk assessment to determine what sources and pollutants to control as well as the degree of control. Such an assessment evaluates chronic, long-term effects, calculating the increased risk of cancer as a result of exposure to one or more TACs.

TACs generated during Project construction and operation are evaluated below. The City's CEQA significance thresholds require that new projects containing sensitive receptors (such as residences, schools, etc.) also be evaluated to determine whether those receptors would be exposed to health risks from nearby sources of TACs.[12] The Project does not proposed uses for sensitive receptors.

Analysis

Construction TAC Emissions. Project construction activities would produce TACs primarily as diesel particulate matter (DPM) and $PM_{2.5}$ emissions from the exhaust of diesel fueled construction equipment such as loaders, backhoes, cranes, etc., as well as heavy duty truck trips. These emissions could result in elevated concentrations of DPM and $PM_{2.5}$ at nearby receptors. Exposure of receptors in the vicinity of the project site to these elevated concentrations could lead to an increase in the risk of cancer or other health impacts. The 2014 LMSAP EIR also determined that sensitive receptors in proximity to construction-related DPM emissions (generally within 200 meters) could be subject to increased cancer risk, chronic health problems and acute health risk.

The Project's construction-related activities over the 20-month construction period would result in the generation of DPM from on-road heavy-duty trucks and off-road equipment. Due to the variable nature of construction activity, the generation of TAC emissions in most cases would be temporary, especially considering the short amount of time such equipment is typically within an influential distance that would result in the exposure of sensitive receptors to substantial concentrations.

Regarding construction TACs emissions, BAAQMD recommends that a Health Risk Assessment (HRA) be conducted when sensitive receptors are located within 1,000 feet of project construction activities. Closest sensitive receptors in the form of residential uses are located approximately 500 feet west of the project site. Scattered residences are also located along 8th Street approximately 700 feet southwest of the project site. The Lakeview Tower Apartments are located approximately 825 feet east and downwind of the project site. The La Escuelita Elementary School and the Laney Children's Center are also located within 1,000 feet to the southeast of the site. Consequently, a HRA was conducted to determine the level of risk generated by construction-related TACs at nearby receptors. The HRA also satisfies requirements of SCA AIR-3a(i).

[12] A California Supreme Court decision clarified that CEQA requires the analysis of potential adverse effects of a project on the environment; potential effects of the environment on a project are legally not required to be analyzed or mitigated under CEQA. However, this analysis assesses potential effects of "the environment on the project" in order to provide information to decision-makers.

In accordance with OEHHA's 2015 *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, the HRA applied the highest estimated concentrations of TACs at the receptors analyzed to established cancer potency factors and acceptable reference concentrations for non-cancer health effects. The maximum DPM concentration as modeled using USEPA's AERMOD dispersion model occurred at the residential receptors at the Lakeview Tower Apartments east of the project site. Though these receptors are farther away from the project site than the residences along 10th Street, due to their location downwind of the project site, they represent the Maximum Exposed Individual Receptor (MEIR). Increased cancer risks were calculated using the modeled maximum DPM concentrations and OEHHA-recommended methodologies for infant (third trimester through two years of age), child, and adult exposure.

Table AIR-3 shows that the cancer risk, chronic Hazard Index (HI) and $PM_{2.5}$ concentration at the MEIR from project-related construction activities for residential infant, child and adult receptors would not exceed the City's CEQA significance thresholds.

TABLE AIR-3
MAXIMUM HEALTH RISKS FROM PROJECT CONSTRUCTION

Health Risk at MEIR	Maximum Cancer Risk (in a million)	Chronic Risk (Hazard Index)	Maximum $PM_{2.5}$ concentration
Uncontrolled Scenario			
Residential Receptor - Infant	10.5	0.007	0.032
Residential Receptor - Child	2	0.007	0.032
Residential Receptor - Adult	0.3	0.007	0.032
Project-level Threshold	10	1.0	0.3
Significant?	**No**	**No**	**No**

SOURCE: ESA, 2018.

Therefore, the potential impact of the Project regarding exposure of existing receptors to construction related health risks would be less than significant and no additional reduction measures would be required per SCA AIR-3a(i).

The Project would also include demolition within the existing building totaling an area of approximately 25,000 square feet. The existing building may contain Asbestos Containing Materials (ACM) which could pose a health risk to workers and nearby receptors during demolition. Consistent with SCA AIR-4, the Project would comply with all applicable laws and regulations regarding demolition and renovation of ACM.

Operational TAC Emissions. For conservative purposes, backup diesel generators were assumed for the Project in some of the technical analysis. However, no backup diesel generators are required or proposed as a part of the Project. Therefore, there would be no new source of TACs associated with the Project.

Impact to Project Receptors. The Project would not include sensitive receptors and thus the cumulative TAC impact on Project receptors would be less than significant.

7.3.4 Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents considered throughout this analysis, the Project would not result in more severe significant impacts than identified in the 2014 LMSAP EIR or the Previous CEQA Documents, nor would they result in new significant impacts related to air quality that were not identified in the 2014 LMSAP EIR or the Previous CEQA Documents**.** Based on the analysis, with implementation of the applicable SCAs, the Project would not exceed any of the City's applicable significance thresholds related to air quality. Therefore, Project construction and operation would result in less-than-significant impacts relating to air quality, including health risk. Based on the health risk analysis above, implementation of the Project would result in less-than-significant impacts related to construction, operation, and cumulative TAC emissions; which were addressed in the 2014 LMSAP EIR and found to be significant and unavoidable. **SCA AIR-1**, **Dust Controls – Construction-Related**; **SCA AIR-2**, **Criteria Air Pollutant Controls - Construction Related**; **SCA AIR-3**, **Diesel Particulate Matter Controls-Construction Related**; and **SCA AIR-4**, **Asbestos in Structures** (see Attachment A) would be applicable to and implemented by the Project to further ensure that, to the extent feasible, air quality impacts associated with the Project are less than significant. Therefore, no mitigation measures are required.

7.4 Biological Resources

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; Have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means; Substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;	☒	☐	☐
b. Fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code [OMC] Chapter 12.36) by removal of protected trees under certain circumstances; or Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources.	☒	☐	☐

7.4.1 Previous CEQA Documents Findings

The Previous CEQA Documents identified less-than-significant impacts related to biological resources, with the 2011 Renewal Plan Amendments EIR identifying applicable City of Oakland SCAs. No mitigation measures were necessary.

7.4.2 2014 LMSAP EIR Findings

The 2014 LMSAP EIR identified 12 special status species that are known to have the potential to occur within the LMSAP Area. Within the Plan Area, Lake Merritt and the Lake Merritt Channel are places where there are particularly sensitive areas with regard to biological resources. However, the 2014 LMSAP EIR identified less-than-significant impacts related to biological resources with implementation of applicable SCAs. No mitigation measures were necessary.

7.4.3 Project Analysis

The adaptive reuse of the Oakland Civic Auditorium was anticipated in the 2014 LMSAP EIR and the Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR.

Special-Status Species, Wildlife Corridors, Riparian and Sensitive Habitat, Wetlands, Tree and Creek Protection (Criteria 3a and 3b)

The project site is located approximately 400 feet south of Lake Merritt and is adjacent to the Lake Merritt Channel. The project site, covered fully by an existing building and parking lot, does not contain vegetation and hydrological conditions suitable for sustaining wetlands, nor are any known special status species, or riparian or other sensitive habitats, present on the site. The Project is not located within an area mapped by the U.S. Fish and Wildlife Service as critical habitat for the Alameda whipsnake.

From a broader geographic perspective, the project site is located within the Pacific Flyway along the eastern shoreline of San Francisco Bay. The waters of San Francisco Bay provide valuable stopover habitat for migratory birds that forage and replenish energy stores during spring and fall migrations. The project site's proximity to Peralta Park and the channel connecting Lake Merritt to the Oakland Estuary provides suitable habitat for migratory birds. Open space, even in highly urbanized areas, attracts avifauna, and any habitat that could be used for foraging, roosting, or rest by birds on the wing (in flight), in proximity to buildings may increase the risk of bird collisions, particularly from large amounts of reflective or artificially lighted surfaces. Due to the surrounding urban setting, the Project is not expected to appreciably increase the overall amount of lighting, considering existing nighttime lighting conditions within the project site and surrounding development; however, avian collisions with glass or reflective surfaces used in the Project could result in injury or mortality.

Because glass is a part of the Project's exterior and the Project is located immediately adjacent to a substantially vegetated park larger than one acre (i.e., Peralta Park), the Project Applicant would be required to implement SCA BIO-1, Bird Collision Reduction Measures. These measures would reduce the potential for bird-building collisions to the maximum extent feasible by submitting a Bird Collision Reduction Plan for City review and approval. The Plan would protect birds by requiring implementation of Best Management Practices to reduce bird strike collisions, such as using bird-friendly glazing, avoidance of bird-friendly attractants near glass, reduction of light pollution, and other appropriate measures.

Many bird collisions are induced by artificial night lighting. The tendency of birds to move toward lights at night when migrating, and their reluctance to leave the sphere of light influences for hours or days once encountered, have been well documented.[13] Birds can become "trapped" by a light source and, disoriented, continue to fly around the source until they become exhausted and drop

[13] Gauthreaux, S.A., and C.G. Belser, 2006, Effects of Artificial Night Lighting on Migrating Birds (hereinafter referred to as Effects of Artificial Night Lighting). In: Rich, C., and T. Longhorn, Ecological Consequences of Night Lighting, Island Press, Covelo, CA, pp. 67-93.

to the ground, where they may be killed by predators[14] or die from stress or exhaustion. This is most likely to occur as a result of fixtures casting upward light radiation.[15] Light attraction in birds is positively related to light intensity, and studies have shown that reduction in lighting intensity and changing fixed lighting to a flashing or intermittent light system can dramatically reduce avian mortality at lighted structures.[16]

The Project would include the addition of two new lighted roof signs located on the north and south edges of the building's roof indicating the directions of the Arena and Theatre components of the building. The recessed roof signs would be 63 feet and 10 inches long by 11 feet and 3 inches high, several feet lower than the roof pitch and a significant reduction in size from the previously installed 1949 roof sign that totaled roughly 185 feet long by 21 feet high. The roof signs would include internally illuminated letters spelling "The Oakland Civic", "Arena", and "Theatre", and internally illuminated arrows. The internal lighting would be supplied by LED lamps. Each roof sign would also include two full color LED resolution screens of approximately 102 square feet per screen. The LED resolution screens will include a decorative cabinet perimeter of LED festoon lighting. No other external lamps, such as spot lights, will illuminate the roof signs. The roof signs would be illuminated from dusk until either 11 p.m. or one hour post event with reduced hours and/or illumination levels between dusk and dawn during the migratory bird season (February 15 to May 15 and August 15 to November 30).

The new roof signs would be consistent with the LMASP Design Guidelines and compatible with the existing building's architecture and character, as well as the character of existing buildings surrounding the Project. The Project roof signs would not include illuminated structures extending above the roofline or cast light, and would reduce lighting between dusk and dawn during the bird migration season. Therefore, the Project is not anticipated to interfere substantially with migrating birds and thus would not result in a significant impact to migrating birds. Nonetheless, mandatory light pollution measures would be implemented as part of compliance with SCA BIO-1, Bird Collision Reduction Measures, and would further reduce less-than-significant impacts.

Trees and vegetation suitable for nesting birds are present on the project site. The Project would remove all existing trees on the site according to a new landscape plan that includes planting 36 new trees. Therefore, the Project Applicant would be required to implement SCA BIO-2, Tree Removal During Bird Breeding Season. This SCA requires identification of any nesting birds during a pre-construction survey conducted within 14 days of the start of construction if the start of construction will occur during nesting birds season, as defined in SCA BIO-2. If the survey indicates nesting birds are present, measures within the SCA will ensure that, to the extent feasible, birds in existing trees at the project site during the nesting season are avoided and protected.

[14] Ogden, L.E., Collision Course: The Hazards of Lighted Structures and Windows to Migrating Birds, Special Report for the World Wildlife Fund and the Fatal Light Awareness Program, www.flap.org. September 1996.

[15] Reed, J.R., J.L. Sincock, and J.P. Hailman, 1985, Light Attraction in Endangered Procellariiform Birds: Reduction by Shielding Upward Radiation (hereinafter referred to as Light Attraction in Endangered Procellariiform Birds). The Auk 102:377–38.

[16] Jones, J., and C.M. Francis, 2003, The effects of light characteristics on avian mortality at lighthouses. Journal of Avian Biology 34:328–333.

The City of Oakland Code of Ordinances, Chapter 12.36 *Protected Trees* defines "protected trees" as a coast live oak (*Quercus agrifolia*) measuring four inches or greater diameter at breast height (dbh), or any other tree measuring nine inches or greater dbh, except Eucalyptus and Monterey pine (*Pinus radiata*). An ESA biologist conducted a tree survey on August 15, 2018 to determine whether any protected trees are present on project site. No coast live oaks or native groves of Monterey pines were identified during the survey; however, five southern magnolias (*Magnolia grandiflora*) with dbh of nine inches or greater were present in the center of the parking lot on the north side of the auditorium. The Project Applicant would be required to implement SCA BIO-3, Tree Permit, ensuring compliance with the City's Tree Protection Ordinance regulating tree protection during construction and any tree removal on the project site. In addition, the Project would install new street trees, as required, along all of the street frontages (see **Figure 2**).

The Project would also comply with SCAs relating to stormwater runoff from construction and operation including SCA HYD-1, Erosion and Sedimentation Control Measures for Construction; SCA HYD-2, State Construction General Permit; and SCA HYD-3, NPDES C.3 Stormwater Requirements for Regulated Projects (see Section 7.8, *Hydrology and Water Quality* below). Each of these measures contributes to protection and health of creeks and waterways downstream of the project site.

7.4.4 Conclusion

Based on an of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents, implementation of the Project would not substantially increase the severity of significant impacts identified in the 2014 LMSAP EIR or the Previous CEQA Documents, nor would it result in new significant impacts related to biological resources that were not identified in the 2014 LMSAP EIR or the Previous CEQA Documents. Because the project site does not possess any potential sensitive habitat or protected vegetation, certain SCAs identified in the 2014 LMSAP EIR would not pertain to the Project, such as those pertaining to creek protection or the Creek Protection Ordinance, or Alameda whipsnake protection measures. **SCA BIO-1**, **Bird Collision Reduction Measures**; **SCA BIO-2**, **Tree Removal During Bird Breeding Season**; **SCA BIO-3**, **Tree Permit**; **SCA HYD-1**, **Erosion and Sedimentation Control Measures for Construction**; **SCA HYD-2**, **State Construction General Permit**; and **SCA HYD-3**, **NPDES C.3 Stormwater Requirements for Regulated Projects** (see Attachment A) would be applicable to and would be implemented by the Project, and would further ensure that impacts related to biological resources would be less than significant. No mitigation measures are required.

7.5 Cultural Resources

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Cause a substantial adverse change in the significance of an historical resource as defined in CEQA Guidelines Section 15064.5. Specifically, a substantial adverse change includes physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be "materially impaired." The significance of an historical resource is "materially impaired" when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance **and** that justify its inclusion on, or eligibility for inclusion on an historical resource list (including the California Register of Historical Resources, the National Register of Historic Places, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5);	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;	☒	☐	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or	☒	☐	☐
d. Disturb any human remains, including those interred outside of formal cemeteries.	☒	☐	☐

7.5.1 Previous CEQA Documents Findings

The 1998 LUTE EIR identified potentially significant impacts to historic resources, and identified mitigation measures to reduce those impacts. The Oakland Civic Auditorium, listed as the Oakland Municipal Auditorium, was identified as a historic resource on the local register in the 1998 LUTE EIR. While the analysis did not specifically address potential impacts to the Oakland Civic Auditorium from any specific projects, both direct impacts as a result of development pressures to increase density along the identified transit corridors, and indirect impacts from new developments adjacent to historic resources were more broadly analyzed (Impacts G.3 and G.4). Historic Preservation Policies 1.3, 2.1, 2.4, 2.5, 2.5, 2.6, 3.4, and 3.5 from the 1994 Historic Preservation Element all support the preservation of historic buildings through listing of eligible resources, providing incentives for preservation, and guiding projects involving Landmarks and Preservation Districts to use the Secretary of the Interior's Standards for the Treatment of Historic Properties (SOI Standards). The analysis concluded that implementation of the prescribed mitigation measures in conjunction

with existing Historic Preservation Element policies would reduce the impacts of the 1998 LUTE on historic resources to less than significant.

The 2011 Renewal Plan Amendments EIR addressed much of the oldest part of Downtown Oakland and the Oakland Civic Auditorium is listed as a historic resource in the project area. However, no individual analysis of any specific project that involved this resource was included. The 2011 Renewal Plan was designed to facilitate redevelopment and the EIR analysis concluded that activities resulting from this Plan could result in the future demolition, destruction, relocation, or alteration of historical resources. It was noted that SCA 56, Property Relocation Rather than Demolition, and SCA 57, Vibrations Adjacent to Historic Structures would offer some level of protection. Mitigation Measure CUL-1, which implements Historic Preservation Element policy 3.8, describes various methods for protecting historical resources including avoidance, reuse or relocation; site-specific surveys; recordation and interpretation; and financial contribution (see Attachment A). This measure was included to reduce significant impacts to historic resources. Nonetheless, the EIR conservatively identified significant and unavoidable Plan and Cumulative impacts to historic resources, even with the implementation of mitigation measures.

Each of these Prior EIRs identified less-than-significant effects to archaeological and paleontological resources and human remains, specifically with the incorporation of City of Oakland SCAs, except that the LUTE EIR identified mitigation measures to reduce the effects to archaeological resources to less-than-significant levels.

7.5.2 LMSAP EIR Findings

The LMSAP EIR did not include a project-level analysis of historic resources, indicating project-level analysis shall be conducted for individual development projects in the LMSAP. As discussed below, the Project would adaptively reuse the Oakland Civic Auditorium following the SOI Standards for Rehabilitation, which falls within the anticipated outcome of the 2014 LMSAP EIR; however, the project details were not known at that time and were not fully analyzed.

The 2014 LMSAP EIR further determined that impacts to archaeological resources, paleontological resources, and human remains would be less than significant with the implementation of applicable SCAs. The 2014 LMPSAP EIR indicates that paleontological sensitivity of the geologic units underlying the Plan Area is considered to be low to moderate.

7.5.3 Project Analysis

Historical Resources (Criterion 4a)

Project Construction

While the Project does not plan to demolish the historic Oakland Civic Auditorium entirely, demolition of portions of the interior as well as new construction will be required as part of the adaptive reuse of the property. Construction activities could result in vibrations with the potential to damage the building as well as to the Oakland Museum of California, located adjacent to and west of the project site. SCA NOI-6, Vibration Impacts on Adjacent Historic Structures or Vibration-

Sensitive Activities (see Section 7.11, Noise), would be applicable to the Project. SCA NOI-6 would address potential direct impacts from construction activities such as excavation undermining existing foundations, construction equipment coming in contact with existing walls, demolition or other construction activities. As a part of implementing this SCA, the Project Applicant would be required to prepare a Historic Property Protection Plan in conjunction with construction plans. Compliance with SCA NOI-6 would ensure that project construction impacts to Historic Architectural Resources would remain equal to or less than those identified in the 2014 LMSAP EIR.

Project Operation

Methodology and Assumptions

The project site includes the Oakland Civic Auditorium, which is eligible for listing in the National Register of Historic Places and is considered a historical resource under CEQA. The Project would rehabilitate the Calvin Simmons Theatre, the theatre's ancillary spaces, and the two third-floor ballrooms while adaptively reusing the Arena and basement portions of the building for new uses including office and retail. On the exterior, new roof signs are proposed to be added to the north and south sides of the building, and a new podium would be added along the north side of the building to facilitate the new uses. It is the intention of the Project Applicant to use Federal Historic Tax Credits to partially fund the Project, and there is ongoing consultation with the State Historic Preservation Officer at the Office of Historic Preservation (OHP) and the National Park Service (NPS) in order to finalize the details of the Project. While several design details have not been finalized, the Project has been sufficiently developed in order to analyze potential CEQA impacts. In order to qualify for Federal Rehabilitation Tax Credits program a project must conform with the Secretary of the Interior (SOI) Standards for Rehabilitation. While a project's conformance with the SOI Standards is required to qualify for this program and assures a less-than-significant impact under CEQA, not conforming with the SOI Standards does not automatically result in a significant impact under CEQA. A significant impact under CEQA would occur if the Project were to cause a substantial adverse change in the significance of the historical resource. A substantial adverse change includes physical demolition, destruction, relocation, or alteration of the resource or its surroundings such that the significance of the historical resource would be "materially impaired." To determine if a resource would be "materially impaired" by a proposed project, the physical characteristics that convey historical significance and justify the eligibility of the resource for listing must be understood.

As a part of the Federal Tax Credit Application (Part 1) the Oakland Civic Auditorium was formally nominated to the National Register of Historic Places. A detailed description of the building was provided with the nomination and was used, along with OHP's review of the Part 2 application, to determine if the Project would result in a substantial adverse change to the Oakland Civic Auditorium. On June 13, 2018, OHP provided comments on the Part 2 submittal dated May 18, 2018, stating,

> Based on the information contained in this application and the Oakland Civic Auditorium (HJK) HPCA [Historic Preservation Certification Application] Part 2 Submittal Packet (dated 5/18/18), the project concept would appear consistent with the [Secretary of the Interior's] Standards, however the project description and drawings are not developed to the extent that a definitive determination on the overall project can be given at this time. Therefore,

> approval is limited to the information and conceptual design contained in this submittal…. It appears that the overall project may be able to be deemed to meet the Standards if the enclosed recommendations and conditions are successfully incorporated into the project and the work is further developed and detailed in accordance with the Standards.[17]

The OHP granted conditional approval of the conceptual design package with implementation of specific conditions or recommended design changes. Subsequent discussions with OHP have resulted in the addition of many of those necessary details needed to determine the Project's conformance with the SOI Standards.

On July 26, 2018, NPS also provided comments on the Part 2 submittal dated May 18, 2018. NPS confirmed OHPs conclusions and recommended design changes with a minor addition. NPS stated that the Project would meet the SOI Standards, provided that the conditions are met, and granted conditional approval for the conceptual design package.

Analysis and Conclusions

The following analyzes impacts from the Project on the Oakland Civic Auditorium, specifically the Oakland Civic Auditorium's eligibility as a historical resource. It addresses the major components of the building--the Calvin Simmons Theatre, the Arena and new south lobby, the basement, and the exterior—with a conclusion about the overall impact to the historical resource.

Calvin Simmons Theatre. The Calvin Simmons Theatre and associated ancillary spaces occupy approximately 60,300 square feet on the first, second, and third levels of the west side of the building. The majority of this space is occupied by the Theatre, the Olympic Room (3,500 square feet), the Gold Room (7,000 square feet), and the North Ballroom (9,000 square feet). All of these spaces would be maintained and rehabilitated with the Theatre continuing to accommodate live performances and events, the Gold Room and North Ballroom supporting performances, events, and rehearsals at the Theatre, and the Olympic Room being used for limited service restaurant and café space. On the ground floor, some non-historic risers that serve as the mounting surface for the current seats would be removed. A new floor would be placed over the existing concrete sub-floor to provide a base for an updated seat layout with improved accessibility and greater row spacing for exiting, and comfort. As conditioned by OHP and NPS, the new openings for the loge boxes would be no wider than the existing exit corridor openings.[18] Further consultation with OHP may modify these project elements to align the Project more closely with the SOI Standards; however, as designed, it would not materially impair the eligibility the resource and would not result in a significant impact.

Arena and New South Lobby. Alterations to the arena side of the building include a new south lobby, removal of some interior walls, restoration of windows, and new skylights.[19] The central door, currently a loading dock area, would open into a new south lobby space that would function as a reception area for the first floor and basement offices and program area. It would also connect to the Theatre stage door entrance and serve as secure access to the stage, green room and backstage

[17] OHP, Tax Credit Application Part 2 Submittal Comments, May 18, 2018.
[18] A loge box is a small, separated seating area in an auditorium for a limited number of people.
[19] The full scope of window restoration is dependent on individual existing window conditions. As with previous projects, window restoration is undertaken by a skilled team of carpenters and is repaired to be consistent with the SOI Standards.

areas. The CEQA Project assumes approximately 69,000 square feet of usable space could be adaptively reused within the arena area for office and possibly retail uses. As conditioned by OHP and NPS, the new south lobby would not protrude into the central arena space. On the second floor, a portion of the arena seating and partition walls would be removed, and the intermediate diagonal steel beams would be removed. The primary diagonal steel beams would remain. On the third floor, partition walls would be removed while the arena seating would remain. Finally, a portion of the roof would be removed to allow for new skylights within the area of the historic skylight, and coverings over existing windows along the east end wall would be removed to allow for window restoration as needed. Further consultation with OHP and NPS may modify these project elements to align the Project more closely with the SOI Standards; however, according to the requirements under CEQA, the Project as currently designed would not materially impair the eligibility of the resource and would not result in a significant impact.

Basement. The existing basement would be modified for new uses. The existing HVAC and other equipment would be removed to make room for the new HVAC equipment, structural upgrades, and accessibility. No portion of the basement is considered to convey the building's significance, and the proposed alterations to this space would therefore not significantly impact the historical resource. These project elements, as designed, would not materially impair the eligibility the resource and would not result in a significant impact.

Exterior and Site. Portions of the Project that involve the exterior of the building and the surrounding site include a new outdoor podium, alterations to the entry on the south façade, and hardscape/landscape improvements.

A new outdoor podium measuring approximately 11,000 square feet would be added along the north façade of the building. This outdoor podium would be designed for public uses. As conditioned by NPS, two formerly proposed glass enclosures on the podium are no longer under consideration. No physical damage to the north (primary) façade is expected from the construction of this new element.

For the south façade of the building, NPS and OHP included a condition that all existing historic architecture features, decorative elements, and finishes and/or materials be preserved in place. New lighting and other features on the south façade must be compatible in design with the historic light fixtures, but simpler and not match exactly to avoid creating a false sense of history.

The Project would include the addition of two new lighted roof signs located on the north and south facades of the building indicating the directions of the Arena and Theatre components of the building. The roof signs will be LED-bulbed with internally lit changeable lettering and will measure approximately 64 feet long by 11 feet 3 inches high, a significant reduction in size from the previously installed 1949 roof sign that totaled roughly 185 feet long by 21 feet high. The new roof signs would be consistent with the LMASP Design Guidelines (see Section 7.2.3, Aesthetics). Per the SOI Standards, the installation of the roof signs would be designed to be fully reversible. The galvanized steel roof sign structure would be attached to either wood blocking or wide flange beams that sit on top of the roof to protect the structure and provide for removal without damage to the roof.

NPS and OHP made recommendations in regard to the new railings and light fixtures as well as the hardscape/landscape. For example, the Project plans currently specify glass railings, and OHP recommended that pipe railings similar to what already exists be used to be compatible with the existing design. A redesign of the parking lot and hardscape was also recommended to make these areas "homogeneous and compatible with the character of the historic building and its setting (consider extending the south and east side sidewalk design to the north and west side of the building)." However, as designed, these project elements are considered relatively minor and would not materially impair the resource's ability to convey its significance as defined under CEQA.

While the Project would alter some of those physical characteristics that convey the significance of the resource, taken as a whole these changes would not materially impair the resource such that it could no longer convey that significance or be eligible as a historic resource. Therefore, the Project would have a less-than-significant impact per CEQA.

Consistency with Previous CEQA Documents

As stated above, the Oakland Civic Auditorium has been a designated City Landmark since 1979. It was identified as a historic resource on the Local Register in the 1998 LUTE EIR. Potentially significant impacts to historic resources were identified and mitigation measures established to reduce those impacts to a less than significant level. Based on the findings in this CEQA Analysis, the Project would not result in a new or more severe significant impact with respect to historic resources and thus would be consistent with the findings of the 1998 LUTE EIR.

As noted above, Mitigation Measure CUL-1 was adopted as part of the 2011 Renewal Plan Amendment EIR and also as a part of the 2014 LMSAP EIR for a portion of the Planning Area including the Project site. This measure includes multiple measures and approaches, some of which could reduce impacts on historic resources to a less than significant level, and others could reduce impacts on historic properties, but not to a less than significant level (see Attachment A). If avoidance is not feasible, as is the case with the Project, adaptive reuse following SOI Standards is the second option.

Also as noted above, the Project Applicant is finalizing the details of the Project with OHP and NPS seeking to qualify for Federal Rehabilitation Tax Credits, having already placed the building on the National Register of Historic Places and received a conditional approval of its conceptual design from the State Historic Preservation Office and National Park Service, who conclude the design conforms with the SOI Standards for rehabilitation. Conformance with the SOI Standards is required to qualify for this program and assures a less-than-significant impact under CEQA. However, not conforming with the SOI Standards does not mean the Project will result in a significant impact under CEQA. Mitigation Measure CUL-1 allows for multiple measures and approaches should conformance with the SOI Standards not be satisfied. Regardless, both the 2011 Urban Renewal Plan Amendments EIR and the 2014 LMSAP EIR conservatively identified significant and unavoidable impacts to historic resources such that even if the SOI Standards could not satisfied and the measures and approaches identified in Mitigation Measure CUL-1 would not reduce impacts on historic resources to a less than significant level, the Project would not result in a new or more severe significant impact with respect to historic resources and thus would be consistent with the findings of the 2011 Urban Renewal Plan Amendments EIR and the 2014 LMSAP EIR.

Archaeological and Paleontological Resources and Human Remains (Criteria 4b through 4d)

The Project would involve grading and removal of asphalt and dirt for landscaping and new concrete bands in the parking area; therefore, there is the potential to impact unknown archeological resources, as well as potential unknown paleontological resources or human remains, as noted in the 2014 LMSAP EIR and Previous CEQA Documents. SCA CUL-1, Archaeological and Paleontological Resources – Discovery During Construction, is applicable to all construction projects including the Project and would require all work within 50 feet of inadvertent discoveries of any subsurface archaeological materials to be halted and a qualified archaeologist or paleontologist hired to both assess the significance of the find, and deal with the find according to regulatory guidance. The 2014 LMSAP EIR identified six recorded archaeological resources within the LMSAP, and the Plan Area is considered to have a high potential for having additional, unrecorded Native American resources. Therefore, as noted in the 2014 LMSAP EIR, implementation of SCA CUL-2, Archaeologically Sensitive Areas – Pre-Construction Measures, would be applicable to the Project and would ensure that archaeological resources are recovered and that appropriate procedures are followed in the event of accidental discovery. Finally, implementation of the SCA CUL-1 and SCA CUL-3, Human Remains-Discovery During Construction, would require a qualified paleontologist to document a discovery and that appropriate procedures be followed in the event of a discovery, and would ensure that the appropriate procedures for handling and identifying human remains are followed.

7.5.4 Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents considered throughout this analysis, the Project would not result in any more severe significant impacts than those identified in the 2014 LMSAP EIR or the Previous CEQA Documents, nor would it result in new significant impacts related to cultural resources that were not identified in the 2014 LMSAP EIR or the Previous CEQA Documents. **Implementation of SCAs CUL-1**, **Archaeological and Paleontological Resources – Discovery During Construction**; **CUL-2**, **Archaeologically Sensitive Areas – Pre-Construction Measures**; **CUL-3**, **Human Remains – Discovery During Construction**; and **SCA NOI-6**, **Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities** (see Attachment A) would further ensure that potential impacts associated with cultural resources would be less than significant. No mitigation measures are required.

7.6 Geology, Soils, and Geohazards

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Expose people or structures to substantial risk of loss, injury, or death involving: • Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; • Strong seismic ground shaking; • Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, collapse; or • Landslides;	☒	☐	☐
b. Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007, as it may be revised), creating substantial risks to life or property; result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways.	☒	☐	☐

7.6.1 Previous CEQA Documents Findings

The Previous CEQA Documents identified that impacts to geology, soils, and geohazards would be less than significant, with the 2011 Renewal Plan Amendments EIR identifying applicable City of Oakland SCAs. No mitigation measures were necessary.

7.6.2 2014 LMSAP EIR Findings

The 2014 LMSAP EIR determined that with implementation of SCAs, impacts related to seismic hazards and unstable soils would be less than significant with development occurring under the LMSAP. No mitigation measures were necessary.

7.6.3 Project Analysis

The adaptive reuse of the Oakland Civic Auditorium was anticipated in the 2014 LMSAP EIR and the Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR.

Seismic Hazards, Expansive Soils, and Soil Erosion (Criteria 5a and 5b)

The existing Oakland Civic Auditorium has a steel frame and reinforced concrete structure. The Project would preserve the existing building envelope, seismically upgrade the existing building. The seismic upgrade will be minimal with work largely focusing on strengthening an existing shear wall between the Arena and the Theatre, the east wall, and the roof.

The site is flat and not located in a landslide area. The project site is, however, located within a liquefaction hazard area, as mapped by the California Geological Survey (CGS).[20] Therefore, SCA GEO-2, Seismic Hazard Zone (Landslide/Liquefaction) would be implemented which would require the Project Applicant to implement the recommendations contained in an approved site-specific geotechnical report during Project design and construction to reduce potential impacts related to liquefaction.

The Project would include grading of approximately 16,000 square feet of the adjacent surface parking lot and would require a grading permit. Therefore, per City of Oakland SCA HYD-1, the Project Applicant would be required to prepare an Erosion and Sedimentation Control Plan, the recommendations and provision of which the applicant will be required to implement.

The Project also would be required to comply with the Historic Building Code seismic standards, which require specific design parameters for construction in various seismic environments per City of Oakland SCA GEO-1, Construction-Related Permit(s), to ensure that development of the Project would avoid and minimize potential geologic impacts through compliance specifically with local, state, and national regulations governing design and construction practices. It is possible that unknown groundwater wells and abandoned structures (pits, mounts, septic tank vaults, sewer lines, etc.) could be present and disturbed during grading and construction activities, which would be appropriately addressed through implementation of SCAs applicable to the Project.

7.6.4 Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents considered in this analysis, the Project would not result in any new or more significant impacts related to geology and soils than those identified in the 2014 LMSAP EIR or the Previous CEQA Documents. Furthermore, implementation of **SCA GEO-1**, **Construction-Related Permit(s)**; **SCA GEO-2**, **Seismic Hazard Zone (Landslide/Liquefaction)**; and **SCA HYD-1**, **Erosion and Sedimentation Control Plan for Construction** (see Attachment A), would ensure that potential impacts associated with hazardous geologic and soils conditions would be less than significant. No mitigation measures are required.

[20] Association of Bay Area Governments, 2017. Resilience Open Data Portal, Liquefaction Study Zones. Available at: http://gis.abag.ca.gov/website/Hazards/?hlyr=cgsLiqZones. Accessed December 18, 2017.

7.7 Greenhouse Gas and Climate Change

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, specifically: • For a project involving a land use development, produce total emissions of more than 1,100 metric tons of CO_2e annually AND more than 4.64 metric tons of CO_2e per service population annually. The service population includes both the residents and the employees of the project. The project's impact would be considered significant if the emissions exceed BOTH the 1,100 metric tons threshold and the 4.6 metric tons threshold. Accordingly, the impact would be considered less than significant if the project's emissions are below EITHER of these thresholds.	☒	☐	☐
b. Fundamentally conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions.	☒		

7.7.1 Previous CEQA Documents Findings

Climate change and greenhouse gas emissions (GHG) were not expressly addressed in the 1998 LUTE EIR. The 2011 Renewal Plan Amendments EIR identified less-than-significant GHG impacts with the implementation of applicable City of Oakland SCAs. No mitigation measures were necessary.

7.7.2 2014 LMSAP EIR Findings

The 2014 LMSAP EIR included GHG emissions and impacts analyses. It identified less-than-significant impacts with the implementation of the applicable City of Oakland SCAs, and no mitigation measures were necessary. The 2014 LMSAP EIR determined that development occurring under the LMSAP would not generate greenhouse gas emissions, either directly or indirectly, that would have a significant impact on the environment at the plan level or at the project-level. The estimate of emissions from service population annually was less than the applicable significance threshold, and implementation of the LMSAP would not fundamentally conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions. The 2014 LMSAP EIR determined that development of specific projects under the Plan would be subject to all applicable regulatory requirements adopted for the purpose of reducing greenhouse gas emissions.

7.7.3 Project Analysis

The adaptive reuse of the Oakland Civic Auditorium was anticipated in the 2014 LMSAP EIR and the Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR.

Greenhouse Gas Emissions (Criterion 6a)

An analysis of the Project using the previously recommended May 2011 BAAQMD CEQA Guidelines and Thresholds was conducted and found that the Project would not result in a significant effect (cumulative) relating to GHG emissions, as shown below. Both BAAQMD and the California Air Pollution Control Officers Association (CAPCOA) consider GHG impacts to be exclusively cumulative impacts, in that no single project could, by itself, result in a substantial change in climate. Therefore, the evaluation of GHG emissions impacts evaluates whether the Project would make a considerable contribution to cumulative climate change effects.

Construction GHG Emissions

The total GHG emissions (construction and operation) for the Project is presented in **Table GHG-1**. The table present GHG emissions from all sources associated with the Project and assess the impact relative to City thresholds. The CalEEMod model runs for the Project (see Section 7.2, Air Quality, above) also calculated the GHG emissions that would be generated by construction activities associated with the Project. Construction-related emissions would total approximately 1,524 metric tons of CO_2 equivalents (CO_2e) during the entirety of the construction period. These emissions are annualized over an assumed project life of 40 years and factored into the total GHG emissions calculation to determine significance. The impact would be less than significant as detailed below.

TABLE GHG-1
PROJECT GHG EMISSIONS (METRIC TONS PER YEAR)[a]

Project Component	CO_2e
Project	
Area Source Emissions	<0.1
Energy Emissions[b]	575
Mobile Emissions[c]	1,487
Solid Waste	23
Water and Wastewater	48
Annualized Construction Emissions (Over 40 Years)	37
Total GHG Emissions	2,170
City of Oakland Screening Threshold	1,100
Service Population (residents and employees)	297
Total Emissions per Service Population	7.3
City Emissions per Service Population Threshold	4.6
Significant?	**Yes**

[a] Project operational emissions estimates were made using CalEEMod, version 2016.3.2.
[b] Assumes energy and utility assumptions conservatively factoring in 2008 Title 24 standards due to the age of the existing structure, actual PG&E emission factors, and compliance with City's waste reduction goals.
[c] GHG emissions from mobile sources relied on inputs from the Transportation Analysis by Fehr & Peers.

Operational GHG Emissions

Although some technical analyses in this CEQA Analysis assume the Project would include a backup diesel generator, this is no longer proposed as a part of the Project. Therefore, Project operations would not generate new emissions from stationary sources.

The Project would generate GHG emissions from many of the same sources as presented in air quality Tables AIR-1 and AIR-2 (see Section 7.2, Air Quality, above). Additionally, GHGs would be generated indirectly by increased electrical and water demand, and increased wastewater and solid waste generation. Though the project site is located within 0.5 miles of the Lake Merritt BART station, as it does not propose residential uses, the Project would not qualify as a transit priority project under Section 21155 of the *California Public Resources Code.* GHG emissions from mobile sources have therefore been included in the emissions inventory. Retail use is a more intensive land use with respect to GHG emissions. Therefore, the Optional Retail land use scenario is quantified below for this GHG analysis (see Table 2 in Section 5). These emissions are presented in **Table GHG-1** above to determine significance.

As shown in the table, the Project would exceed the City's threshold of 1,100 metric tons of CO_2e per year as well as the 4.6 metric tons of CO_2e per service population threshold. Therefore, the City's current SCA GHG-1, Greenhouse Gas Reduction Plan (GHGRP), would apply to the Project and a GHGPR would be required. As such, a GHGRP has been prepared for the Project and included as Appendix B. According to SCA GHG-1, the goal of the GHGRP for this Project is to increase energy efficiency and reduce GHG emissions to below at least one of the City's CEQA Thresholds of Significance (1,100 metric tons of CO_2e per year or 4.6 metric tons of CO_2e per year per service population). The GHGRP shall include, at a minimum, (a) a detailed GHG emissions inventory for the Project under a "business-as-usual" scenario with no consideration of Project design features, or other energy efficiencies, (b) an "adjusted" baseline GHG emissions inventory for the Project, taking into consideration energy efficiencies included as part of the project (including the City's Standard Conditions of Approval, proposed mitigation measures, project design features, and other City requirements), (c) a comprehensive set of quantified additional GHG reduction measures available to further reduce GHG emissions beyond the adjusted GHG emissions, and (d) requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented.

The Project GHGRP includes measures in addition to those required by state and local regulations to reduce GHG emissions. The GHGRP identified two additional available measures that would further reduce emissions:

- Transportation and Parking Demand Management Plan (TDM): As required by SCA TRA-4, the Project will implement a TDM program to reduce trips by 20%. The trips reduction will have a direct effect on running exhaust emissions from on-road vehicles. If trips are reduced by a different percentage, this reduction in emissions can be scaled linearly.
- Plug-In Electric Vehicle (PEV) Charging Infrastructure: As required by SCA TRA-6, the Project Plans will include the required PEV-ready and PEV-capable parking spaces per the requirements of Chapter 15.04 of the Oakland Municipal Code. The Project plans will show the location of future accessible Electric Vehicle Charging Station (EVCS) parking spaces as required

under Title 24 Chapter 11B Table 11B-228.3.2.1. Based on this table and the Project's proposed 187 parking spaces, the Project would require 1 van accessible EVCS, 5 standard EVCS, and 5 ambulatory EVCS for a total of 11 EVCS. The GHGRP identified 20 additional EVCS beyond the 11 EVCS required by Title 24 and SCA TRA-6, as an available measure to reduce emissions.

- On-Site Renewable Energy: The Project could include solar ready installations consistent with Title 24, Part 6, Building Energy Efficiency Standards Rulemaking Section 110.10. This standard will require that no less than 15 percent of the total roof area of the building be dedicated as a solar zone for the installation of a solar electric or solar thermal system. Given an approximate roof area of 75,000 square feet, the required solar zone would be approximately 11,250 feet. Such an area could accommodate 10,000 square feet of solar panels. GHG reductions associated with on-site solar electricity generation were estimated using the PVWATTS calculator of the National Renewable Energy Laboratory. The rule also allows for other areas to be used as a solar zone if the roof characteristics are ill-suited to accommodating a solar array. Specifically, the solar zone shall be located on the roof or overhang of the building or on the roof or overhang of another structure located with 250 feet of the building or on covered parking installed with the building project.

After accounting for additional reductions from these measures, the Project would not achieve GHG emissions below 4.6 MT CO_2e/SP/year. Preparation and implementation of the GHGRP establishes Project compliance with SCA GHG-1 and ensures Project GHG emissions are reduced to a less than significant level consistent with the findings of the 2014 LMSAP EIR.

Numerous other City of Oakland SCAs that would contribute to minimizing potential GHG emissions from construction and operations of development projects such as the Project pertain to landscaping plans and maintenance (SCA AES-3, Landscape Plan), alternative transportation facilities (bicycles) (SCA TRA-2, Bicycle Parking), construction equipment emissions (SCA AIR-2, Criteria Air Pollutant Controls – Construction Related; SCA AIR-3, Diesel Particulate Matter Controls-Construction Related), construction waste reduction and recycling (SCA UTIL-1, Construction and Demolition Waste Reduction and Recycling), as well as California Green Building Standards (SCA-UTIL-4, Green Building Requirements).

Consistency with GHG Emissions Plans and Policies (Criterion 6b)

The Project would comply with the Oakland Energy and Climate Action Plan, current City Sustainability Programs, and General Plan policies and regulations regarding GHG reductions and other local, regional and statewide plans, policies and regulations that are related to the reduction of GHG emissions and relevant to the Project.

Specifically, the Project would also be consistent with the State's Updated Climate Change Scoping Plan and the City of Oakland's Energy and Climate Action Plan and will include a number of sustainability design features. The Project Applicant intends to meet LEED Silver certification standards or equivalent and comply with the Green Building ordinance and requirements such as reduction in indoor and outdoor water use. The Project would optimize the efficiency of its building envelope, and through the use of efficient lighting and HVAC systems it would reduce energy use. The Project would meet the newly implemented Building Energy Efficiency Standards. Additionally, the Project would be located in area with diverse land uses and in proximity to transit services, which would reduce the number of vehicle trips and the associated GHG emissions

generated. Therefore, the Project would be considered to be consistent with all applicable goals, policies and regulations adopted to reduce GHG emissions. This impact would be less than significant consistent with the findings of the 2014 LMSAP EIR.

7.7.4 Conclusion

Based on the analysis above, the Project would exceed the City's thresholds for GHG emissions. With implementation of the City's SCAs, the Project would not result in a significant impact regarding GHG emissions or compliance with applicable plans, policies, or regulations adopted for the purposes of reducing greenhouse gas emissions. Implementation of SCA GHG-1, Greenhouse Gas Reduction Plan, would ensure a less-than-significant impact with the Project. In addition, implementation of **SCA AES-3**, **Landscape Plan**; **SCA AIR-2**, **Criteria Air Pollutant Controls – Construction Related**; **SCA AIR-3**, **Diesel Particulate Matter Controls-Construction Related**; **SCA TRA-2**, **Bicycle Parking**; **SCA TRA-4**, **Transportation and Parking Demand Management**; **SCA TRA-6**, **Plug-In Electric Vehicle (PEV) Charging Infrastructure**; **SCA UTIL-1**, **Construction and Demolition Waste Reduction and Recycling**; and **SCA UTIL-4**, **Green Building Requirements** (see Attachment A), would further ensure that impacts associated with greenhouse gas emissions would be less than significant. No mitigation measures are required.

7.8 Hazards and Hazardous Materials

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; Create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors; Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (i.e., the "Cortese List") and, as a result, would create a significant hazard to the public or the environment;	☒	☐	☐
b. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;	☒	☐	☐
c. Result in less than two emergency access routes for streets exceeding 600 feet in length unless otherwise determined to be acceptable by the Fire Chief, or his/her designee, in specific instances due to climatic, geographic, topographic, or other conditions; or Fundamentally impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	☒	☐	☐

7.8.1 Previous CEQA Documents Findings

The Previous CEQA Documents found less-than-significant effects regarding hazards and hazardous materials including risk of upset in school proximity and emergency response/evacuation plans, with the 2011 Renewal Plan Amendments EIR identifying applicable City of Oakland SCAs. The 1998 LUTE EIR identified mitigation measures to reduce potentially significant effects regarding exposing workers and the public to hazardous substances to less-than-significant levels. These mitigation measures are now incorporated into the applicable City of Oakland SCAs.

7.8.2 2014 LMSAP EIR Findings

The 2014 LMSAP EIR determined that with implementation of SCAs, impacts related to hazards and hazardous materials would be less than significant with development occurring under LMSAP. No mitigation measures were necessary.

7.8.3 Project Analysis

The adaptive reuse of the Oakland Civic Auditorium was anticipated in the 2014 LMSAP EIR and the Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR.

Exposure to Hazards, Hazardous Materials Use, Storage and Disposal (Criterion 7a)

Within the project vicinity, there are two listed leaking underground storage tank (LUST) Cleanup sites and one School Investigation site, of which none are active, or undergoing remediation. No cleanup sites were identified on the project site.[21,22] Apex Companies conducted a Phase I Environmental Site Assessment (ESA) for the project site in February of 2018.[23] Using records searches (standard, historical, and regulatory agency files) and site reconnaissance, the site assessment found no evidence of recognized environmental conditions at the project site and no further action (Phase II ESA) was recommended.[24] However, due to access limitations, lack of power, and poor lighting, it was not possible to fully inspect the six existing elevators during the site the reconnaissance. The Phase I ESA neither confirmed that these elevators are hydraulically driven nor inspected for leaks or staining associated with these elevators. The Project would include repair or replacement of the existing elevators and while environmental impacts associated with hydraulic elevators are often minor, the uncertainty around the elevators represents a data gap. The Project Applicant would be required to implement SCA HAZ-2, Hazardous Building Material and Site Contamination, which is partially fulfilled by the Phase I ESA prepared for the Project site (*b. Environmental Site Assessment Required*). In compliance with SCA HAZ-2, the Project Applicant would also submit a comprehensive and qualified assessment report to the City's Bureau of Building for review and approval prior to approval of demolition, grading, or building permits (*a. Hazardous Building Material Assessment*, see Attachment A). The assessment is required to include specifications for the stabilization and/or removal of any identified hazardous materials and will ensure associated construction activities are conducted in accordance with all applicable laws and regulations.

The Project uses include small-scale production of artisan and/or custom products, or general building storage, which could involve the transportation, use, and storage of a limited amount of hazardous materials. The transportation, use, and storage of all hazardous materials involved with the Project (construction and operation) would be required to follow the applicable laws and regulations adopted to safeguard workers and the general public, including preparation of a Hazardous Materials Management Plan and Hazardous Materials Business Plan, as required by Alameda County and the City of Oakland SCAs (SCA HAZ-3, Hazardous Materials Business Plan). Further, the Project Applicant would be required to implement SCA HAZ-1, Hazardous Material Related to Construction, to ensure best management practices are followed during construction

[21] State Water Resources Control Board (SWRCB), 2017. GeoTracker database. Available at: geotracker.waterboards.ca.gov/. Accessed December 19, 2017.

[22] California Department of Toxic Substances Control (DTSC), 2017. Envirostor database. Available at: http://www.envirostor.dtsc.ca.gov/public/. Accessed December 19, 2017.

[23] Apex Companies, LLC, 2019. Phase I Environmental Site Assessment conducted at Kaiser Convention Center 10 10th Street Oakland, Alameda County, CA, February, 5, 2018.

[24] Recognized Environmental Condition (REC) – the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to any release to the environment; 2) under conditions indicative of a release to the environment; or 3) under conditions that indicate pose a material threat of a future release to the environment.

activities. Since development of the Project would be subject to the SCAs pertaining to the handling of hazardous materials related to construction activities and project operation, and the remedial actions required when site contamination is encountered, consistent with the findings and conclusions of the 2014 LMSAP EIR, the potential impacts would be reduced to less-than-significant levels.

Hazardous Materials within a Quarter Mile of a School (Criterion 7b)

The project site is located adjacent to Laney College and within approximately 0.25 miles of several schools including Dewey Academy, La Escuelita Elementary School and Lincoln Elementary School; however, the Project would be required to comply with existing local regulations that require hazardous material handlers within 1,000 feet of a school or other sensitive receptor to prepare a Hazardous Materials Assessment Report and Remediation Plan.

Emergency Access Routes (Criteria 7c)

The Project would not significantly interfere with emergency response plans or evacuation plans. Construction adjacent to OMCA and Laney College may result in temporary road closures, which could require traffic control plans to ensure at least two emergency access routes are available for streets exceeding 600 feet in length, per the City of Oakland's Ordinances and General Plan Policies; however, the Project would not permanently change the surrounding streets or roadways. Further, the Project Applicant would comply with SCA TRA-1, Construction Activity in the Public Right-of-Way, which requires an obstruction permit from the City prior to approval of the construction-related permit.

7.8.4 Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents, the Project would not result in any new or more severe significant impacts related to hazards and hazardous materials than those identified in the 2014 LMSAP EIR or the Previous CEQA Documents. Implementation of **SCA HAZ-1**, **Hazards Materials Related to Construction**; **SCA HAZ-2**, **Hazardous Building Materials and Site Contamination**; **SCA HAZ-3**, **Hazardous Materials Business Plan**; and **SCA TRA-1**, **Construction Activity in the Public Right-of-Way** (see Attachment A) would further ensure that potential impacts associated with hazardous conditions would be less than significant.

7.9 Hydrology and Water Quality

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Violate any water quality standards or waste discharge requirements; Result in substantial erosion or siltation on- or off-site that would affect the quality of receiving waters; Create or contribute substantial runoff which would be an additional source of polluted runoff; Otherwise substantially degrade water quality; Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect hydrologic resources.	☒	☐	☐
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or proposed uses for which permits have been granted);	☒	☐	☐
c. Create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems; Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course, or increasing the rate or amount of flow, of a creek, river, or stream in a manner that would result in substantial erosion, siltation, or flooding, both on- or off-site	☒	☐	☐
d. Result in substantial flooding on- or off-site; Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, that would impede or redirect flood flows; Place within a 100-year flood hazard area structures which would impede or redirect flood flows; or Expose people or structures to a substantial risk of loss, injury, or death involving flooding.	☒	☐	☐

7.9.1 Previous CEQA Documents Findings

The Previous CEQA Documents found less-than-significant impacts related to hydrology or water quality, primarily given required adherence to existing regulatory requirements, many of which are incorporated in the City of Oakland's SCAs. The 2011 Renewal Plan Amendments EIR found less-than-significant effects regarding stormwater and 100-year flood hazard with implementation of applicable City of Oakland SCAs. The 1998 LUTE EIR acknowledged that areas considered under

that EIR could potentially occur within a 100-year flood boundary. Adherence to existing regulatory requirements that are incorporated in the City of Oakland's SCAs would address potentially significant effects regarding flooding. No mitigation measures were warranted.

7.9.2 2014 LMSAP EIR Findings

The 2014 LMSAP EIR determined that with implementation of SCAs impacts related to hydrology and water quality, groundwater, and flooding would be less than significant with development occurring under the LMSAP. No mitigation measures were necessary.

7.9.3 Project Analysis

The adaptive reuse of the Oakland Civic Auditorium was anticipated in the 2014 LMSAP EIR and the Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR. No mitigation measures were necessary.

Water Quality, Stormwater, and Drainages and Drainage Patterns (Criteria 8a and 8c)

Lake Merritt and its Channel are located adjacent to the project site. However, the Project would not directly impact the water quality for receiving water bodies by generating polluted runoff or soils. The Project would occur within the existing building envelope and would involve the reconfiguration of the parking lot and landscaping. The project site is approximately 4.79 acres and the proposed development would comply with numerous SCAs relating to stormwater runoff from construction. To comply with SCA HYD-1, Erosion and Sedimentation Control Plan for Construction, the Project Applicant will submit an Erosion and Sedimentation Control plan to the City for review and approval. SCA HYD-2, State Construction General Permit, requires the Project Applicant to prepare a Stormwater Pollution Prevention Plan and submit evidence of complying with the Construction General Permit issued by the State Water Resources Control Board (SWRCB). SCA GEO-1, Construction-Related Permit(s)), ensures compliance with construction-related codes including Oakland Grading Regulations.

The project site is currently approximately 85 percent covered with impervious surfaces (structure and parking lot). The Project would add approximately 9,300 square feet of new impervious surface (just under 5 percent) and thus SCA HYD-3, NPDES C.3 Stormwater Requirements for Regulated Projects, would apply. This SCA requires compliance with Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES) which will ensure Project stormwater runoff flow and duration will not exceed existing conditions.

As identified in the 2014 LMSAP EIR, the project site is not located within a flood hazard zone or tsunami-inundation zone. The Project would not utilize groundwater resources and would not substantially affect groundwater recharge. The Project also would not substantially alter existing drainage patterns, as the Project would occur within the existing building envelope and involves the reconfiguration of the existing parking lot and landscaping. In addition, per SCA UTIL-6, Storm Drain System, to the maximum extent practicable, peak stormwater runoff from the project site would be reduced by at least 25 percent compared to the pre-project condition.

Use of Groundwater (Criterion 8b)

Potable water is supplied by the East Bay Municipal Utility District (EBMUD), and groundwater is generally not considered potable and is not utilized in the public drinking water supply. The 2014 LMSAP EIR also assumed compliance with existing City practices, which are stated in the City of Oakland's SCAs that address all applicable regulatory standards and regulations pertaining to remediation and grading and excavation activities. The Project would adhere to these SCAs as they apply to the Project (see above) and therefore would have a less-than-significant impact with respect to water quality and groundwater supplies, as identified in the 2014 LMSAP EIR and the Previous CEQA Documents.

Flooding and Substantial Risks from Flooding (Criteria 8d)

The Project site is not located in either a 100-year or 500-year flood boundary.[25] In addition, the project site is not located near a levee or a dam. Therefore, the Project would not result in a significant impact with respect to flood-related risks.

7.9.4 Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents, implementation of the Project would not result in any new or more severe significant impacts related to hydrology and water quality, groundwater, or flooding than those identified in the 2014 LMSAP EIR or the Previous CEQA Documents. Implementation of **SCA HYD-1**, **Erosion and Sedimentation Control Plan for Construction**; **SCA HYD-2**, **State Construction General Permit**; **SCA HYD-3**, **NPDES C.3 Stormwater Requirements for Regulated Projects**; **SCA GEO-1**, **Construction-Related Permit(s)**; and **SCA UTIL-6**, **Storm Drain System** (see Attachment A) would ensure that potential impacts to hydrology and water quality would be less than significant. No mitigation measures are required.

[25] Federal Emergency Management Agency (FEMA), 2009. Flood Insurance Rate Map, Alameda County (Unincorporated Areas), Panel 67 of 725, Map Number 06001C0067G. August 3, 2009.

7.10 Land Use, Plans, and Policies

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Physically divide an established community;	☒	☐	☐
b. Result in a fundamental conflict between adjacent or nearby land uses; or	☒	☐	☐
c. Fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment.	☒	☐	☐

7.10.1 Previous CEQA Documents Findings

The 2011 Renewal Plan Amendments EIR, found less-than-significant impacts related to land use, plans, and policies, and no mitigation measures were warranted. The 1998 LUTE EIR, however, identified a significant and unavoidable effect associated with inconsistencies with policies in the Clean Air Plan (resulting from significant and unavoidable increases in criteria pollutants from increased traffic regionally). The 1998 LUTE EIR identified mitigation measures, which largely align with current City of Oakland SCAs involving Transportation Demand Management (TDM), and which apply to all projects within the City of Oakland.

7.10.2 2014 LMSAP EIR Findings

The 2014 LMSAP EIR determined that impacts related to land use and planning would be less than significant with development occurring under the LMSAP. No mitigation measures or City of Oakland SCA were required. Compliance with LUTE Policies Dl0.2, N5.2, and N8.2 would ensure that development under the LMSAP would not conflict with surrounding land uses; or with existing plans, policies, and regulations adopted for the purpose of mitigating an environmental effect.

The LMSAP includes Land Use Policy LU-15, *Kaiser Auditorium reuse*, specific to the project site, which aims to promote the reuse of the Oakland Civic Auditorium to activate the southern edge of the new Lake Merritt Boulevard and to complete the entertainment, educational, and cultural hub.

7.10.3 Project Analysis

The adaptive reuse of the Oakland Civic Auditorium was anticipated in the 2014 LMSAP EIR and the Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR.

Division of Existing Community, Conflict with Land Uses, or Land Use Plans (Criteria 9a through 9c)

The Project would rehabilitate the vacant Oakland Civic Auditorium to provide new uses while preserving the existing building envelope. Therefore, the Project would not physically divide an established community. The Project also would not result in a fundamental conflict with adjacent land uses. The restaurant/retail, office, Theatre, ballrooms, and other (artisan workshops, arts/music practice space, storage) land uses would be consistent and compatible with nearby institutional, recreational, and open space land uses. The Project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project site. The Project would renovate an existing building located wholly within the Central Business District (CBD) General Plan land use designation and the D-LM-4 Mixed Commercial Lake Merritt Station Area District. The intent of the D-LM-4 zone is to designate areas of the Lake Merritt Station Area Plan District appropriate for a wide range of residential, commercial, and compatible light industrial activities. The Project land uses would be consistent with LMSAP Land Use Policy LU-15, and promote entertainment and potentially educational uses.

7.10.4 Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and Previous CEQA Documents, the Project would not result in any new or more severe significant impacts related to land use and planning than those identified in the 2014 LMSAP EIR or the Previous CEQA Documents. The 2014 LMSAP EIR did not identify any mitigation measures related to land use, and no City of Oakland SCAs directly addressing land use and planning apply to the Project.

7.11 Noise

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts. During the hours of 7 p.m. to 7 a.m. on weekdays and 8 p.m. to 9 a.m. on weekends and federal holidays, noise levels received by any land use from construction or demolition shall not exceed the applicable nighttime operational noise level standard; Generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code Section 8.18.020) regarding persistent construction-related noise;	☒	☐	☐
b. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding operational noise;	☒	☐	☐
c. Generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or, if under a cumulative scenario where the cumulative increase results in a 5 dBA permanent increase in ambient noise levels in the project vicinity without the project (i.e., the cumulative condition including the project compared to the existing conditions) and a 3-dBA permanent increase is attributable to the project (i.e., the cumulative condition including the project compared to the cumulative baseline condition without the project);	☒	☐	☐
d. Expose persons to interior L_{dn} or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities (and may be extended by local legislative action to include single-family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24); Expose the project to community noise in conflict with the land use compatibility guidelines of the Oakland General Plan after incorporation of all applicable Standard Conditions of Approval (see Figure 1); Expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of the Occupational Safety and Health Administration [OSHA]); or	☒	☐	☐
e. During either project construction or project operation expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration (FTA).	☒	☐	☐

7.11.1 Previous CEQA Documents Findings

The 2011 Renewal Plan Amendments EIR identified less-than-significant effects related to roadway noise and found construction and operational noise impacts would be mitigated to a less-than-significant level with implementation of SCAs. The 1998 LUTE EIR identified mitigation measures to address potential noise conflicts between different land uses. Regarding construction noise, the 1998 LUTE EIR identified a significant and unavoidable construction noise and vibration impact in Downtown, even after the implementation of mitigation measures.

7.11.2 2014 LMSAP EIR Findings

The 2014 LMSAP EIR determined that with implementation of SCAs, construction and operation period noise would be less than significant with development occurring under the LMSAP. The 2014 LMSAP EIR determined that while activities occurring under the Plan could expose residential uses near construction to noise levels exceeding the General Plan standard of 80 and 85 dBA, construction of individual development projects implemented under the LMSAP would be temporary in nature and that associated impacts would be less than significant with implementation of applicable SCAs.

The 2014 LMSAP EIR also determined that operation-period noise associated with projects developed under the Plan would be less than significant, and that implementation of applicable SCAs would ensure that operation noise is reduced to a less-than-significant level.

7.11.3 Project Analysis

The adaptive reuse of the Oakland Civic Auditorium was anticipated in the 2014 LMSAP EIR and the Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR.

Construction and Operational Noise and Vibration, Exposure of Receptors to Noise (Criteria 10a, 10b, and 10e)

Construction Noise

Construction activities for the Project would be expected to occur over approximately 20 months and would entail demolition, renovations to the existing building reconfiguration of the parking lot, landscaping, and finishing interiors. Required implementation of applicable City of Oakland SCAs would minimize construction noise by limiting hours of construction activities, by requiring best available noise control technology and notification of any local residents of construction activities, and by tracking and responding to noise complaints. Specifically, Project construction would comply with the following SCAs: SCA NOI-1, Construction Days/Hours, limits construction hours mirroring Noise Ordinance requirements; SCA NOI-2, Construction Noise, requires projects to implement construction noise reduction measures; SCA NOI-3, Extreme Construction Noise, addresses extreme construction noise by requiring a Noise Management Plan and public notification of Project construction activities; and SCA NOI-4, Construction Noise Complaints, sets a protocol for receiving and addressing construction noise complaints from the public. A Construction Noise Management Plan has been prepared for the Project and is included as **Appendix C**.

In addition, as the Project would be adjacent to the Oakland Museum of California, which is a City of Oakland Designated Historic Property, the SCA pertaining to effects of vibration during construction on adjacent historic structures SCA NOI-6, Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities, would also apply to the Project.

With the implementation of these SCAs, construction noise impacts of the Project would be less than significant, as identified for the 2014 LMSAP EIR.

Operational Noise

Once operational, the Project would include stationary sources such as heating, ventilating, and air conditioning (HVAC) mechanical equipment. Stationary equipment would be located in the basement. Should it be located on the rooftop, it would be operated within the restrictions of the City's Noise Ordinance. Chapter 17.120.050 of the City of Oakland Planning Code specifies the maximum sound level received at residential, public open spaces and commercial land uses. Development of the Project would be required to comply with SCA NOI-5, Operational Noise, which ensures compliance with operational noise limits in the City's Noise Ordinance and would result in a less-than-significant impact with respect to noise from stationary sources on the project site.

Project and Cumulative Traffic Noise (Criterion 10c)

For operational noise impacts from Project-related traffic increase, the analysis relies on vehicle trip generation and distribution estimated for the Project. Based on the traffic analysis prepared by Fehr & Peers, traffic generated by the Project would be consistent with the traffic assumptions in the 2014 LMSAP EIR. As the amount of traffic generated by the Project is within the traffic generation parameters analyzed in the 2014 LMSAP EIR, as described below in Section 7.13, Transportation and Circulation, the Project would result in less than significant impacts consistent with the 2014 LMSAP EIR.

The 2014 LMSAP EIR determined that the segment of Lake Merritt Boulevard between 12th and 14th Streets running adjacent to the northern boundary of the project site would experience a greater than 5 dBA increase in cumulative noise from traffic. However, the 2014 LMSAP EIR found that the increase in traffic from development under the LMSAP would not result in a considerable contribution to this increase and the impact was found to be less than significant. The Project would generate traffic consistent with the assumptions in the 2014 LMSAP EIR and therefore the Project's contribution to cumulative noise increase in the area can also be considered less than significant.

Exposure to Project receptors (Criterion 10d)

Oakland's land use compatibility guidelines specify the community ambient noise level that would be considered "normally acceptable", "conditionally acceptable", "normally unacceptable" and "clearly unacceptable" for various uses. Based on Table 3.10-8 of the 2014 LMSAP EIR, the project site would be located within the 65 dBA contour for Lake Merritt Boulevard and the ambient noise level would therefore be considered "normally acceptable" for the uses proposed by the Project. Therefore, additional SCAs related to exposure to community noise would not be required and the impact would be considered less than significant and consistent with the findings of the 2014 LMSAP EIR.

7.11.4 Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and Previous CEQA Documents, implementation of the Project would not substantially increase the severity of impacts identified in the 2014 LMSAP EIR or Previous CEQA Documents, nor would it result in new significant impacts related to noise that were not identified in the 2014 LMSAP EIR and Previous CEQA Documents. Implementation of **SCA NOI-1**, **Construction Days/Hours**; **SCA NOI-2**, **Construction Noise**; **SCA NOI-3**, **Extreme Construction Noise**; **SCA NOI-4**, **Construction Noise Complaints**; **SCA NOI-5**, **Operational Noise**; and **SCA NOI-6**, **Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities** (see Attachment A) would be applicable and would be implemented with the Project, and would ensure that noise-related impacts associated with the Project would be less than significant.

7.12 Population and Housing

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Induce substantial population growth in a manner not contemplated in the General Plan, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extensions of roads or other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed;	☒	☐	☐
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element; or Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element.	☒	☐	☐

7.12.1 Previous CEQA Documents Findings

The Previous CEQA Documents, including the 2011 Renewal Plan Amendments EIR, found less-than-significant impacts related to population and housing, as well as employment. The 1998 LUTE EIR identified mitigation measures to address unanticipated employment growth (compared to regional ABAG projections), and no other mitigation measures were warranted.

7.12.2 2014 LMSAP EIR Findings

The 2014 LMSAP EIR determined that impacts related to population and housing would be less than significant with development occurring under the LMSAP. No mitigation measures or SCAs would be required. The 2014 LMSAP EIR assumes that associated growth in the number of households and population occurring from development under the LMSAP would be in line with regional growth projections, including ABAG's 2009 growth forecast for 2035, and would not result in unplanned population growth.

7.12.3 Project Analysis

The adaptive reuse of the Oakland Civic Auditorium was anticipated in the 2014 LMSAP EIR and the Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR.

Population Growth and Displacement of Housing and People (Criteria 11a and 11b)

The Project would rehabilitate the vacant Oakland Civic Auditorium, which contains no residential uses; therefore, the Project would not displace any housing or people. The Project would result in

approximately 210 office employees and 37 restaurant/retail employees.[26] An estimated 41 fulltime equivalent employment positions are estimated to be generated by the Theatre, ballroom, and other uses (artisan workshops, arts/music practice space).[27] Overall, the Project would generate an estimated total of approximately 297 employees. Construction of the Project also would involve temporary employees, and additional temporary employees may be necessary during operation of the Project for special events. The additional approximately 297 employees would not result in substantial growth beyond what was projected in the overall development program in the 2014 LMSAP EIR.

7.12.4 Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents, the Project would not result in any new or more severe significant impacts related to population and housing than those identified in the 2014 LMSAP EIR or the Previous CEQA Documents. The 2014 LMSAP EIR did not identify any mitigation measures related to population and housing, and none would be required for the Project. Nonetheless, the City's required **SCA POP-1**, **Jobs/Housing Impact Fee** (see Attachment A) applies to all projects involving construction of 25,000 square feet or more of new office space, including the Project, and would further reduce less-than-significant effects. Overall, the Project's potential impacts to population and housing would be less than significant. No mitigation measures are required.

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[26] This analysis assumes an employment density of one job per 400 square feet of office space and one job per 350 square feet of retail space, as established in the certified Lake Merritt Station Area Plan EIR (Table ES-1). Employment calculations are conservatively based on retail use for the 25,000 square feet of office/optional retails space on the 2nd floor of the Arena.

[27] Based on information provided by the Project Applicant, typical Theatre events with about 85 percent seated occupancy (approximately 1,275 attendees) are expected about four times a week and sold out events including both ballrooms (approximately 2,400 attendees) are expected about three times per year. Employment calculations are based on a conservative 0.039 employees per attendee for the Theatre and ballroom uses. Employment estimates for the artisan workshops, arts/music practice space were provided by the Project Applicant.

7.13 Public Services, Parks and Recreation Facilities

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: • Fire protection; • Police protection; • Schools; or • Other public facilities.	☒	☐	☐
b. Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or Include recreational facilities or require the construction or expansion of recreational facilities which might have a substantial adverse physical effect on the environment.	☒	☐	☐

7.13.1 Previous CEQA Documents Findings

The 2011 Renewal Plan Amendments EIR found less-than-significant impacts related to public services and recreational facilities; no mitigation measures were warranted nor City of Oakland SCAs identified. The 1998 LUTE EIR identified a significant and unavoidable impact for fire safety, with mitigation measures pertaining to the North Oakland Hills area; the 1998 LUTE EIR also identified a significant and unavoidable impact regarding increased student enrollment, particularly in Downtown (and the Waterfront), and identified mitigation measures that would not reduce the effect to a less-than-significant level. Thus, the impact was significant and unavoidable.[28]

7.13.2 2014 LMSAP EIR Findings

The 2014 LMSAP EIR determined that the increase in demand for public services (i.e., fire, police, and schools) and park and recreation services from development under the LMSAP would be less than significant. The Oakland Police Department and Fire Department would adjust service capacity as needed and the City is responsible for coordinating service provisions to adjust to the expected increase in demand for these services. New development, including the Project, is required to adhere to appropriate building and fire code requirements that would be incorporated

[28] The 1998 LUTE EIR addressed effects on solid waste demand and infrastructure facilities for water, sanitary sewer and stormwater drainage under *Public Services*. These topics are addressed in this document under *14. Utilities and Service Systems*, consistent with current City approach.

into Project construction. The Plan area is exceptionally well-served by libraries, and the LMSAP includes the creation of new parks and open spaces, and improved access to the regional parks system. Potential impacts to public services would be less than significant with implementation of SCAs. No mitigation measures or SCAs were required regarding recreation.

7.13.3 Project Analysis

The adaptive reuse of the Oakland Civic Auditorium was anticipated in the 2014 LMSAP EIR and the Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR.

Public Services and Parks and Recreation (Criteria 12a and 12b)

The Project would include approximately 196,300 square feet of commercial and entertainment use. Employees and visitors to the Project would increase demands on public services and recreation facilities, including Lake Merritt and Peralta Park which are both adjacent to the Project site to the north and to the east, respectively. However, the redevelopment activities would occur in an urban area already served by public services and recreation facilities. Further, the increase in demand was anticipated and analyzed in the 2014 LMSAP EIR and determined to result in a less-than-significant impact. Also, as noted above, the Prior EIRs determined that the anticipated growth would not impose a burden on existing public services to create a significant impact with the exception of fire safety pertaining to the North Oakland Hills area and increased student enrollment (1998 LUTE EIR). The Project site is not in the North Oakland Hills.

Compliance with standard City practices would further ensure the less-than-significant impact. These include City practices and requirements, such as the Oakland Fire Services' review of Project plans. City of Oakland SCAs incorporate most of these standard practices and requirements to address potential public services and park and recreation facilities impacts. The Project would comply with City of Oakland SCAs related to the increased need for fire protection by requiring all projects to implement safety features, and to comply with all applicable codes and regulations. The City's required SCA PUB-1, Capital Improvements Impact Fee, applies all projects subject to the Capital Improvements Impact Fee Ordinance per Oakland Municipal Code Chapter 15.74, and SCA REC-1, Access to Parks and Open Space, applies to all projects involving new construction adjacent to an existing open space such as parks, lakes, or the shoreline. Adherence to these SCAs would further reduce less-than-significant effects. In addition, adherence to the General Plan's Open Space, Conservation and Recreation Element policies 3.1, 3.3, and 3.10 would reduce potential impacts to recreational facilities. In addition, any increases in need for police protection, fire protection, schools, or other public facilities would be mitigated by adherence to General Plan policies N.12.1, N.12.2, N.12.5, FI-1, and FI-2.

7.13.4 Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents, the Project would not result in any new or more severe significant impacts related to public services and parks and recreation services than those identified in the 2014 LMSAP EIR and the Previous CEQA Documents. Implementation of **SCA PUB-1**, **Capital**

Improvements Impact Fee; and **SCA REC-1**, **Access to Parks and Open Space** (see Attachment A) would ensure that potential impacts to public services, parks and recreation facilities would be less than significant. No mitigation measures are required.

7.14 Transportation and Circulation

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths (except for automobile level of service or other measures of vehicle delay)	☒	☐	☐
b. Cause substantial additional vehicle miles traveled (VMT) per capita, per service population, or other appropriate efficiency measure	☒	☐	☐
c. Substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes) or by adding new roadways to the network.	☒	☐	☐

7.14.1 Previous CEQA Documents Findings

The Prior EIRs considered for this analysis identified significant and unavoidable impacts regarding intersection and/or roadway segment operations. Various mitigation measures and City of Oakland SCAs are identified (except in the 1998 LUTE EIR, which does not identify SCAs). Other transportation/ circulation effects identified in each document are reduced to a less than significant level with adherence to City of Oakland SCAs or mitigation measure, as follows.

The 1998 LUTE EIR identified significant and unavoidable impacts regarding degradation of the level of service (LOS) for several roadway segments citywide. A mitigation measure was identified for one Downtown intersection to reduce the intersection operations impacts to less than significant. All other topics were found less than significant. The 1998 LUTE EIR did not identify an impact at the intersections that are affected by the Project.

The 2011 Renewal Plan Amendments EIR identified significant and unavoidable impacts to roadway segment operations as well as railroad crossing safety, after the implementation of identified mitigation measures. The 2011 Renewal Plan Amendments EIR did not identify an impact in the area affected by the Project.

7.14.2 2014 LMSAP EIR Findings

The 2014 LMSAP EIR evaluated 45 intersections and 10 freeway segments within the vicinity of the LMSAP Area (including within the City of Alameda) for potential impacts. The thresholds of significance for the 2014 LMSAP EIR were based on vehicle level of service (LOS).

Under Existing Plus LMSAP Project conditions, significant LOS impacts at a total of seven intersections were identified during one or both peak hours. Impacts at three of these intersections would be reduced to a less-than-significant level with implementation of the recommended mitigation measures. However, impacts to the First Avenue and International Boulevard, Oak Street

and 10th Street, Oak Street and Sixth Street, and Jackson Street and Fifth Street intersections would be significant and unavoidable. Under Existing Plus LMSAP Project conditions, impacts to the I-880 freeway segment between Oak Street and Fifth Street would be significant and unavoidable. In addition, under Existing Plus LMSAP Project conditions, impacts related to pedestrian circulation at the Constitution Way and Marina Village Parkway, and Constitution Way and Atlantic Avenue intersections would be significant and unavoidable because these intersections are located in the City of Alameda and the City of Oakland does not have the authority to construct recommended improvements.

Under Interim 2020 Plus LMSAP Project conditions, significant unavoidable impacts were identified at a total of three intersections, including Jackson Street and Sixth Street, Oak Street and Sixth Street, and Oak Street and Fifth Street.

Under Cumulative 2035 Plus LMSAP Project conditions, significant unavoidable impacts were identified at a total of 13 intersections including: Madison Street and 14th Street; Madison Street and 11th Street; Madison Street and 10th Street; Oak Street and 10th Street; Harrison Street and Eighth Street; Jackson Street and Eighth Street; Oak Street and Eighth Street; Jackson Street and Seventh Street; Oak Street and Seventh Street; Fifth Avenue and Seventh Street/Eighth Street; Jackson Street and Sixth Street; Oak Street and Sixth Street; and Oak Street and Fifth Street. In addition, under Cumulative 2035 Plus LMSAP Project conditions, impacts to the segment of Oak Street between 2nd Street and Embarcadero would also be significant and unavoidable.

All the mitigation measures identified in the 2014 LMSAP EIR are included in the citywide Transportation Impact Fee (TIF), which will be used to fund the implementation of these mitigation measures.

Several SCAs related to transportation and circulation were identified as required to be implemented for projects developed under the LMSAP.

7.14.3 Project Analysis

The adaptive reuse of the Oakland Civic Auditorium was anticipated in the 2014 LMSAP EIR and the Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR.

Conflicts with Plans, Ordinances, or Policies Relating to Safety, or Performance of the Circulation System (Criterion a)

The Project is consistent with applicable plans, ordinances, and policies, and would not cause a significant impact by conflicting with adopted plans, ordinances, or policies addressing the safety and performance of the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths (except for automobile level of service or other measures of vehicle delay).

In accordance with SCA TRA-1, Construction Activity in the Public Right-of-Way, the Project would: (1) obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets, sidewalks, bicycle facilities, and bus

stops; (2) submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit; and (3) repair any damage to the public right-of way, including streets and sidewalks, caused by project construction. SCA TRA-5, Transportation Impact Fee, would ensure compliance with the requirements of the City of Oakland Transportation Impact Fee Ordinance (chapter 15.74 of the Oakland Municipal Code). SCA TRA-6, Plug-In Electric Vehicle (PEV) Charging Infrastructure, would also be applicable to the Project and would require that PEV-ready and PEV-capable parking spaces per the requirements of Chapter 15.04 of the Oakland Municipal Code are included in Project plans, and that the plans show the location of future accessible EV parking spaces as required under Title 24, Chapter 11B, Table 11B-228.3.2.1.

The LUTE, as well as the City's Public Transit and Alternative Mode and Complete Streets policies, states a strong preference for encouraging the use of non-automobile transportation modes, such as transit, bicycling, and walking. The Project would encourage the use of non-automobile transportation modes by providing a variety of uses with little parking in a dense, walkable urban environment that is well-served by local and regional transit.

The Project is consistent with both the City's Pedestrian Master Plan and Bicycle Master Plan as it would not make major modifications to existing pedestrian or bicycle facilities in the surrounding areas and would not adversely affect installation of future facilities, including the planned East Bay Greenway (EBGW) project, which would provide a continuous bikeway between the Lake Merritt BART Station in Oakland and Fremont. Adjacent to the Project, the EBGW would provide a two-way cycletrack on the south side of 10th Street. In addition, SCA TRA-2, Bicycle Parking, would be applicable to the Project and would ensure that the Project complies with the City of Oakland Bicycle Parking Requirements (chapter 17.118 of the Oakland Planning Code).

The Project would also implement SCA TRA-3, Transportation Improvements, which would include the recommended on- and off-site transportation-related improvements contained within the Transportation Impact Review for the Project. Further, because the Project would generate more than 50 peak hour trips, preparation and implementation of a Transportation and Parking Demand Management Plan (TDM Plan) is required that satisfies SCA TRA-4, Transportation and Parking Demand Management. The TDM Plan includes on-going operational strategies, as well as infrastructure improvements, that encourage the use of non-automobile travel modes (see Appendix D).

The Project site is located within the LMSAP area and as described below, the Project is consistent with the 2014 LMSAP EIR.

Overall, the Project would not conflict with adopted plans, ordinances, or policies addressing the safety and performance of the circulation system. This is a less-than-significant impact; no mitigation measures are required.

Consistency with the 2014 LMSAP EIR

The following analysis supports the conclusion that the Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR, providing the basis for use of an Addendum pursuant to CEQA Guidelines Section 15164. The

Project site is located within the LMSAP area and the 2014 LMSAP EIR assumed adaptive reuse of the Oakland Civic Auditorium. As noted in the 2014 LMSAP EIR, the Development Program represents the reasonably foreseeable development expected to occur in the next 20 to 25 years in the Plan area. The Specific Plan and the EIR intend to provide flexibility in the location, amount, and type of development. Thus, as long as the trip generation for the overall Plan area remains below the levels estimated in the EIR, the traffic impact analysis presented in the EIR continues to remain valid. Trip generation for the Project and the LMSAP are discussed below.

Project Trip Generation

The estimated number of vehicles that would likely access the Project on any given day (trip generation) is summarized in **Table TRA-1**. The trip generation includes both a typical and capacity event at the Calvin Simmons Theatre including ballroom uses. The detailed trip generation calculations and assumptions are provided in Appendix E.

TABLE TRA-1
PROJECT TRIP GENERATION SUMMARY

Project[1]	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
With typical event at the Theatre	2,450	99	45	144	377	101	478
With capacity event at the Theatre	2,930	99	45	144	590	112	702

[1] See Appendix E for more detail.

SOURCE: Fehr & Peers, 2018.

The trip generation for events at the Calvin Simmons Theatre was estimated separately because, based on information provided by the Project Applicant, typical events with about 85 percent seated occupancy (approximately 1,275 attendees) are expected about four times a week and sold out events including both ballrooms (approximately 2,400 attendees) are expected about three times per year.

Trip generation data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual* (Ninth Edition) was used as a starting point to estimate the vehicle trip generation for all of the Project uses, except for the entertainment/assembly venues (Calvin Simmons Theatre, Gold Room, and Ball Room). The ITE data is based on data collected at mostly single-use suburban sites where the automobile is often the only travel mode. However, the Project site is in a dense, mixed-use urban environment where many trips are walk, bike, or transit trips. Since the Project is about 0.2 miles from the Lake Merritt BART Station, the City of Oakland's *Transportation Impact Review Guidelines* (TIRG, April 14, 2017) recommends a 47-percent reduction from the ITE-based trip generation to account for non-automobile trips. This reduction is based on Census commute data for Alameda County from the 2014 5-Year Estimates of the American Community Survey (ACS), which shows that the non-automobile mode share for areas less than 0.5 miles from a BART Station is about 46.9-percent.

The trip generation also accounts for pass-by trips for the retail and restaurant components of the Project. Pass-by trips are trips attracted to a site from adjacent roadways as an intermediate stop on the way to a final destination. Pass-by trips alter travel patterns in the immediate study area, but do not add new vehicle trips to the roadway network, and should therefore be excluded from trip generation estimates.

The trip generation for event at the Calvin Simmons Theatre was estimated assuming a seated capacity of 1,500 attendees, a maximum capacity of 2,400 attendees (including both ballrooms), a non-automobile mode share of 46.9-percent, and an occupancy of 2.8 people per automobile based on observations at other similar events. Considering that most events would occur during evenings, the trip generation assumes that all the event attendees would arrive during the PM peak hour. It is estimated that a typical event at 85 percent seated occupancy (about 1,275 attendees) at the Theatre would generate about 540 daily and 250 PM peak hour automobile trips, and a capacity plus ballrooms event (about 2,400 attendees) at the Theatre would generate about 1,020 daily, and 480 PM peak hour automobile trips.

As summarized in Table TRA-1 trip generation during the AM peak hour would be about 144 trips, and trip generation during the PM peak hour would be about 478 trips with a typical event and 702 trips with a capacity event at the Theatre.

LMSAP Area Trip Generation

Since the approval of the 2014 LMSAP EIR, nine developments, including this Project, have been proposed and are in some stage of the City's approval process at this time. **Table TRA-2** summarizes the trip generation for these developments. The eight developments combined would generate about 12,812 daily, 784 AM peak hour, and 1,330 PM peak hour trips. As previously noted, typical conditions account for typical events with 85 percent seated occupancy at the Calvin Simmons Theatre, which are expected about four times per week.

The combined trip generation is less than the total trip generation estimated in the 2014 LMSAP EIR. Since the Project uses are consistent with the assumptions in 2014 LMSAP EIR and the Project, combined with the other approved projects, would generate fewer automobile trips than assumed in 2014 LMSAP EIR, the Project would not result in additional impacts on traffic operations at the intersections analyzed in the 2014 LMSAP EIR.

Vehicle Miles Travelled (VMT) Assessment (Criterion b)

On September 21, 2016, the City of Oakland's Planning Commission directed staff to update the City of Oakland's California Environmental Quality Act (CEQA) Thresholds of Significance Guidelines related to transportation impacts in order to implement the direction from Senate Bill 743 (Steinberg 2013) to modify local environmental review processes by removing automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, as a significant impact on the environment pursuant to CEQA. The Planning Commission direction aligns with draft proposed guidance from the Governor's Office of Planning and Research (OPR) and the City's approach to transportation impact analysis, with adopted plans and policies related to transportation that promote the reduction of greenhouse gas emissions, the

TABLE TRA-2
TRIP GENERATION FOR DEVELOPMENT PROJECTS WITHIN THE LMSAP AREA

Project Name	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
378 11th Street (Hampton Inn)[1]	580	26	18	44	23	23	46
250 14th Street[2]	738	11	41	52	43	25	68
226 13th Street[3]	1,285	19	64	83	72	46	118
301/385 12th Street (W12)[4]	2,202	-16	80	64	127	71	198
Lakehouse Commons[5]	809	19	41	60	40	25	65
1314 Franklin Street[6]	3,070	69	173	242	170	94	264
325 7th Street[7]	1,198	36	59	95	58	35	93
0 Fallon Street[8]	180	3	8	11	9	5	14
Project (Typical Conditions)[9]	2,450	99	45	144	377	101	487
Total Projects Trips	**12,512**	**266**	**529**	**795**	**668**	**919**	**1,344**
LMSAP Estimated Trip Generation	26,837	1,370	725	2,095	996	1,399	2,395
Percent Complete	*47%*	*19%*	*73%*	*38%*	*92%*	*30%*	*56%*

1 Source: *378 11th Street, Oakland, CA* letter (June 2015)
2 Source: *14th and Alice Residential Project – Transportation Assessment* (January 2016)
3 Source: 226 *13th Street Project –Transportation Assessment* (March 2016)
4 Source: W12 Mixed-Use Project CEQA Analysis (July 2016)
5 Source: *Lakehouse Commons Project – Transportation Assessment* (May 2016)
6 Source: *1314 Franklin Street Mixed-Use Project CEQA Analysis* (March 2017)
7 Source: Modified 325 7th Street Project CEQA Analysis (July 2017)
8 Estimated assuming that the project would consist of 58 residential units.
9 See Table TRA-1 for more detail. Trip generation assumes a typical event with 1,275 attendees at the Calvin Simmons Theatre.

SOURCE: Fehr & Peers, 2018.

development of multimodal transportation networks, and a diverse set of land uses. Consistent with the Planning Commission direction and the Senate Bill 743 requirements, the City of Oakland published the revised TIRG on April 14, 2017 to guide the evaluation of the transportation impacts associated with land use development projects.

Many factors affect travel behavior, including density of development, diversity of land uses, design of the transportation network, access to regional destinations, distance to high-quality transit, development scale, demographics, and transportation demand management. Typically, low-density development that is located at a great distance from other land uses, in areas with poor access to non-single occupancy vehicle travel modes generate more automobile travel compared to development located in urban areas, where a higher density of development, a mix of land uses, and travel options other than private vehicles are available.

Given these travel behavior factors, most of Oakland has lower VMT per capita and VMT per worker ratios than the nine-county San Francisco Bay Area region. Further, some neighborhoods of the City have lower VMT ratios than other areas of the City.

VMT Assessment Overview/ Estimate Approach

To fully analyze the impacts of the Project on VMT, this analysis uses the following approaches to evaluate the potential impact of each of the variety of uses proposed for the Project.

- For all uses, except the retail/restaurant spaces, the music/arts practice rooms, and the entertainment venues; a screening analysis based on the Metropolitan Transportation Commission (MTC) Travel Model is used to determine the impact of these project components on VMT. Per City of Oakland's TIRG, the artisan/custom goods production space (which can be considered as production, distribution and repair (PDR) space) is treated as office.
- The retail/restaurant uses are under 80,000 square feet, and the music/arts practice rooms are considered local serving and not expected to contribute to an increase in VMT because they are small uses intended to primarily serve the needs of the surrounding neighborhoods. Thus, they are presumed to have a less than significant impact on VMT.
- For the entertainment venues, a qualitative approach is used to assess VMT because the travel demand models described above would not accurately estimate the Project's entertainment venue related VMT. As described below, this method is supported by the Governor's Office of Planning and Research (OPR).

MTC Travel Model

As described above, the MTC Model is used in the VMT analysis. Oakland is geographically broken down into transportation analysis zones, or TAZs. The MTC Travel Model includes 116 TAZs within Oakland that vary in size from a few city blocks in the downtown core, to multiple blocks in outer neighborhoods, to even larger geographic areas in lower density areas in the hills. TAZs are used in transportation planning models for transportation analysis and other planning purposes.

The MTC Travel Model is a model that assigns all predicted trips within, across, or to or from the nine-county San Francisco Bay Area region onto the roadway network and the transit system, by mode (single-driver and carpool vehicle, biking, walking, or transit) and transit carrier (bus, rail) for a particular scenario.

The travel behavior from the MTC Travel Model is modeled based on the following inputs:

- Socioeconomic data developed by the Association of Bay Area Governments (ABAG);
- Population data created using the 2000 US Census and modified using the open source PopSyn software;
- Zonal accessibility measurements for destinations of interest;
- Travel characteristics and automobile ownership rates derived from the 2000 Bay Area Travel Survey; and
- Observed vehicle counts and transit boardings.

The daily VMT output from the MTC Travel Model for residential and office uses comes from a tour-based analysis. The tour-based analysis examines the entire chain of trips over the course of a day, not just trips to and from the Project site. In this way, all of the VMT for an individual resident

or employee is included; not just trips into and out of the person's home or workplace. For example: a resident leaves her apartment in the morning, stops for coffee, and then goes to the office. In the afternoon she heads out to lunch, and then returns to the office, with a stop at the drycleaners on the way. After work, she goes to the gym to work out, and then joins some friends at a restaurant for dinner before returning home. The tour-based approach would sum the total amount driven and assign the daily VMT to this resident for the total number of miles driven on the entire "tour".

Based on the MTC Travel Model, the regional average daily VMT per capita is 15.0 under 2020 conditions and 13.8 under 2040 conditions, and the regional average daily VMT per worker is 21.8 under 2020 conditions and 20.3 under 2040 conditions.

Thresholds of Significance for VMT

The following are thresholds of significance related to substantial additional VMT:

- For residential projects, a project would cause substantial additional VMT if it exceeds existing regional household VMT per capita minus 15-percent.
- For office projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per worker minus 15-percent.
- For retail projects greater than 80,000 square feet, a project would cause substantial additional VMT if it results in a net increase in total citywide VMT per service population.

Screening Criteria

VMT impacts would be less than significant for a project if any of the identified screening criteria are met:

1. Small Projects: The project generates fewer than 100 vehicle trips per day.
2. Low-VMT Areas: The project meets map-based screening criterion by being located in an area that exhibits VMT below threshold, or at least 15% below the regional average.
3. Near Transit Stations: The project is located in a Transit Priority Area or within a one-half mile of a Major Transit Corridor or Stop[29] and satisfies the following:
    - Has a Floor Area Ratio (FAR) of more than 0.75;
    - Includes less parking for use by residents, customers, or employees of the project than other typical nearby uses, or more than required by the City (if parking minimums pertain to the site) or allowed without a conditional use permit (if minimums and/or maximums pertain to the site); and
    - Is consistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the MTC).

The VMT assessment for various component of the Project is described below.

[29] Major transit stop is defined in CEQA Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

Office and Production Space VMT Impact Analysis Screening

Per direction provided in the TIRG, production space shall be treated as office space when evaluating VMT. Therefore, the combination of office and production use is evaluated as office use to assess potential impacts on VMT. Per direction provided in the TIRG, the regional VMT per worker minus 15-percent is used as the threshold of significance for office use. These components of the Project satisfy the Low-VMT Area (#2) and Near Transit Stations (#3) criteria as described below.

Criterion #1: Small Projects

The Project would generate more than 100 trips per day and therefore would not meet criterion #1.

Criterion #2: Low-VMT Area

Table TRA-3 describes the 2020 and 2040 VMT for TAZ 946 in the MTC Model, the TAZ in which the Project is located, as well as the applicable VMT thresholds of 15-percent below the regional average. As shown in Table TRA-3, the 2020 and 2040 average daily VMT per worker in the Project TAZ is below the regional average minus 15-percent. The Project would not exceed VMT more than 15-percent below the regional averages and would be less-than-significant for the office and production space components of the Project.

TABLE TRA-3
DAILY VEHICLE MILES TRAVELED PER CAPITA

	Bay Area				TAZ 946	
	2020		2040			
Land Use	Regional Average	Regional Average minus 15%	Regional Average	Regional Average minus 15%	2020	2040
Office (VMT per worker)[1]	21.8	18.5	20.3	17.3	18.5	16.7

[1] MTC Model results at analytics.mtc.ca.gov/foswiki/Main/PlanBayAreaVmtPerWorker and accessed in September 2018.

SOURCE: Fehr & Peers, 2018

Criterion #3: Near Transit Stations

The Project would be located about 0.2 miles from the Lake Merritt BART Station and within 0.5 miles of frequent bus service along Lake Merritt Boulevard/International Boulevard (Line 1 with 8-minute peak headways), and at the Lake Merritt BART Station (Lines 14, 18, 33, 62, and 88 with 15-minute peak headways). The Project would satisfy Criterion #3 because it would meet the following three conditions for this criterion:

- The Project has an FAR of more than 0.75.
- The Project is estimated to provide 187 off-street parking spaces. The Project is located in the D-LM-4 zone, and City of Oakland Planning Code (Sections 17.116.080) requires minimum of no parking and maximum of 296 parking spaces (see Appendix E). The number of parking spaces provided by the Project would be below the maximum parking supply allowed by the Planning Code. The existing loading berth along 10th Street will remain and the project applicant will provide the required number of long-term and short-term bicycle parking spaces within the project site and at within 50 feet of the main entryways.

- The Project is located within the Downtown & Jack London Square Priority Development Area (PDA) as defined by Plan Bay Area, and is therefore consistent with the region's Sustainable Communities Strategy.

VMT Screening Conclusion

The office and production components of the Project would satisfy the Low-VMT Area (#2) and the Near Transit Stations (#3) criteria and are therefore presumed to have a less–than-significant impact on VMT.

Entertainment Venue VMT Analysis

Due to its relatively unique use and size, VMT per capita for the entertainment component of the Project cannot be assessed using the screening criteria or the regional travel demand models used for the other components of the Project. However, it is estimated that the VMT per attendee for the Theatre component of the Project would be lower than similar uses in the region, as qualitatively described below.[30]

The Project is located in a low VMT generating area. As shown in Table TRA-3, the Project TAZ has a lower VMT per worker than the region. Similarly, the Project TAZ has a lower VMT per resident than the region (the Project TAZ has a VMT per capita of 5.0 compared to the regional average of 15.0).[31] As shown in the previous sections, the other components of the Project would have a lower VMT metric than the region.

The Project area has a low VMT because it is a dense, mixed-use urban environment with limited and priced parking supply, good transit service (Lake Merritt BART Station is about a 5-minute walk, Jack London Square Amtrak station is about a 15-minute walk, and several AC Transit lines operate within 0.5 miles of the site), and pedestrian and bicycle infrastructure (examples include sidewalks on both sides of the streets serving the site, buffered bike lanes on 10th Street, Class 2 bike lanes on Lake Merritt Boulevard, and a Class 1 path adjacent to Lake Merritt). As a result, many trips in the Project area are walk, bike, or transit trips. Similar to the other components of the Project, many Theatre attendants are expected to use these facilities to travel to and from the site.

In addition, there is a large population that would be in the Project area regardless of the events at the Theatre that can be potential attendees at the site. These consist of about 90,000 workers and about 25,000 residents in downtown Oakland, and about 11,000 students at Laney Community College, which is located across 10th Street from the Project site.

Furthermore, most events at the Theatre are expected to start during or right after the evening peak congestion period. Considering the high level of traffic congestion on the regional roadways providing access to the site, such as I-880 and I-80, it is estimated that many attendees would be incentivized to use public transportation to avoid the expected congestion.

[30] The *Final Proposed Updates to the CEQA Guidelines* (OPR, November 2017), Section 15064.3(b)(3) recognizes that it may not be possible to quantitatively estimate VMT for some project types, and encourages the evaluation of factors such as the availability of transit, proximity to other destinations, and other factors that may affect the amount of driving required by a project.

[31] https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=5dac76d69b3d41e583882e146491568b

Since the proposed Theatre is located in a low VMT-generating area, it is expected that similar to the other components of the Project, the VMT per attendee for the Theatre would be lower than similar uses in the region.

VMT Analysis Conclusion

All the components of the Project would have a less than significant impact on VMT; no mitigation measures are required.

Induced Automobile Travel (Criteria c)

The Project would not modify the roadway network surrounding the project site. Therefore, it would not increase the physical roadway capacity and would not add new roadways to the network, and would not induce additional automobile traffic. This is a less-than-significant impact; no mitigation measures are required.

7.14.4 Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents, implementation of the Project would not increase the severity of significant impacts identified in the 2014 LMSAP EIR or the Previous CEQA Documents, nor would it result in new significant impacts related to transportation and circulation that were not identified in the 2014 LMSAP EIR or the Previous CEQA Documents, as summarized below.

The Project would contribute trips to the significant impacts previously identified in the 2014 LMSAP EIR. However, as noted above, the total cumulative development contemplated and approved within the 2014 LMSAP EIR is substantially larger than that which is currently proposed and under consideration within the Specific Plan Area. The impacts of the Project are considered equal to, or less severe than, those previously identified and disclosed in the 2014 LMSAP EIR.

The project's potential impacts related to pedestrian, bicycle, transit, emergency access, and design and incompatible use considerations would be less than significant and thus consistent with that identified in the 2014 LMSAP EIR. The Project would not result in any other transportation related significant impacts.

Further, implementation of **SCA TRA-1**, **Construction Activity in the Public Right-of-Way**; **SCA TRA-2**, **Bicycle Parking**; **SCA TRA-3**, **Transportation Improvements**; **SCA TRA-4**, **Transportation and Parking Demand Management**; **SCAT RA-5**, **Transportation Impact Fee;** and **SCA TRA-6**, **Plug-In Electric Vehicle (PEV) Charging Infrastructure**, would be applicable to the Project and would ensure that transportation and circulation-related impacts associated with the Project would be less than significant (see Attachment A). No mitigation measures would be required. Overall, with implementation of applicable SCAs, the Project would not result in new or more severe significant impacts related to transportation and circulation than those already analyzed and disclosed in the 2014 LMSAP EIR.

7.15 Utilities and Service Systems

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board; Require or result in construction of new storm water drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects; Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects;	☒	☐	☐
b. Exceed water supplies available to serve the project from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects;	☒	☐	☐
c. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects; Violate applicable federal, state, and local statutes and regulations related to solid waste;	☒	☐	☐
d. Violate applicable federal, state and local statutes and regulations relating to energy standards; or Result in a determination by the energy provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects.	☒	☐	☐

7.15.1 Previous CEQA Documents Findings

The 2011 Renewal Plan Amendments EIR found less-than-significant impacts related to water, wastewater, or stormwater facilities, solid waste, and energy finding no mitigation measures were warranted but adhering to certain City of Oakland SCAs. The 1998 LUTE EIR identified significant effects regarding these topics and identified mitigation measures that reduced the effects to less-than-significant levels.

7.15.2 2014 LMSAP EIR Findings

The 2014 LMSAP EIR identified less-than-significant impacts to utilities and service systems with the incorporation of City of Oakland SCAs in certain instances where new infrastructure would be required to be constructed. The 2014 LMSAP EIR determined that the capacity of existing service systems would meet increased service demand of development analyzed for the LMSAP; wastewater demand would not exceed wastewater treatment requirements or capacity, surface water runoff would not exceed the capacity of the storm drain system, water demand would not exceed available water supplies, and solid waste generated would not exceed landfill capacity. No mitigation measures were necessary.

7.15.3 Project Analysis

The adaptive reuse of the Oakland Civic Auditorium was anticipated in the 2014 LMSAP EIR and the Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR.

Water, Wastewater, and Stormwater (Criteria 14a and 14b)

The 2014 LMSAP EIR determined that growth within the LMSAP Area would not exceed water supplies available to serve the proposed Plan, nor require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects. Therefore, the Project would have a less-than-significant impact in terms of water supply. Nonetheless, implementation of SCA UTIL-7, Water Efficient Landscape Ordinance (WELO), would further reduce less-than-significant impacts.

Additionally, the 2014 LMSAP EIR found that development of the LMSAP would not contain any unusual pollutants and would be within the existing capacity of East Bay Municipal Utility District's (EBMUD's) wastewater treatment plant, that the additional wastewater generated by development under the LMSAP would be adequately handled by the existing sanitary sewer system, and that development under the LMSAP would not be anticipated to change stormwater flows substantially due to the existing developed nature of the area.

As the Project is located in an already built out urban area, no new infrastructure would be required for the Project. Development of the Project would increase sewer demand; however, implementation of SCAs requiring stormwater control during and after construction (SCA UTIL-5, Sanitary Sewer System; SCA UTIL-6, Storm Drain System; SCA HYD-1, Erosion and Sedimentation Control Plan for Construction; SCA HYD-2, State Construction General Permit; and SCA HYD-3, NPDES C.3 Stormwater Requirements for Regulated Projects) would address any potential impacts on stormwater treatment and sanitary sewer as a result of the Project. Therefore, the Project would not result in any new or more substantial impacts on water or sewer services than those identified in the 2014 LMSAP EIR and, with the implementation of SCAs requiring stormwater control during and after construction, the impact on water and sewer services would remain less than significant.

Solid Waste Services (Criterion 14c)

The 2014 LMSAP EIR demonstrated that the five landfills most heavily used by the City of Oakland have substantial capacity through the planning horizon. Further, the development under LMSAP would not impede the ability of the City to meet the waste diversion requirements or cause the City to violate other applicable federal, state, and local statutes and regulations related to solid waste. The Project would comply with City of Oakland SCAs pertaining to waste reduction and recycling (SCA UTIL-1, Construction and Demolition Waste Reduction and Recycling; SCA UTIL-3, Recycling Collection and Storage Space). The Project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the 2014 LMSAP EIR, and adaptive reuse of the building on the project site was anticipated in the 2014 LMSAP EIR. Therefore, the impacts associated with solid waste services and/or landfill capacity as a result of the Project would remain less than significant.

Energy (Criterion 14d)

The Project would result in less-than-significant impacts related to energy standards and use, and would comply with the standards of Title 24 of the California Code of Regulations. In addition, City of Oakland SCA UTIL-4, Green Building Requirements, pertaining to compliance with the green building ordinance would require construction projects to incorporate energy-conserving design measures, documented Project compliance with the current version of Title 24 of the California Building Code, and demonstrated compliance with CALGreen mandatory measures and other green building point certification requirements. Implementation of SCA UTIL-4 would ensure the Project's impacts on energy would remain less than significant.

7.15.4 Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents, implementation of the Project would not substantially increase the severity of significant impacts identified in the 2014 LMSAP EIR or Previous CEQA Documents, nor would it result in new significant impacts related to utilities and service systems that were not identified in the 2014 LMSAP EIR or the Previous CEQA Documents. The 2014 LMSAP EIR did not identify any mitigation measures related to utilities and service systems, and none would be required for the Project. Implementation of **SCA UTIL-1**, **Construction and Demolition Waste Reduction and Recycling**; **SCA UTIL-3**, **Recycling Collection and Storage Space**; **SCA UTIL-4**, **Green Building Requirements**; **SCA UTIL-5**, **Sanitary Sewer System**; **SCA UTIL-6**, **Storm Drain System**; **SCA UTIL-7**, **Water Efficient Landscape Ordinance (WELO)**; **SCA HYD-1**, **Erosion and Sedimentation Control Plan for Construction**; **SCA HYD-2**, **State Construction General Permit**; and **SCA HYD-3**, **NPDES C.3 Stormwater Requirements for Regulated Projects** (see Attachment A), as well as compliance with Title 24 and CALGreen requirements, would ensure that impacts to sewer capacity, stormwater drainage facilities, solid waste services, and energy would be less than significant.

8. References

(All references cited below are available at the Oakland Bureau of Planning, Agency, 250 Frank Ogawa Plaza, Suite 3330, Oakland, California, unless specified otherwise.)

8.1.1 Lake Merritt Station Area Plan EIR

City of Oakland, Draft EIR, 2014.

City of Oakland, Final EIR, 2014.

8.1.2 Central District Urban Renewal Plan Amendment (Renewal Plan)

Oakland Redevelopment Agency, Draft EIR for the Proposed Amendments to the Central District Urban Renewal Plan, March 2011.

Oakland Redevelopment Agency, Final EIR for the Proposed Amendments to the Central District Urban Renewal Plan, June 2011.

Oakland Redevelopment Agency, 2012. *Central District Urban Renewal Plan*, Adopted June 12, 1969, as amended through April 3, 2012.

8.1.3 General Plan Land Use and Transportation Element

City of Oakland, 1998 LUTE Draft EIR, October 1997.

City of Oakland, 1998 LUTE Final EIR, February 1998.

City of Oakland, 2007. Land Use and Transportation Element of the Oakland General Plan, March 24, 1998, amended to June 21, 2007.

8.1.4 Plan Bay Area

Metropolitan Transportation Commission and Association of Bay Area Governments, 2017. Plan Bay Area 2040, Strategy for a Sustainable Region. Adopted July 11, 2017.

8.1.5 Oakland Planning Code

City of Oakland, 2014. City of Oakland Planning Code. CEDA: Planning and Zoning. https://cao-94612.s3.amazonaws.com/documents/Planning-Code-after-12-4-2018_Residential-Hotel-Regulations-Update.pdf, accessed January 8, 2019.

Attachments

A. Standard Conditions of Approval and Mitigation Monitoring and Reporting Program
B. Criteria for Use of Addendum, Per CEQA Guidelines Sections 15162, 15164, and 15168
C. Project Consistency with Community Plan or Zoning, Per CEQA Guidelines Section 15183

Appendices

A. Health Risk Assessment
B. Greenhouse Gas Reduction Plan
C. Construction Noise Management Plan
D. Transportation Demand Management Plan
E. Non-CEQA Transportation Analysis/Transportation Tables

ATTACHMENT A

Standard Conditions of Approval and Mitigation Monitoring and Reporting Program

This Standard Conditions of Approval (SCAs) and Mitigation Monitoring and Reporting Program (SCAMMRP) is based on the CEQA Checklist prepared for the Oakland Civic Auditorium Rehabilitation Project.

This SCAMMRP is in compliance with Section 15097 of the CEQA Guidelines, which requires that the Lead Agency "adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects." The SCAMMRP lists mitigation measures recommended in the 2014 LMSAP EIR that apply to the Project. The SCAMMRP also lists other SCAs that apply to the Project, most of which were identified in the 2014 LMSAP EIR and some of which have been subsequently updated or otherwise modified by the City. Specifically, on November 5, 2018, the City of Oakland released a revised set of all City of Oakland SCAs, which largely still include SCAs adopted by the City in 2008, along with supplemental, modified, and new SCAs. SCAs are measures that would minimize potential adverse effects that could result from implementation of the Project, to ensure the conditions are implemented and monitored. The revised set of the City of Oakland SCAs includes new, modified, and reorganized SCAs; however, none of the revisions diminish or negate the ability of the SCAs considered "environmental protection measures" to minimize potential adverse environmental effects. As such, the SCAs identified in the SCAMMRP reflect the current SCAs only. Although the SCA numbers listed below may not correspond to the SCA numbers in the 2014 LMSAP EIR, all of the environmental topics and potential effects addressed by the SCAs in the 2014 LMSAP EIR are included in this SCAMMRP (as applicable to the Project). This SCAMMRP also identifies the mitigation monitoring requirements for each mitigation measure and SCA.

This CEQA Checklist is also based on the analysis in the following Prior EIRs that apply to the Project: Oakland's 1998 General Plan Land Use and Transportation Element EIR (1998 LUTE EIR), and the 2011 Central District Urban Renewal Plan Amendments EIR (2011 Renewal Plan Amendments EIR). None of the mitigation measures or SCAs from these EIRs are included in this SCAMMRP because they, or an updated or equally effective mitigation measure or SCA, is identified in the 2014 LMSAP EIR, its addenda, or in this CEQA Checklist for the Project.

To the extent that there is any inconsistency between any mitigation measures and/or SCAs, the more restrictive conditions shall govern; to the extent any mitigation measure and/or SCA identified in the

CEQA Checklist were inadvertently omitted, they are automatically incorporated herein by reference.

- The first column of the SCAMMRP table identifies the mitigation measure or SCA applicable to that topic in the CEQA Checklist. While a mitigation measure or SCA can apply to more than one topic, it is listed in its entirety only under its primary topic (as indicated in the mitigation or SCA designator). The SCAs are numbered to specifically apply to the Project and this CEQA Checklist; however, the SCAs as presented in the City's *Standard Conditions of Approval and Uniformly Applied Development Standards* document[32] are included in parenthesis for cross-reference purposes.
- The second column identifies the monitoring schedule or timing applicable to the Project.
- The third column names the party responsible for monitoring the required action for the Project.

The Project Applicant is responsible for compliance with any recommendations identified in City-approved technical reports, all applicable mitigation measures adopted, and with all SCAs set forth herein at its sole cost and expense, unless otherwise expressly provided in a specific mitigation measure or condition of approval, and subject to the review and approval of the City of Oakland. Overall monitoring and compliance with the mitigation measures will be the responsibility of the Bureau of Planning, and Zoning Inspections Division. Prior to the issuance of a demolition, grading, and/or construction permit, the Project Applicant shall pay the applicable mitigation and monitoring fee to the City in accordance with the City's Master Fee Schedule.

[32] Dated May 1, 2018, as amended.

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
General		
SCA GEN-1 (Standard Condition Approval 15) *Regulatory Permits and Authorizations from Other Agencies* Requirement: The project applicant shall obtain all necessary regulatory permits and authorizations from applicable resource/regulatory agencies including, but not limited to, the Regional Water Quality Control Board, Bay Area Air Quality Management District, Bay Conservation and Development Commission, California Department of Fish and Wildlife, U. S. Fish and Wildlife Service, and Army Corps of Engineers and shall comply with all requirements and conditions of the permits/authorizations. The project applicant shall submit evidence of the approved permits/authorizations to the City, along with evidence demonstrating compliance with any regulatory permit/authorization conditions of approval.	Prior to activity requiring permit/authorization from regulatory agency.	City of Oakland Bureau of Planning and applicable regulatory agency with jurisdiction
Aesthetics, Shadow, and Wind		
SCA AES-1 (Standard Condition of Approval 16) Trash and Blight Removal The project applicant and his/her successors shall maintain the property free of blight, as defined in chapter 8.24 of the Oakland Municipal Code. For nonresidential and multi-family residential projects, the project applicant shall install and maintain trash receptacles near public entryways as needed to provide sufficient capacity for building users.	Ongoing.	City of Oakland Bureau of Building
SCA AES-2 (Standard Condition of Approval 17) *Graffiti Control* a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation: i. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces. ii. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces. iii. Use of paint with anti-graffiti coating. iv. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED). v. Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement. b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following: i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system. ii. Covering with new paint to match the color of the surrounding surface. iii. Replacing with new surfacing (with City permits if required).	Ongoing.	City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Aesthetics, Shadow, and Wind (cont.)		
SCA AES-3 (Standard Condition of Approval 18) *Landscape Plan* ***a. Landscape Plan Required*** The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with the landscape requirements of chapter 17.124 of the Planning Code. Proposed plants shall be predominantly drought-tolerant. Specification of any street trees shall comply with the Master Street Tree List and Tree Planting Guidelines (which can be viewed at http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak042662.pdf and http://www2.oaklandnet.com/oakca1/groups/pwa/documents/form/oak025595.pdf, respectively), and with any applicable streetscape plan. ***b. Landscape Installation*** The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit, or other equivalent instrument acceptable to the Director of City Planning, is provided. The financial instrument shall equal the greater of $2,500 or the estimated cost of implementing the Landscape Plan based on a licensed contractor's bid. ***c. Landscape Maintenance*** All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.	a. Prior to approval of construction-related permit. b. Prior to building permit final. c. Ongoing	a. City of Oakland Bureau of Planning b. City of Oakland Bureau of Building c. City of Oakland Bureau of Building
SCA AES-4 (Standard Condition of Approval 19): *Lighting* Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties.	Prior to building permit final.	City of Oakland Bureau of Building
SCA AES-5 (Standard Condition of Approval 20) *Public Art for Private Development* Requirement: The project is subject to the City's Public Art Requirements for Private Development, adopted by Ordinance No. 13275 C.M.S. ("Ordinance"). The public art contribution requirements are equivalent to one-half percent (0.5%) for the "residential" building development costs, and one percent (1.0%) for the "non-residential" building development costs. The contribution requirement can be met through: 1) the installation of freely accessible art at the site; 2) the installation of freely accessible art within one-quarter mile of the site; or 3) satisfaction of alternative compliance methods described in the Ordinance, including, but not limited to, payment of an in-lieu fee contribution. The applicant shall provide proof of full payment of the in-lieu contribution and/or provide plans, for review and approval by the Planning Director, showing the installation or improvements required by the Ordinance prior to issuance of a building permit. Proof of installation of artwork, or other alternative requirement, is required prior to the City's issuance of a final certificate of occupancy for each phase of a project unless a separate, legal binding instrument is executed ensuring compliance within a timely manner subject to City approval.	Payment of in-lieu fees and/or plans showing fulfillment of public art requirement – Prior to Issuance of Building permit Installation of art/cultural space – Prior to Issuance of a Certificate of Occupancy.	City of Oakland Bureau of Planning and Bureau of Building
Also **SCA UTIL-2, Underground Utilities.** See *Utilities and Service Systems*, below.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Air Quality		
SCA AIR-1 (Standard Condition of Approval 21) ***Dust Controls*** – *Construction-Related* The Project applicant shall implement all of the following applicable dust control measures during construction of the Project: a. Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible. b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. d. Limit vehicle speeds on unpaved roads to 15 miles per hour. e. All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph. f. All trucks and equipment, including tires, shall be washed off prior to leaving the site. g. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel. h. Apply and maintain vegetative ground cover (e.g., hydroseed) or non-toxic soil stabilizers to disturbed areas of soil that will be inactive for more than one month. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.). i. Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. j. When working at a site, install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of the site, to minimize wind-blown dust. Windbreaks must have a maximum 50 percent air porosity. k. Post a publicly visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for responding to dust complaints and the telephone numbers of the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours. l. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.	During construction.	City of Oakland Bureau of Building
SCA AIR-2 (Standard Condition of Approval 22) *Criteria Air Pollutant Controls – Construction Related* Requirement: The project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the project as applicable: a. Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.	During construction.	City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Air Quality (cont.)		
b. Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations"). c. All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed. d. Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and use propane or natural gas generators cannot meet the electrical demand. e. Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings. f. All equipment to be used on the construction site and subject to the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") and upon request by the City, the project applicant shall provide written documentation that fleet requirements have been met.		
SCA AIR-3 (Standard Condition of Approval 23) *Diesel Particulate Matter Controls-Construction Related* ***a. Diesel Particulate Matter Reduction Measures*** Requirement: The project applicant shall implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to exposure to diesel particulate matter (DPM) from construction emissions. The project applicant shall choose one of the following methods: i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with current guidance from the California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment to determine the health risk to sensitive receptors exposed to DPM from project construction emissions. The HRA shall be submitted to the City (and the Air District if specifically requested) for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then DPM reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, DPM reduction measures shall be identified to reduce the health risk to acceptable levels as set forth under subsection b below. Identified DPM reduction measures shall be submitted to the City for review and approval prior to the issuance of building permits and the approved DPM reduction measures shall be implemented during construction. - or - ii. All off-road diesel equipment shall be equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by CARB. The equipment shall be properly maintained and tuned in accordance with manufacturer specifications. This shall be verified through an equipment inventory submittal and Certification Statement that the Contractor agrees to compliance and acknowledges that a significant violation of this requirement shall constitute a material breach of contract.	a. Prior to issuance of a construction related permit (i), during construction (ii). b. Prior to issuance of a construction related permit.	a. City of Oakland Bureau of Planning and Bureau of Building. b. City of Oakland Bureau of Planning and Bureau of Building.

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Air Quality (cont.)		
b. Construction Emissions Minimization Plan (if required by a above) Requirement: The project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified DPM reduction measures (if any). The Emissions Plan shall be submitted to the City (and the Bay Area Air Quality District if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following: i. An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all VDECS, the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date. ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract. **NOTE: This measure has been implemented by the project applicant and no further action is required.**		
SCA AIR-4 (Standard Condition of Approval 27) *Asbestos in Structures* Requirement: The project applicant shall comply with all applicable laws and regulations regarding demolition and renovation of Asbestos Containing Materials (ACM), including but not limited to California Code of Regulations, Title 8; California Business and Professions Code, Division 3; California Health and Safety Code sections 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended. Evidence of compliance shall be submitted to the City upon request.	Prior to approval of construction-related permit	Applicable regulatory agency with jurisdiction
Biological Resources		
SCA BIO-1 (Standard Condition of Approval 29): *Bird Collision Reduction Measures* The project applicant shall submit a Bird Collision Reduction Plan for City review and approval to reduce potential bird collisions to the maximum feasible extent. The Plan shall include all of the following mandatory measures, as well as applicable and specific project Best Management Practice (BMP) strategies to reduce bird strike impacts to the maximum feasible extent. The project applicant shall implement the approved Plan. Mandatory measures include all of the following: i. For large buildings subject to federal aviation safety regulations, install minimum intensity white strobe lighting with three second flash instead of solid red or rotating lights. ii. Minimize the number of and co-locate rooftop-antennas and other rooftop structures. iii. Monopole structures or antennas shall not include guy wires. iv. Avoid the use of mirrors in landscape design. v. Avoid placement of bird-friendly attractants (i.e., landscaped areas, vegetated roofs, water features) near glass unless shielded by architectural features taller than the attractant that incorporate bird friendly treatments no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule), as explained below. vi. Apply bird-friendly glazing treatments to no less than 90 percent of all windows and glass between the ground and 60 feet above ground or to the height of existing adjacent landscape or the height of the proposed landscape. Examples of bird-friendly glazing treatments include the following:	Prior to approval of construction-related permit	City of Oakland Bureau of Planning and Planning and Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Biological Resources (cont.)		
• Use opaque glass in window panes instead of reflective glass. • Uniformly cover the interior or exterior of clear glass surface with patterns (e.g., dots, stripes, decals, images, abstract patterns). Patterns can be etched, fritted, or on films and shall have a density of no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule). • Install paned glass with fenestration patterns with vertical and horizontal mullions no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule). • Install external screens over non-reflective glass (as close to the glass as possible) for birds to perceive windows as solid objects. • Install UV-pattern reflective glass, laminated glass with a patterned UV-reflective coating, or UV-absorbing and UV-reflecting film on the glass since most birds can see ultraviolet light, which is invisible to humans. • Install decorative grilles, screens, netting, or louvers, with openings no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule). • Install awnings, overhangs, sunshades, or light shelves directly adjacent to clear glass which is recessed on all sides. • Install opaque window film or window film with a pattern/design which also adheres to the "two-by-four" rule for coverage. vii. Reduce light pollution. Examples include the following: • Extinguish night-time architectural illumination treatments during bird migration season (February 15 to May 15 and August 15 to November 30). • Install time switch control devices or occupancy sensors on non-emergency interior lights that can be programmed to turn off during non-work hours and between 11:00 p.m. and sunrise. • Reduce perimeter lighting whenever possible. • Install full cut-off, shielded, or directional lighting to minimize light spillage, glare, or light trespass. • Do not use beams of lights during the spring (February 15 to May 15) or fall (August 15 to November 30) migration. viii. Develop and implement a building operation and management manual that promotes bird safety. Example measures in the manual include the following: • Donation of discovered dead bird specimens to an authorized bird conservation organization or museums (e.g., UC Berkeley Museum of Vertebrate Zoology) to aid in species identification and to benefit scientific study, as per all federal, state and local laws. • Distribution of educational materials on bird-safe practices for the building occupants. Contact Golden Gate Audubon Society or American Bird Conservancy for materials. • Asking employees to turn off task lighting at their work stations and draw office blinds, shades, curtains, or other window coverings at end of work day. • Install interior blinds, shades, or other window coverings in windows above the ground floor visible from the exterior as part of the construction contract, lease agreement, or CC&Rs. • Schedule nightly maintenance during the day or to conclude before 11 p.m., if possible.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Biological Resources (cont.)		
SCA BIO-2 (Standard Condition of Approval 30): *Tree Removal During Bird Nesting Season* To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of birds shall not occur during the bird breeding season of February 1 to August 15 (or during December 15 to August 15 for trees located in or near marsh, wetland, or aquatic habitats). If tree removal must occur during the bird breeding season, all trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to the start of work and shall be submitted to the City for review and approval. If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.	Prior to removal of trees.	City of Oakland Bureau of Planning and Bureau of Building
SCA BIO-3 (Standard Condition of Approval 27): *Tree Permit* ***a. Tree Permit Required*** Pursuant to the City's Tree Protection Ordinance (OMC chapter 12.36), the project applicant shall obtain a tree permit and abide by the conditions of that permit. ***b. Tree Protection During Construction*** <u>Requirement</u>: Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist: i. Before the start of any clearing, excavation, construction, or other work on the site, every protected tree deemed to be potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree to be determined by the project's consulting arborist. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree. ii. Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filling, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the project's consulting arborist from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree. iii. No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the project's consulting arborist from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the project's consulting arborist. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree.	a. Prior to approval of construction-related permit b. During construction.	a. City of Oakland Public Works Department, Tree Division, and Bureau of Building b. City of Oakland Public Works Department, Tree Division, and Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Biological Resources (cont.)		
iv. Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration. v. If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Department and the project's consulting arborist shall make a recommendation to the City Tree Reviewer as to whether the damaged tree can be preserved. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed. vi. All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations.		
Also **SCA HYD-1, Erosion and Sedimentation Control Plan for Construction**. See *Hydrology and Water Quality*, below.		
Also **SCA HYD-2, State Construction General Permit**. See *Hydrology and Water Quality*, below.		
Also **SCA HYD-3 NPDES C.3 Stormwater Requirements for Regulated Projects.** See *Hydrology and Water Quality*, below.		
Cultural Resources		
Mitigation Measure CUL-1: Mitigation Measure CUL-1 involving (a) Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures; (b) Future Site-specific Surveys and Evaluations; (c) Recordation and Public Interpretation; or (d) Financial Contributions,), would not reduce the impact to a less than significant level. ***a. Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures.*** – *Avoidance*. The City shall ensure that all future redevelopment activities allowable under the Proposed Amendments, including demolition, alteration, and new construction, would avoid historical resources (i.e., those listed on federal, state, and local registers). – *Adaptive Reuse*. If avoidance is not feasible, adaptive reuse and rehabilitation of historical resources shall occur in accordance with the *Secretary of Interior's Standards for the Treatment of Historic Properties*. – *Appropriate Relocation*. If avoidance or adaptive reuse *in situ* is not feasible, pursuant to SCA CUL-4: Compliance with Policy 3.7 of the Historic Preservation Element (Property Relocation Rather than Demolition), redevelopment projects able to relocate the affected historical property to a location consistent with its historic or architectural character could reduce the impact less than significant (Historic Preservation Element Action 3.8.1), unless the property's location is an integral part of its significance, e.g., a contributor to a historic district. ***b. Future Site-specific Surveys and Evaluations.*** Although most of the Project Area has been surveyed by the City of Oakland's OCHS, evaluations and ratings may change with time and other conditions. As such, there may be numerous other previously unidentified historical resources which would be affected by future redevelopment activities, including demolition, alteration, and new construction. For any future redevelopment project that would occur on or immediately adjacent to buildings 50 years old or older, and would occur between 2012 and 2023 (i.e., buildings constructed prior to 1973), the City shall require specific surveys and evaluations of	Prior to issuance of building permit (or other construction-related permit)	City of Oakland, Planning and Zoning Division City of Oakland - Building Services Division, Zoning Inspection

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Cultural Resources (cont.)		
such properties to determine their potential historical significance at the federal, state, and local levels. Intensive-level surveys and evaluations shall be completed by a qualified architectural historian who meets the *Secretary of the Interior's Standards* for architectural history. For all historical resources identified as a result of site-specific surveys and evaluations, the City shall ensure that future redevelopment activities, including demolition, alteration, and new construction, would avoid, adaptively reuse, and/or appropriately relocate such historical resources in accordance with measure "a" (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures), above. ***c. Recordation and Public Interpretation.*** If measure "a" (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically significant Structures) is determined infeasible as part of any future redevelopment scenarios, the City shall evaluate the feasibility of recordation and public interpretation of such resources prior to any construction activities which would directly affect them. Should City staff decide recordation and or public interpretation is required, the following activities would be performed: – *Recordation*. Recordation shall follow the standards provided in the National Park Service's Historic American Building Survey (HABS) program, which requires large-format photo-documentation of historic structures, a written report, and measured drawings (or photo reproduction of original plans if available). The photographs and report would be archived at local repositories, such as public libraries, historical societies, and the Northwest Information Center at Sonoma State University. The recordation efforts shall occur prior to demolition, alteration, or relocation of any historic resources identified in the Project Area, including those that are relocated pursuant to measure "a" (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically-significant Structures). Additional recordation could include (as appropriate) oral history interviews or other documentation (e.g., video) of the resource. – *Public Interpretation*. A public interpretation program would be developed by a qualified historic consultant in consultation with the Landmarks Preservation Advisory Board and City staff, based on a City-approved scope of work and submitted to the City for review and approval. The program could take the form of plaques, commemorative markers, or artistic or interpretive displays which explain the historical significance of the properties to the general public. Such displays would be incorporated into project plans as they are being developed, and would typically be located in a publicly accessible location on or near the site of the former historical resource(s). Public interpretation displays shall be installed prior to completion of any construction projects in the Project Area. – Photographic recordation and public interpretation of historically significant properties prior to their demolition or alteration does not typically mitigate the loss of potentially historic resources to a less than significant level [CEQA Section 15126.4(b)(2)]. ***d. Financial Contributions.*** If measure "a" (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically significant Structures) and measure "b" (Future Site-specific Surveys and Evaluations) are not satisfied, the project applicants of specific projects facilitated by the Proposed Amendments shall make a financial contribution to the City of Oakland, which can be used to fund other historic preservation projects within the Project Area or in the immediate vicinity. Such programs include, without limitation, a Façade Improvement Program, or the Property Relocation Assistance Program. This mitigation would conform to Action 3.8.1(9) of the Historic Preservation Element of the City of Oakland General Plan. Contributions to the fund(s) shall be determined by staff at the time of approval of site-specific project plans based on a formula to be determined by the Landmarks Preservation Advisory Board. However, such financial contribution, even in conjunction with measure "c" (Recordation and Public Interpretation), would not reduce the impacts to less than significant levels.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Cultural Resources (cont.)		
SCA CUL-1 (Standard Condition of Approval 33): *Archaeological and Paleontological Resources – Discovery During Construction* Requirement: Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the Project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented. In the event of data recovery of archaeological resources, the Project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The Project applicant shall implement the ARDTP at his/her expense. In the event of excavation of paleontological resources, the Project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the Project applicant.	During construction.	City of Oakland Bureau of Building
SCA CUL-2 (Standard Condition of Approval 34): *Archaeologically Sensitive Areas – Pre-Construction Measures* Requirement: The project applicant shall implement either Provision A (Intensive Pre-Construction Study) or Provision B (Construction ALERT Sheet) concerning archaeological resources. ***Provision A: Intensive Pre-Construction Study.*** The Project applicant shall retain a qualified archaeologist to conduct a site-specific, intensive archaeological resources study for review and approval by the City prior to soil-disturbing activities occurring on the project site. The purpose of the site-specific, intensive archaeological resources study is to identify early the potential presence of history-period archaeological resources on the project site. At a minimum, the study shall include: a. Subsurface presence/absence studies of the project site. Field studies may include, but are not limited to, auguring and other common methods used to identify the presence of archaeological resources. b. A report disseminating the results of this research.	Prior to approval of construction-related permit; during construction.	City of Oakland Bureau of Planning and Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Cultural Resources (cont.)		
c. Recommendations for any additional measures that could be necessary to mitigate any adverse impacts to recorded and/or inadvertently discovered cultural resources. If the results of the study indicate a high potential presence of historic-period archaeological resources on the project site, or a potential resource is discovered, the project applicant shall hire a qualified archaeologist to monitor any ground disturbing activities on the project site during construction and prepare an ALERT sheet pursuant to Provision B below that details what could potentially be found at the project site. Archaeological monitoring would include briefing construction personnel about the type of artifacts that may be present (as referenced in the ALERT sheet, required per Provision B below) and the procedures to follow if any artifacts are encountered, field recording and sampling in accordance with the Secretary of Interior's Standards and Guidelines for Archaeological Documentation, notifying the appropriate officials if human remains or cultural resources are discovered, and preparing a report to document negative findings after construction is completed if no archaeological resources are discovered during construction. ***Provision B: Construction ALERT Sheet.*** The Project applicant shall prepare a construction "ALERT" sheet developed by a qualified archaeologist for review and approval by the City prior to soil-disturbing activities occurring on the project site. The ALERT sheet shall contain, at a minimum, visuals that depict each type of artifact that could be encountered on the project site. Training by the qualified archaeologist shall be provided to the Project's prime contractor, any project subcontractor firms (including demolition, excavation, grading, foundation, and pile driving), and utility firms involved in soil- disturbing activities within the project site. The ALERT sheet shall state, in addition to the basic archaeological resource protection measures contained in other standard conditions of approval, all work must stop and the City's Environmental Review Officer contacted in the event of discovery of the following cultural materials: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire-cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels, etc.; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes); wood structural remains (building, ship, wharf); clay roof/floor tiles; stone walls or footings; or gravestones. Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, and supervisory personnel. The ALERT sheet shall also be posted in a visible location at the project site.		
SCA CUL-3 (Standard Condition of Approval SCA 35): *Human Remains – Discovery During Construction* Requirement: Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the Project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the Project applicant.	During construction.	City of Oakland Bureau of Building
See SCA NOI-6, **Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities. See *Noise*, below.**		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Geology, Soils, and Geohazards		
SCA GEO-1 (Standard Condition of Approval 37): *Construction-Related Permit(s)* Requirement: The Project applicant shall obtain all required construction-related permits/approvals from the City. The Project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.	Prior to approval of construction-related permit.	City of Oakland Bureau of Building
SCA GEO-2 (Standard Condition of Approval 40): *Seismic Hazards Zone (Landslide/Liquefaction)* Requirement: The Project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The Project applicant shall implement the recommendations contained in the approved report during Project design and construction.	Prior to approval of construction-related permit.	City of Oakland Bureau of Building
See SCA HYD-1, Erosion and Sedimentation Control Plan for Construction**. See *Hydrology and Water Quality*, below.**		
Greenhouse Gases and Climate Change		
SCA GHG-1 (Standard Condition of Approval 42): *Greenhouse Gas (GHG) Reduction Plan* Requirement: The project applicant shall retain a qualified air quality consultant to develop a Greenhouse Gas (GHG) Reduction Plan for City review and approval and shall implement the approved GHG Reduction Plan. The goal of the GHG Reduction Plan shall be to increase energy efficiency and reduce GHG emissions to below at least one of the Bay Area Quality Management District's (BAAQMD's) CEQA Thresholds of Significance (1,100 metric tons of CO_2e per year or 4.6 metric tons of CO_2e per year per service population). The GHG Reduction Plan shall include, at a minimum, (a) a detailed GHG emissions inventory for the project under a "business-as-usual" scenario with no consideration of project design features, or other energy efficiencies, (b) an "adjusted" baseline GHG emissions inventory for the project, taking into consideration energy efficiencies included as part of the project (including the City's Standard Conditions of Approval, proposed mitigation measures, project design features, and other City requirements), and additional GHG reduction measures available to further reduce GHG emissions, and (c) requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. If the project is to be constructed in phases, the GHG Reduction Plan shall provide GHG emission scenarios by phase. Potential GHG reduction measures to be considered include, but are not be limited to, measures recommended in BAAQMD's latest CEQA Air Quality Guidelines, the California Air Resources Board Scoping Plan (December 2008, as may be revised), the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures (August 2010, as may be revised), the California Attorney General's website, and Reference Guides on Leadership in Energy and Environmental Design (LEED) published by the U.S. Green Building Council. The types of allowable GHG reduction measures include the following (listed in order of City preference): (1) physical design features; (2) operational features; and (3) the payment of fees to fund GHG-reducing programs (i.e., the purchase of "carbon credits") as explained below.	Prior to approval of construction-related permit.	City of Oakland Bureau of Planning

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Greenhouse Gases and Climate Change (cont.)		
The allowable locations of the GHG reduction measures include the following (listed in order of City preference): (1) the project site; (2) off-site within the City of Oakland; (3) off-site within the San Francisco Bay Area Air Basin; (4) off-site within the State of California; then (5) elsewhere in the United States. As with preferred locations for the implementation of all GHG reductions measures, the preference for carbon credit purchases include those that can be achieved as follows (listed in order of City preference): (1) within the City of Oakland; (2) within the San Francisco Bay Area Air Basin; (3) within the State of California; then (4) elsewhere in the United States. The cost of carbon credit purchases shall be based on current market value at the time purchased and shall be based on the project's operational emissions estimated in the GHG Reduction Plan or subsequent approved emissions inventory, which may result in emissions that are higher or lower than those estimated in the GHG Reduction Plan. For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits. **NOTE: This measure has been implemented by the project applicant and no further action is required.**		
See **SCA AES-3, Landscape Plan**. See *Aesthetics, Wind, and Shadow*, above.		
See **SCAs AIR-2, Criteria Air Pollutant Controls - Construction Related.** See *Air Quality*, above.		
See **SCAs AIR-3, Diesel Particulate Matter Controls - Construction Related.** See *Air Quality*, above.		
See SCA **TRA-2, Bicycle Parking**. See *Transportation and Circulation*, below.		
See **SCA TRA-4, Transportation and Parking Demand Management.** See *Transportation and Circulation*, below.		
See **SCA TRA-6, Plug-In Electric Vehicle (PEV) Charging Infrastructure.** See *Transportation and Circulation*, below.		
See **SCA UTIL-1, Construction and Demolition Waste Reduction and Recycling**. See *Utilities and Service Systems*, below.		
See **SCA UTIL-4, Green Building Requirements**. See *Utilities and Service Systems*, below.		
Hazards and Hazardous Materials		
SCA HAZ-1 (Standard Condition of Approval 43): *Hazards Materials Related to Construction* Requirement: The Project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following: a. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction; b. Avoid overtopping construction equipment fuel gas tanks; c. During routine maintenance of construction equipment, properly contain and remove grease and oils; d. Properly dispose of discarded containers of fuels and other chemicals;	During construction.	City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Hazards and Hazardous Materials (cont.)		
e. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and f. If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.		
SCA HAZ-2 (Standard Condition of Approval 44): ***Hazardous Building Materials and Site Contamination*** ***a. Hazardous Building Materials and Site Contamination*** Requirement: The project applicant shall submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials (ACMs), lead-based paint, polychlorinated biphenyls (PCBs), and any other building materials or stored materials classified as hazardous materials by State or federal law. If lead-based paint, ACMs, PCBs, or any other building materials or stored materials classified as hazardous materials are present, the project applicant shall submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal of the identified hazardous materials in accordance with all applicable laws and regulations. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency. ***b. Environmental Site Assessment Required*** Requirement: The project applicant shall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase I report, for the project site for review and approval by the City. The report(s) shall be prepared by a qualified environmental assessment professional and include recommendations for remedial action, as appropriate, for hazardous materials. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency. ***c. Health and Safety Plan Required*** Requirement: The Project applicant shall submit a Health and Safety Plan for the review and approval by the City in order to protect project construction workers from risks associated with hazardous materials. The Project applicant shall implement the approved Plan. ***d. Best Management Practices (BMPs) Required for Contaminated Sites*** Requirement: The Project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential soil and groundwater hazards. These shall include the following:	a. Prior to approval of demolition, grading, or building permits b. Prior to approval of construction-related permit c. Prior to approval of construction-related permit d. During Construction	a. City of Oakland Bureau of Building b. Applicable regulatory agency with jurisdiction c. City of Oakland Bureau of Building d. City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Hazards and Hazardous Materials (cont.)		
i. Soil generated by construction activities shall be stockpiled on-site in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state, and federal requirements. ii. Groundwater pumped from the subsurface shall be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building.		
SCA HAZ-3 (Standard Condition of Approval 45): *Hazardous Materials Business Plan* The Project applicant shall submit a Hazardous Materials Business Plan for review and approval by the City, and shall implement the approved Plan. The approved Plan shall be kept on file with the City and the project applicant shall update the Plan as applicable. The purpose of the Hazardous Materials Business Plan is to ensure that employees are adequately trained to handle hazardous materials and provides information to the Fire Department should emergency response be required. Hazardous materials shall be handled in accordance with all applicable local, state, and federal requirements. The Hazardous Materials Business Plan shall include the following: a. The types of hazardous materials or chemicals stored and/or used on-site, such as petroleum fuel products, lubricants, solvents, and cleaning fluids. b. The location of such hazardous materials. c. An emergency response plan including employee training information. d. A plan that describes the manner in which these materials are handled, transported, and disposed.	Prior to building permit final	Oakland Fire Department
See **SCA TRA-1, Construction Activity in the Public Right-of-Way**. See *Transportation and Traffic*, below.		
Hydrology and Water Quality		
SCA HYD-1 (Standard Condition of Approval 49): *Erosion and Sedimentation Control Plan for Construction* ***a. Erosion and Sedimentation Control Plan Required*** Requirement: The Project applicant shall submit an Erosion and Sedimentation Control Plan to the City for review and approval. The Erosion and Sedimentation Control Plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading and/or construction operations. The Plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the City. The Plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the Project applicant shall clear the system of any debris or sediment.	a. Prior to approval of construction-related permit. b. During construction.	City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Hydrology and Water Quality (cont.)		
b. Erosion and Sedimentation Control During Construction Requirement: The Project applicant shall implement the approved Erosion and Sedimentation Control Plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Bureau of Building.		
SCA HYD-2 (Standard Condition of Approval 50): *State Construction General Permit* a. Requirement: The Project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The Project applicant shall submit evidence of compliance with Permit requirements to the City.	Prior to approval of construction-related permit.	State Water Resources Control Board; evidence of compliance submitted to Bureau of Building
SCA HYD-3 (Standard Condition of Approval 54): *NPDES C.3 Stormwater Requirements for Regulated Projects* ***a. Post-Construction Stormwater Management Plan Required*** Requirement: The Project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-Project stormwater runoff flow and duration match pre-Project runoff. ***b. Maintenance Agreement Required*** Requirement: The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The Project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the Project until the responsibility is legally transferred to another entity; and	a. Prior to approval of construction-related permit. b. Prior to building permit final.	a. City of Oakland Bureau of Building b. City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Hydrology and Water Quality (cont.)		
ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.		
Also **SCA GEO-1, Construction-Related Permit(s).** See *Geology, Soils, and Geohazards*, above.		
Also **SCA UTIL-6, Storm Drain System**. See *Utilities and Service Systems*, below.		
Noise		
SCA NOI-1 (Standard Condition of Approval 62) *Construction Days/Hours* Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours: a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday. c. No construction is allowed on Sunday or federal holidays. Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area. Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.	During construction.	City of Oakland Bureau of Building
SCA NOI-2: (Standard Condition of Approval 63) *Construction Noise* Requirement: The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following**:** a. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible.	During construction.	City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
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Noise (cont.)		
b. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures. c. Applicant shall use temporary power poles instead of generators where feasible. d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction. e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.		
SCA NOI-3 (Standard Condition of Approval 64) *Extreme Construction Noise* ***a. Construction Noise Management Plan Required*** Requirement: Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following: i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings; ii. Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions; iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site; iv. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and v. Monitor the effectiveness of noise attenuation measures by taking noise measurements. ***b. Public Notification Required*** Requirement: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.	a. Prior to approval of construction-related permit. b. During construction.	City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Noise (cont.)		
NOTE: A Construction Noise Management Plan has been prepared by the project applicant and no further action is required for SCA NOI-3a.		
SCA NOI-4 (Standard Condition of Approval 66) *Construction Noise Complaints* Requirement: The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include**:** a. Designation of an on-site construction complaint and enforcement manager for the project; b. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit; c. Protocols for receiving, responding to, and tracking received complaints; and d. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.	Prior to approval of construction-related permit.	City of Oakland Bureau of Building
SCA NOI-5 (Standard Condition of Approval 68) *Operational Noise* Requirement: Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.	Ongoing.	City of Oakland Bureau of Building
SCA NOI-6 (Standard Condition of Approval 70) *Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities* Requirement: The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located at the Project site and the Oakland Museum of California (1000 Oak Street). The Vibration Analysis shall identify design means and methods of construction that shall be utilized in order to not exceed the thresholds. The applicant shall implement the recommendations during construction.	Prior to construction.	City of Oakland Bureau of Building
Population and Housing		
SCA POP-1 (Standard Condition of Approval 71) *Jobs/Housing Impact Fee* Requirement: The Project applicant shall submit payment to the City in accordance with the requirements of the City of Oakland Jobs/Housing Impact Fee Program (chapter 15.68 of the Oakland Municipal Code).	Prior to construction.	City of Oakland Bureau of Building
Public Services, Parks, and Recreation Facilities		
SCA PUB-1 (Standard Condition of Approval 74) *Capital Improvements Impact Fee* Requirement: The project applicant shall comply with the requirements of the City of Oakland Capital Improvements Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).	Prior to issuance of building permit	City of Oakland Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Public Services, Parks, and Recreation Facilities (cont.)		
SCA REC-1 (Standard Condition of Approval 75) *Access to Parks and Open Space* Requirement: The project applicant shall submit a plan for City review and approval to enhance bicycle and pedestrian access from the project site and adjacent areas to Lake Merritt and Peralta Park. Examples of enhancements may include, but are not limited to, new or improved bikeways, bike parking, traffic control devices, sidewalks, pathways, bulb-outs, and signage. The project sponsor shall install the approved enhancements during construction and prior to completion of the project.	Prior to approval of construction-related permit	City of Oakland Bureau of Planning and City of Oakland Department of Transportation
Transportation and Circulation		
SCA TRA-1 (Standard Condition of Approval 76) *Construction Activity in the Public Right-of-Way* ***a. Obstruction Permit Required*** Requirement: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets, sidewalks, bicycle facilities, and bus stops. ***b. Traffic Control Plan Required*** Requirement: In the event of obstructions to vehicle or bicycle travel lanes, bus stops, or sidewalks, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian accommodations (or Detours, if accommodations are not feasible), including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The Traffic Control Plan shall be in conformance with the City's Supplemental Design Guidance for Accommodating Pedestrians, Bicyclists, and Bus Facilities in Construction Zones. The project applicant shall implement the approved Plan during construction. ***c. Repair of City Streets*** Requirement: The project applicant shall repair any damage to the public right-of way, including streets and sidewalks caused by project construction at his/her expense within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to approval of the final inspection of the construction-related permit. All damage that is a threat to public health or safety shall be repaired immediately.	a. Prior to approval of construction-related permit. b. Prior to approval of construction-related permit. c. Prior to building permit final.	City of Oakland Department of Transportation
SCA TRA-2 (Standard Condition of Approval 77) *Bicycle Parking* Requirement: The project applicant shall comply with the City of Oakland Bicycle Parking Requirements (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall demonstrate compliance with the requirements.	Prior to approval of construction-related permit.	City of Oakland Bureau of Planning and Bureau of Building
SCA TRA-3 (Standard Condition of Approval 78): *Transportation Improvements.* The project applicant shall implement the recommended on- and off-site transportation-related improvements contained within the Transportation Impact Review for the project (e.g., signal timing adjustments, restriping, signalization, traffic control devices, roadway reconfigurations, transportation demand management measures, and transit, pedestrian, and bicyclist amenities). The project applicant is responsible for funding and installing the improvements, and shall obtain all necessary permits and approvals from the City and/or other applicable regulatory agencies such as, but not limited to, Caltrans (for improvements related to Caltrans facilities) and the California Public Utilities Commission (for improvements related to railroad crossings), prior to installing the improvements. To	Prior to building permit final or as otherwise specified	City of Oakland Bureau of Building and City of Oakland Department of Transportation

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Transportation and Circulation (cont.)		
implement this measure for intersection modifications, the project applicant shall submit Plans, Specifications, and Estimates (PS&E) to the City for review and approval. All elements shall be designed to applicable City standards in effect at the time of construction and all new or upgraded signals shall include these enhancements as required by the City. All other facilities supporting vehicle travel and alternative modes through the intersection shall be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for, among other items, the elements listed below: a. 2070L Type Controller with cabinet accessory b. GPS communication (clock) c. Accessible pedestrian crosswalks according to Federal and State Access Board guidelines with signals (audible and tactile) d. Countdown pedestrian head module switch out e. City Standard ADA wheelchair ramps f. Video detection on existing (or new, if required) g. Mast arm poles, full activation (where applicable) h. Polara Push buttons (full activation) i. Bicycle detection (full activation) j. Pull boxes k. Signal interconnect and communication with trenching (where applicable), or through existing conduit (where applicable), 600 feet maximum l. Conduit replacement contingency m. Fiber switch n. PTZ camera (where applicable) o. Transit Signal Priority (TSP) equipment consistent with other signals along corridor p. Signal timing plans for the signals in the coordination group q. Bi-directional curb ramps (where feasible, and if project is on a street corner) r. Upgrade ramps on receiving curb (where feasible, and if project is on a street corner)		
SCA TRA-4 (Standard Condition of Approval 79) *Transportation and Parking Demand Management* ***a. Transportation and Parking Demand Management (TDM) Plan Required*** Requirement: The project applicant shall submit a Transportation and Parking Demand Management (TDM) Plan for review and approval by the City. i. The goals of the TDM Plan shall be the following: • Reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable.	a. Prior to approval of planning application. b. Prior to building permit final c. Ongoing	a. City of Oakland Bureau of Planning b. City of Oakland Bureau of Building c. City of Oakland Department of Transportation

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Transportation and Circulation (cont.)		

- Achieve the following project vehicle trip reductions (VTR):
  - Projects generating 50-99 net new a.m. or p.m. peak hour vehicle trips: 10 percent VTR
  - Projects generating 100 or more net new a.m. or p.m. peak hour vehicle trips: 20 percent VTR
- Increase pedestrian, bicycle, transit, and carpool/vanpool modes of travel. All four modes of travel shall be considered, as appropriate.
- Enhance the City's transportation system, consistent with City policies and programs.

ii. The TDM Plan should include the following:

- Baseline existing conditions of parking and curbside regulations within the surrounding neighborhood that could affect the effectiveness of TDM strategies, including inventory of parking spaces and occupancy if applicable.
- Proposed TDM strategies to achieve VTR goals (see below).

iii. For employers with 100 or more employees at the subject site, the TDM Plan shall also comply with the requirements of Oakland Municipal Code Chapter 10.68 Employer-Based Trip Reduction Program.

iv. The following TDM strategies **must** be incorporated into a TDM Plan based on a project location or other characteristics. When required, these mandatory strategies should be identified as a credit toward a project's VTR.

Improvement	Required by code or when…
Bus boarding bulbs or islands	• A bus boarding bulb or island does not already exist and a bus stop is located along the project frontage; and/or • A bus stop along the project frontage serves a route with 15 minutes or better peak hour service and has a shared bus-bike lane curb
Bus shelter	• A stop with no shelter is located within the project frontage, or • The project is located within 0.10 miles of a flag stop with 25 or more boardings per day
Concrete bus pad	• A bus stop is located along the project frontage and a concrete bus pad does not already exist
Curb extensions or bulb-outs	• Identified as an improvement within site analysis
Implementation of a corridor-level bikeway improvement	• A buffered Class II or Class IV bikeway facility is in a local or county adopted plan within 0.10 miles of the project location; and • The project would generate 500 or more daily bicycle trips

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Transportation and Circulation (cont.)		

Improvement	Required by code or when…
Implementation of a corridor-level transit capital improvement	• A high-quality transit facility is in a local or county adopted plan within 0.25 miles of the project location; and • The project would generate 400 or more peak period transit trips
Installation of amenities such as lighting; pedestrian-oriented green infrastructure, trees, or other greening landscape; and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.	• Always required
In-street bicycle corral	• A project includes more than 10,000 square feet of ground floor retail, is located along a Tier 1 bikeway, and on-street vehicle parking is provided along the project frontages.
Intersection improvements[33]	• Identified as an improvement within site analysis
New sidewalk, curb ramps, curb and gutter meeting current City and ADA standards	• Always required
No monthly permits and establish minimum price floor for public parking[34]	• If proposed parking ratio exceeds 1:1000 sf. (commercial)
Parking garage is designed with retrofit capability	• Optional if proposed parking ratio exceeds 1:1.25 (residential) or 1:1000 sf. (commercial)
Parking space reserved for car share	• If a project is providing parking and a project is located within downtown. One car share space reserved for buildings between 50 – 200 units, then one car share space per 200 units.
Paving, lane striping or restriping (vehicle and bicycle), and signs to midpoint of street section	• Typically required
Pedestrian crossing improvements	• Identified as an improvement within site analysis
Pedestrian-supportive signal changes[35]	• Identified as an improvement within operations analysis

[33] Including but not limited to visibility improvements, shortening corner radii, pedestrian safety islands, accounting for pedestrian desire lines.
[34] May also provide a cash incentive or transit pass alternative to a free parking space in commercial properties.
[35] Including but not limited to reducing signal cycle lengths to less than 90 seconds to avoid pedestrian crossings against the signal, providing a leading pedestrian interval, provide a "scramble" signal phase where appropriate.

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Transportation and Circulation (cont.)		

Improvement	Required by code or when…
Real-time transit information system	• A project frontage block includes a bus stop or BART station and is along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better
Relocating bus stops to far side	• A project is located within 0.10 mile of any active bus stop that is currently near-side
Signal upgrades[36]	• Project size exceeds 100 residential units, 80,000 sf. of retail, or 100,000 sf. of commercial; and • Project frontage abuts an intersection with signal infrastructure older than 15 years
Transit queue jumps	• Identified as a needed improvement within operations analysis of a project with frontage along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better
Trenching and placement of conduit for providing traffic signal interconnect	• Project size exceeds 100 units, 80,000 sf. of retail, or 100,000 sf. of commercial; and • Project frontage block is identified for signal interconnect improvements as part of a planned ITS improvement; and • A major transit improvement is identified within operations analysis requiring traffic signal interconnect
Unbundled parking	• If proposed parking ratio exceeds 1:1.25 (residential)

v. Other TDM strategies to consider include, but are not limited to, the following:

- Inclusion of additional long-term and short-term bicycle parking that meets the design standards set forth in chapter five of the Bicycle Master Plan and the Bicycle Parking Ordinance (chapter 17.117 of the Oakland Planning Code), and shower and locker facilities in commercial developments that exceed the requirement.
- Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, on-site signage and bike lane striping.
- Installation of safety elements per the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials, in addition to safety elements required to address safety impacts of the project.

[36] Including typical traffic lights, pedestrian signals, bike actuated signals, transit-only signals

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Transportation and Circulation (cont.)		
• Installation of amenities such as lighting, street trees, and trash receptacles per the Pedestrian Master Plan, the Master Street Tree List, Tree Planting Guidelines (which can be viewed at http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak042662.pdf and http://www2.oaklandnet.com/oakca1/groups/pwa/documents/form/oak025595.pdf, respectively), and any applicable streetscape plan. • Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements. • Direct on-site sales of transit passes purchased and sold at a bulk group rate (through programs such as AC Transit Easy Pass or a similar program through another transit agency). • Provision of a transit subsidy to employees or residents, determined by the project applicant and subject to review by the City, if employees or residents use transit or commute by other alternative modes. • Provision of an ongoing contribution to transit service to the area between the project and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2) Contribution to an existing area shuttle service; and 3) Establishment of new shuttle service. The amount of contribution (for any of the above scenarios) would be based upon the cost of establishing new shuttle service (Scenario 3). • Guaranteed ride home program for employees, either through 511.org or through separate program. • Pre-tax commuter benefits (commuter checks) for employees. • Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.) and/or car-share membership for employees or tenants. • On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools. • Distribution of information concerning alternative transportation options. • Parking spaces sold/leased separately for residential units. Charge employees for parking, or provide a cash incentive or transit pass alternative to a free parking space in commercial properties. • Parking management strategies including attendant/valet parking and shared parking spaces. • Requiring tenants to provide opportunities and the ability to work off-site. • Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five eight-hour workdays by adjusting their schedule to reduce vehicle trips to the worksite (e.g., working four, ten-hour days; allowing employees to work from home two days per week). • Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours. The TDM Plan shall indicate the estimated VTR for each strategy, based on published research or guidelines where feasible. For TDM Plans containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure the Plan is implemented on an ongoing basis during project operation. If an annual compliance report is required, as explained below, the TDM Plan shall also specify the topics to be addressed in the annual report.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Transportation and Circulation (cont.)		
b. TDM Implementation – Physical Improvements Requirement: For VTR strategies involving physical improvements, the project applicant shall obtain the necessary permits/approvals from the City and install the improvements prior to the completion of the project. ***c. TDM Implementation – Operational Strategies*** Requirement: For projects that generate 100 or more net new a.m. or p.m. peak hour vehicle trips and contain ongoing operational VTR strategies, the project applicant shall submit an annual compliance report for the first five years following completion of the project (or completion of each phase for phased projects) for review and approval by the City. The annual report shall document the status and effectiveness of the TDM program, including the actual VTR achieved by the project during operation. If deemed necessary, the City may elect to have a peer review consultant, paid for by the project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the project applicant has failed to implement the TDM Plan, the project will be considered in violation of the Conditions of Approval and the City may initiate enforcement action as provided for in these Conditions of Approval. The project shall not be considered in violation of this Condition if the TDM Plan is implemented but the VTR goal is not achieved. **NOTE: This measure has been implemented by the project applicant and no further action is required.**		
SCA TRA-5 (Standard Condition of Approval 80) *Transportation Impact Fee* Requirement: The project applicant shall comply with the requirements of the City of Oakland Transportation Impact Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).	Prior to issuance of building permit.	City of Oakland Bureau of Building
SCA TRA-6 (Standard Condition of Approval 83) *Plug-In Electric Vehicle (PEV) Charging Infrastructure* ***a. PEV-Ready Parking Spaces*** Requirement: The applicant shall submit, for review and approval of the Building Official and the Zoning Manager, plans that show the location of parking spaces equipped with full electrical circuits designated for future PEV charging (i.e. "PEV-Ready) per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-Ready parking spaces. ***b. PEV-Capable Parking Spaces*** Requirement: The applicant shall submit, for review and approval of the Building Official, plans that show the location of inaccessible conduit to supply PEV-capable parking spaces per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-capable parking spaces. ***c. ADA-Accessible Spaces*** Requirement: The applicant shall submit, for review and approval of the Building Official, plans that show the location of future accessible EV parking spaces as required under Title 24 Chapter 11B Table 11B-228.3.2.1, and specify plans to construct all future accessible EV parking spaces with appropriate grade, vertical clearance, and accessible path of travel to allow installation of accessible EV charging station(s).	Prior to Issuance of Building Permit	City of Oakland Bureau of Building
LMSAP TRA Mitigation Measures All the mitigation measures identified in the LMSAP EIR are included in the citywide Transportation Impact Fee (TIF). Therefore, the project applicant shall mitigate the project impacts by paying the required TIF.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Utilities and Service Systems		
SCA UTIL-1 (Standard Condition of Approval 84) *Construction and Demolition Waste Reduction and Recycling* Requirement: The Project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the Project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.	Prior to approval of construction-related permit	City of Oakland Public Works Department, Environmental Services Division
SCA UTIL-2 (Standard Condition of Approval 85) *Underground Utilities* Requirement: The Project applicant shall place underground all new utilities serving the Project and under the control of the Project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the Project's street frontage and from the Project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.	During construction.	City of Oakland Bureau of Building
SCA UTIL-3 (Standard Condition of Approval 86) *Recycling Collection and Storage Space* Requirement: The Project applicant shall comply with the City of Oakland Recycling Space Allocation Ordinance (chapter 17.118 of the Oakland Planning Code). The Project drawings submitted for construction-related permits shall contain recycling collection and storage areas in compliance with the Ordinance. For residential projects, at least two cubic feet of storage and collection space per residential unit is required, with a minimum of ten cubic feet. For nonresidential projects, at least two cubic feet of storage and collection space per 1,000 square feet of building floor area is required, with a minimum of ten cubic feet.	Prior to approval of construction-related permit.	City of Oakland Bureau of Planning and Bureau of Building
SCA UTIL-4 (Standard Condition of Approval 87) *Green Building Requirements* ***a. Compliance with Green Building Requirements During Plan-Check*** Requirement: The Project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code). i. The following information shall be submitted to the City for review and approval with the application for a building permit: • Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards. • Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit. • Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit. • Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below.	a. Prior to approval of construction-related permit. b. During construction. c. Prior to Final Approval.	a. City of Oakland Bureau of Building b. City of Oakland Bureau of Building c. City of Oakland Bureau of Planning and Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Utilities and Service Systems (cont.)		
• Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance. • Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit. • Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. ii. The set of plans in subsection (i) shall demonstrate compliance with the following: • CALGreen mandatory measures. • Compliance with the appropriate and applicable checklist approved during the Planning entitlement process. • All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted. • The required green building point minimums in the appropriate credit categories. ***b. Compliance with Green Building Requirements During Construction*** Requirement: The Project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the Project. The following information shall be submitted to the City for review and approval: i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit. ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance. iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. ***c. Compliance with Green Building Requirements After Construction*** Requirement: Prior to the finalizing the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.		
SCA UTIL-5 (Standard Condition of Approval 89) *Sanitary Sewer System* Requirement: The Project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-Project and post-Project wastewater flow from the Project site. In the event that the Impact Analysis indicates that the net increase in Project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the Project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system.	Prior to approval of construction-related permit.	City of Oakland Public Works Department, Department of Engineering and Construction

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Utilities and Service Systems (cont.)		
SCA UTIL-6 (Standard Condition of Approval 90) *Storm Drain System* Requirement: The Project storm drainage system shall be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-Project condition.	Prior to approval of construction-related permit.	City of Oakland Bureau of Building
SCA UTIL-7 (Standard Condition of Approval 92) *Water Efficient Landscape Ordinance (WELO)* Requirement: The project applicant shall comply with California's Water Efficient Landscape Ordinance (WELO) in order to reduce landscape water usage. For any landscape project with an aggregate (total noncontiguous) landscape area equal to 2,500 sq. ft. or less. The project applicant may implement either the Prescriptive Measures or the Performance Measures, of, and in accordance with the California's Model Water Efficient Landscape Ordinance. For any landscape project with an aggregate (total noncontiguous) landscape area over 2,500 sq. ft., the project applicant shall implement the Performance Measures in accordance with the WELO. *Prescriptive Measures:* Prior to construction, the project applicant shall submit documentation showing compliance with Appendix D of California's Model Water Efficient Landscape Ordinance (see website below starting on page 23): http://www.water.ca.gov/wateruseefficiency/landscapeordinance/docs/Title%2023%20extract%20-%20Official%20CCR%20pages.pdf *Performance Measures*: Prior to construction, the project applicant shall prepare and submit a Landscape Documentation Package for review and approval, which includes the following: a. Project Information: i. Date, ii. Applicant and property owner name, iii. Project address, iv. Total landscape area, v. Project type (new, rehabilitated, cemetery, or home owner installed), vi. Water supply type and water purveyor, vii. Checklist of documents in the package, and viii. Applicant signature and date with the statement: "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package." b. Water Efficient Landscape Worksheet i. Hydrozone Information Table ii. Water Budget Calculations with Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use c. Soil Management Report d. Landscape Design Plan	Prior to approval of construction-related permit.	City of Oakland Bureau of Planning

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Utilities and Service Systems (cont.)		
e. Irrigation Design Plan, and f. Grading Plan Upon installation of the landscaping and irrigation systems, the Project applicant shall submit a Certificate of Completion and landscape and irrigation maintenance schedule for review and approval by the City. The Certificate of Compliance shall also be submitted to the local water purveyor and property owner or his or her designee. i. For the specific requirements within the Water Efficient Landscape Worksheet, Soil Management Report, Landscape Design Plan, Irrigation Design Plan and Grading Plan, see the link below. Effective May 1, 2018 Page 77 http://www.water.ca.gov/wateruseefficiency/landscapeordinance/docs/Title%2023%20extract%20-%20Official%20CCR%20pages.pdf		
Also **SCA HYD-1, Erosion and Sedimentation Control Plan for Construction**. See *Hydrology and Water Quality*, above.		
Also **SCA HYD-2, State Construction General Permit**. See *Hydrology and Water Quality*, above.		
Also **SCA HYD-3 NPDES C.3 Stormwater Requirements for Regulated Projects.** See *Hydrology and Water Quality*, above.		

ATTACHMENT B

Criteria for Use of Addendum, per CEQA Guidelines Sections 15162, 15164 and 15168

Section 15164(a) of the California Environmental Quality Act (CEQA) Guidelines states that "a lead agency or responsible agency shall prepare an addendum to a previously certified EIR [Environmental Impact Report] if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred." Section 15164(e) states that "a brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR."

As discussed in detail in Section 6 of this document, the analysis in the 2014 LMSAP EIR is considered for this assessment under Sections 15162 and 15164.

Project Modifications

In November 2014, the Oakland Planning Commission certified the 2014 LMSAP EIR. The 2014 LMSAP EIR analyzed the LMSAP "Development Program," which was the assumed future development for the Plan with up to 4,900 new housing units, 4,100 new jobs, 404,000 square feet of retail use, and l.3 million square feet of office uses. Although the Development Program was analyzed, project specific details for each potential development project in the LMSAP Area were not known, and could not have been known, at the time the 2014 LMSAP EIR was certified. Therefore, an Addendum is required to evaluate the Oakland Civic Auditorium Rehabilitation Project details and determine that it would not result in new or more severe significant environmental effects than those analyzed in the 2014 LMSAP EIR.

Conditions for Addendum

As demonstrated in the CEQA checklist, none of the following conditions for preparation of a subsequent EIR per Sections 15162(a) and 15168 apply to the Project:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Project Consistency with Sections 15162 and 15168 of the CEQA Guidelines

Since certification of the 2014 LMSAP EIR, no changes have occurred in the circumstances under which the Project would be implemented that would change the severity of the Project's physical impacts, as explained in the CEQA Checklist in Section 7 of this document. No new information has emerged that would substantially change the analyses or conclusions set forth in the 2014 LMSAP EIR.

Furthermore, as demonstrated in the CEQA Checklist, the Project would not result in any new significant environmental impacts, result in any substantial increases in the significance of previously identified effects, or necessitate implementation of additional or considerably different mitigation measures than those identified in the 2014 LMSAP EIR, nor render any mitigation measures or alternatives found not to be feasible, feasible. The effects of the Project would be substantially the same as those reported in the 2014 LMSAP EIR.

The analysis presented in this CEQA Checklist, combined with the prior 2014 LMSAP EIR analysis, demonstrates that the Project would not result in significant impacts that were not previously identified in the 2014 LMSAP EIR. The Project would not result in a substantial increase in the significance of impacts, nor would the Project contribute considerably to cumulative effects that were not already accounted for in the certified 2014 LMSAP EIR. Overall, the Project's impacts are similar to those identified and discussed in the 2014 LMSAP EIR, as described in the CEQA Checklist, and the findings reached in the 2014 LMSAP EIR are applicable.

ATTACHMENT C

Project Consistency with Community Plan or Zoning, Per CEQA Guidelines Section 15183

Section 15183 (a) of the California Environmental Quality Act (CEQA) Guidelines states that "…projects which are consistent with the development density established by the existing zoning, community plan, or general plan policies for which an Environmental Impact Report (EIR) was certified shall not require additional environmental review, except as may be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site."

Further, Section 15183 states,

(b) In approving a project meeting the requirements of this section, a public agency shall limit its examination of environmental effects to those which the agency determines, in an initial study or other analysis:

(1) Are peculiar to the project or the parcel on which the project would be located,

(2) Were not analyzed as significant effects in a prior EIR on the zoning action, general plan or community plan with which the project is consistent,

(3) Are potentially significant off-site impacts and cumulative impacts which were not discussed in the prior EIR prepared for the general plan, community plan or zoning action, or

(4) Are previously identified significant effects which, as a result of substantial new information which was not known at the time the EIR was certified, are determined to have a more severe adverse impact than discussed in the prior EIR.

(c) If an impact is not peculiar to the parcel or to the project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards, as contemplated by subdivision (e) below, then an additional EIR need not be prepared for the project solely on the basis of that impact.

Section 15183 (f) states, "An effect of a project on the environment shall not be considered peculiar to the project or the parcel for the purposes of this section if uniformly applied development policies or standards have been previously adopted by the city or county with a finding that the development policies or standards will substantially mitigate that environmental effect when applied to future projects, unless substantial new information shows that the policies or standards will not substantially mitigate the environmental effect."

Project Consistency. In accordance with State CEQA Guidelines 15183, the Project qualifies for a Community Plan Exemption because the following findings can be made:

- The General Plan land use designation for the site is Central Business District (CBD). This designation applies to areas suitable for high density mixed-use urban center with a mix of large-scale offices, commercial, urban (high-rise) residential, and infill hotel uses, among many others, in the central Downtown core of the city. The proposed restaurant/retail, office, Theatre, ballroom, and other (artisan workshops, arts/music practice space, storage) land uses would be consistent with this designation.

- The site has a zoning designation within the Lake Merritt Station Area District of Mixed Commercial (D-LM-4). The Project would be consistent with the purposes of this zoning district, which is generally intended to be appropriate for a wide range of residential, commercial, and compatible light industrial activities. The Project would develop restaurant/retail, office, Theatre (existing), ballroom (existing), and other (artisan workshops, arts/music practice space, storage) land uses that would be consistent with this designation.

- The site is located within the Lake Merritt Station Area Height District LM-85, which allows a maximum height of 85 feet, or 275 feet with a Conditional Use Permit.

- The Project is consistent with the development density established by existing zoning and General Plan policies for the site, and there are no peculiar aspects that would increase the severity of any of the previously identified significant cumulative effects in the General Plan Land Use and Transportation Element (LUTE) EIR.

- The adaptive reuse of the Oakland Civic Auditorium was anticipated in the 2014 Lake Merritt Station Area Plan (LMSAP) EIR. The Project is within the impact envelope of the Development Program analyzed by the 2014 LMSAP EIR and there are no peculiar aspects that would increase the severity of any of the previously identified significant cumulative effects in the LUTE EIR.

- The Project is consistent with the development goals in the Central District Urban Renewal Plan (2011 Renewal Plan Amendments EIR). The 2011 Renewal Plan Amendments EIR details particular projects and programs that are anticipated to include targeting investments and activities toward certain catalyst projects, infrastructure improvement projects and infill development projects that are consistent with the General Plan. The Project is consistent with at least six major goals of these projects and programs:

  - A strengthening of the Project Area's existing role as an important office center for administrative, financial, business service and governmental activities.

  - Revitalization and strengthening of the Oakland Central District's historical role as the major regional retail center for the Metropolitan Oakland Area.

  - Establishment of the Project Area as an important cultural entertainment center.

  - Provisions of employment and other economic benefits to disadvantaged persons living within or near the Redevelopment Project Area.

  - Restoration of historically significant structures within the Project Area.

  - Improved environmental design within the Project Area, including creation of a definite sense of place, clear gateways, emphatic focal points and physical design which expresses and respects the special nature of each sub-area.

Project-specific impacts peculiar to the project or site, or those not analyzed in a prior EIR. Because the Project is consistent with the policies, land use designation, and development parameters in the LUTE and Lake Merritt Station Area Plan (LMSAP), the Project's potential contribution to cumulatively significant effects has already been addressed in those prior EIRs. In addition, the 2011 Renewal Plan Amendments EIR analyzed the cumulative effects of development projects that would occur absent the Renewal Plan Amendments, which would include the Project, which is not specifically addressed in the EIR.

Therefore, consistent with CEQA Guidelines Section 15183 which allows for streamlined environmental review, this document needs only to consider whether there are project-specific effects peculiar to the project or its site, and relies on the streamlining provisions of CEQA Guidelines Section 15183 to not re-consider cumulative effects.

New Significant Effects

The Project would not cause new specific effects that were not addressed in the LUTE EIR, the 2014 LMSAP EIR, or the 2011 Renewal Plan Amendments EIR. The analysis of the Project in the CEQA Checklist analysis includes all the resource topics identified as potentially incurring significant unavoidable impacts, and concludes that there would be no impacts that were not analyzed in prior EIRs.

Specifically, the analysis in the CEQA Exemption analysis included the resource topics that the 2011 Renewal Plan Amendments EIR and 2014 LMSAP EIR determined could have significant impacts:

- Air Quality
- Noise
- Transportation/Traffic
- Cultural Resources

As these analyses demonstrate, the Project would not substantially increase the severity of the significant impacts identified in the LUTE EIR, the 2014 LMSAP EIR, or 2011 Renewal Plan Amendments EIR, nor would it result in new significant impacts that were not identified in these Previous EIRs. Further, there have been no substantial changes in circumstances following certification of the 2011 Renewal Plan Amendments EIR in 2011 or 2014 LMSAP EIR that would result in any new specific significant effects of the Project.

Substantial New Information

There is no new information that was not known at the time the 2011 Renewal Plan Amendments EIR or the 2014 LMSAP EIR were certified that would cause more severe adverse impacts than discussed in the prior EIRs. There have been no significant changes in the underlying development assumptions, nor in the applicability or feasibility of mitigation measures or SCAs included in the prior EIRs.

Standard Conditions of Approval

SCAs incorporate policies and standards from various adopted plans, policies, and ordinances, which have been found to substantially mitigate environmental effects. The SCAs are adopted as requirements of an individual Project when it is approved by the City and are designed to, and will, substantially mitigate environmental effects, thus meeting the provision of Section 15183 (f), which states that impacts that are addressed by uniformly applied development standards (in this case, City of Oakland SCAs) are not considered peculiar to the parcel for the purpose of requiring further environmental review. Therefore, the Project requires no additional environmental review under California Public Resources Code Section 21083.3 and Section 15183 of the CEQA Guidelines.

APPENDIX A
Health Risk Assessment

The Health Risk Assessment (HRA) presented below includes a detailed assessment of the health risks associated with diesel particulate matter (DPM) from construction activities related to the Oakland Civic Auditorium Project. This HRA has been prepared in compliance with SCA AIR-3(a)(i) [City of Oakland SCA 23a(i)] which applies to construction activities associated with all projects that involve greater than 50,000 square feet of non-residential floor area, such as the Project. This SCA requires that project applicants implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to exposure to DPM from construction emissions by either:

i. Preparing and submitting an HRA in accordance with current guidance from the California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment (OEHHA) to determine the health risk to sensitive receptors exposed to DPM from project construction emissions. If the HRA concludes that the health risk exceeds acceptable levels, a Construction Emissions Minimization Plan shall be prepared that includes DPM reduction measures identified to reduce the health risk to acceptable levels.

   OR

ii. Using all off-road diesel construction equipment equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (such as Tier 4 engines) as certified by CARB.

The HRA consists of three principal components:

1. Estimation of TAC emissions from project construction,
2. Estimation of TAC concentrations at existing sensitive receptors from the project's construction emissions using refined air dispersion modeling, and
3. Estimation of health risks from construction using the modeled concentrations at receptors and exposure parameters and comparison to significance thresholds developed by the BAAQMD and adopted by the City of Oakland.

The HRA was conducted in accordance with technical guidelines developed by federal, state, and regional agencies, including U.S. Environmental Protection Agency (USEPA), CARB, OEHHA *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*[1] and the Bay

[1] Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, February 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html

Area Air Quality Management District (BAAQMD) *Air Toxics New Source Review (NSR) Program Health Risk Assessment Guidelines*.[2]

1. Estimation of TAC Emissions from Project Construction

The primary TAC of concern emitted during project construction is DPM, a primary component of diesel exhaust from construction equipment and heavy duty trucks transporting materials to and from the project site. In August 1998, the CARB identified DPM as a TAC. DPM is a complex mixture of numerous individual gaseous and particulate compounds emitted from diesel-fueled combustion engines and contains at least 40 different TACs. DPM is formed primarily through the incomplete combustion of diesel fuel. DPM is removed from the atmosphere through physical processes including atmospheric fall-out and washout by rain. Humans can be exposed to airborne DPM by deposition on water, soil, and vegetation; although the main pathway of exposure is inhalation. Studies indicate that DPM poses the greatest health risk among airborne TACs.

For purposes of this assessment, consistent with OEHHA guidelines, exhaust emissions of PM_{10} are represented as DPM. Exhaust PM_{10} emissions from project construction were derived from CalEEMod (Version 2016.3.2).

The following assumptions were used in the estimation of emissions using CalEEMod:

- Construction was assumed to begin in August 2018 and last for a period of 20 months;
- The duration of the various construction phases (e.g., demolition, grading, building construction, etc.) were provided by the Project Applicant (shown in **Table A-1**);
- The number and types of construction equipment used for each phase, their size and activity level as well as the number of construction related worker, vendor and hauling trips during each phase (shown in **Tables A-2 and A-3**) were also provided by the Project Applicant;
- Demolition of 25,000 square feet of existing structures; and
- Off-haul of 400 cubic yards and infill of 600 cubic yards of material during the grading phase.

TABLE A-1
PROJECT CONSTRUCTION SCHEDULE[a]

Construction Phase	Duration	Number of Workdays[b]
Demolition	8/1/2018 – 1/1/2019	110
Site Preparation	1/1/2019 – 2/1/2019	24
Grading	1/1/2019 – 2/1/2019	24
Building Construction	8/1/2018 – 3/1/2020	413
Paving	1/1/2020 – 2/1/2020	23
Architectural Coating	1/1/2020 – 3/16/2020	54
Total number of workdays over the construction duration		648

[a] Provided by Project Applicant.
[b] Number of workdays are calculated assuming Monday – Friday construction. No construction on weekends is assumed.

[2] BAAQMD, BAAQMD Air Toxics New Source Review (NSR) Program Health Risk Assessment Guidelines, January 2016.

TABLE A-2
CONSTRUCTION EQUIPMENT USED BY PHASE[a]

Equipment	Number	Horsepower (hp)	No. of Hours/Day Used
Demolition			
Rubber Tired Dozers	1	235	4
Concrete/Industrial Saw	2	7	6
Excavators	1	40	6
Air Compressors	2	13	6
Generator Sets	1	10	8
Pressure Washers	1	8	2
Tractors/Loaders/Backhoes	3	73	6
Cranes	1	2000	4
Aerial Lifts	3	80	6
Excavators	2	235	6
Site Preparation			
Rubber Tired Dozers	1	235	4
Grading			
Rubber Tired Dozer	1	235	4
Tractors/Loaders/Backhoes	2	160	6
Other General Industrial Equipment (Water Trailer Pump)	1	8	6
Building Construction			
Welders	3	80	6
Cranes	1	2000	4
Forklifts	3	80	4
Pressure Washers	1	8	2
Air Compressors	3	13	6
Generator Sets	2	10	6
Aerial Lifts	3	80	6
Paving			
Paving Equipment	1	150	8
Cement & Mortar Mixers	1	8	5
Plate Compactors	1	4	4
Rollers	1	70	6
Tractors/Loaders/Backhoes	2	160	6
Architectural Coating			
Aerial Lifts	3	80	6

[a] Provided by Project Applicant.

TABLE A-3
VEHICLE TRIPS BY CONSTRUCTION PHASE[A]

Construction Phase	Worker Commute Trips/Day	Vendor Trips/Day	Hauling Trips/Day
Demolition	75	4	4
Site Preparation	30	2	2
Grading	30	2	2
Building Construction	75	4	12
Paving	60	2	2
Architectural Coating	50	2	4

[a] Provided by Project Applicant.

Exhaust PM_{10} emissions from on-site construction equipment and off-site vendor and hauling trips during the different phases were extracted from the CalEEMod output and are presented in **Table G-4**. As required by the BAAQMD Guidelines, fugitive emissions are not included in this assessment and are addressed separately through dust control measures implemented as part of SCA AIR-1.

TABLE A-4
TOTAL PM_{10} EXHAUST EMISSIONS FROM PROJECT CONSTRUCTION

	Uncontrolled Scenario
On-Site DPM (as PM_{10} Exhaust) (tons)	0.287
Off-Site DPM (as PM_{10} Exhaust) (tons)	0.005
Total DPM (as PM_{10} Exhaust) (tons)	0.292
Number of construction workdays	648
Emission Rate (grams/second)[a,b]	0.014

[a] Emission rate calculated assuming 8 hours of construction per day, Monday to Friday.
[b] Emission rate calculated assuming only 10 percent of off-site emissions as contributing to concentrations in the project vicinity.

2. Estimation of Ambient Concentrations at Existing Sensitive Receptors

Dispersion is the process by which atmospheric pollutants disseminate due to wind and vertical stability. The results of a dispersion analysis are used to assess pollutant concentrations at or near an emission source. The results of such an analysis allow predicted concentrations of pollutants to be compared directly to air quality standards and other criteria such as health risks based on modeled concentrations.

An air dispersion model is a mathematical formulation that is used to estimate the air quality concentrations at specific locations (receptors) surrounding a source of emissions given the rate of emissions, topography and prevailing meteorological conditions. The air dispersion model used in this assessment was the United States Environmental Protection Agency (EPA) AERMOD air

dispersion model that is approved by the BAAQMD for air pollutant dispersion assessments. Specifically, the AERMOD model was used to estimate concentrations of DPM emissions at sensitive receptor locations using the project's emission rate shown in **Table A-5**. Both on-site emissions from construction and off-site emissions from heavy duty trucks were modeled together as an area source extending over the entire project site. Only 10 percent of off-site emissions were considered in the modeling effort as contributing to concentrations in the project vicinity. It must be noted that most of the construction activities (with the exception of grading and paving) would take place indoors within the existing structure. Emissions generated indoors will be released to the atmosphere through openings and vents located all around the building at different heights. Therefore, the representation of these emissions as being generated by an area source spread out over the entire site is reasonable. Given that the locations and heights of the release points are unknown, the modeling conservatively treats the emissions as if they were generated outdoors and uses a release height of 5 meters above ground to account for the top of the equipment exhaust stack where the emissions are released to the atmosphere and the increase in the height of the emissions due to its heated exhaust. Release at a greater height would lead to better dispersion. A variable emissions rate was used to represent project construction activity that is expected to take place only on weekdays for 8 hours per day between 8 a.m. and 4 p.m. Meteorological data from the Metropolitan Oakland International Airport was used to represent wind conditions at the project site. Concentrations were modeled at the sensitive receptors located around the Project site. Scattered residences are located to the west of the site along 10th Street and 8th Street, west and southwest of the Project site, respectively. The Lakeview Tower Apartments are located approximately 825 feet east and downwind of the Project site. The La Escuelita Elementary School and the Laney Children's Center are also located within 1,000 feet to the southwest of the site.

TABLE A-5
EXPOSURE PARAMETERS USED

Receptor Age	Exposure Duration (ED) [a] (years)	Age Sensitivity Factors (ASF)	Fraction of time at Home (TAH) (%)	Daily Breathing Rate (DBR)[b] (L/kg-day)
Residential Receptor - Infant				
3rd trimester	0.25	10	0.85	361
0 – 2 years	2	10	0.85	1090
2 – 9 years	1	3	0.72	631
Residential Receptor - Child				
2 – 9 years	3	3	0.72	631
Residential Receptor - Adult				
>16 years	3	1	0.73	261
School Receptor - Child				
2 – 9 years	3	3	0.72	631
School Receptor - Adult				
>16 years	3	1	0.73	261

[a] Per BAAQMD guidance, a minimum 3 year exposure duration is assumed to estimate risks from project construction.
[b] BAAQMD Air Toxics New Source Review Program HRA Guidelines recommend using the 95th percentile rate for age groups less than 2 years old and the 80th percentile rate for age groups that are greater than or equal to 2 years old.

The results of the dispersion modeling showed a maximum annual concentration of 0.021 micrograms per cubic meter ($\mu g/m^{3)}$ for the uncontrolled scenario at the residential receptors in the Lakeview Tower Apartments east of the project site. This would be considered the Maximum Exposed Individual Receptor (MEIR).

3. Assessment of Health Risks from Project Construction to Existing Receptors

Assessment of health risks from project construction was conducted following methodologies and exposure parameters recommended in OEHHA's Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.[3] OEHHA's 2015 revisions to its Guidance Manual are primarily designed to ensure that the greater sensitivity of children to cancer and other health risks is reflected in HRAs. For example, OEHHA now recommends that risks be analyzed separately for multiple age groups, focusing especially on young children and teenagers, rather than the past practice of analyzing risks to the general population, without distinction by age. OEHHA also now recommends that statistical "age sensitivity factors" be incorporated into a HRA, and that children's relatively high breathing rates be accounted for. On the other hand, the Guidance Manual revisions also include some changes that would reduce calculated health risks. For example, under the former guidance, OEHHA recommended that residential cancer risks be assessed by assuming 70 years of exposure at a residential receptor; under the revised Guidance Manual, this assumption is lessened to 30 years. This is based on studies showing that 30 years is a reasonable estimate of the 90th to 95th percentile of residency duration in the population. For short term projects such as construction activities, OEHHA recommends using the actual project duration. To ensure that short-term projects do not result in unanticipated higher cancer impacts due to short duration high-exposure rates, the BAAQMD recommends that the cancer risk be evaluated assuming that the average daily dose for short-term exposure lasts a minimum of three years for projects lasting three years or less.

Based on OEHHA recommendations, the cancer risk to residential receptors assumes that exposure occurs 24 hours per day for 350 days per year while accounting for a percentage of time at home. OEHHA evaluated information from activity pattern databases to estimate the fraction of time at home (FAH) during the day. This information was used to adjust exposure duration and cancer risk based on the assumption that a person is not present at home continuously for 24 hours and therefore exposure to emissions is not occurring when a person is away from their home.

Cancer risk at the MEIR was estimated using the OEHHA recommended method shown in the following equations and the cancer risk exposure parameters shown in **Table A-5**. Estimates were made using the mandatory minimum pathways, which for DPM is only through inhalation.

[3] Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, February 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html

$$Risk_{inh\text{-}res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$$

$Risk_{inh\text{-}res}$ = Residential inhalation cancer risk
$DOSE_{air}$ = Daily Inhalation Dose
CPF = Cancer Potency Factor for DPM = 1.1
ASF = Age Sensitivity Factors
ED = Exposure Duration in each age group (years)
AT = Averaging Time over lifetime cancer risk (years) = 70 years
FAH = Fraction of Time at Home (%)

$$DOSE_{air} = C_{air} \times DBR \times A \times EF \times 10^{-6}$$

C_{air} = Concentration of TAC in air ($\mu g/m^3$)
DBR = Daily Breathing Rate
A = Inhalation Absorption factor = 1.0 for DPM
EF = Exposure Frequency = 350/365 = 0.96

Chronic (long-term) adverse health impacts unrelated to cancer are measured against a hazard index (HI), which is defined as the ratio of the predicted incremental DPM exposure concentration from the proposed project to a reference exposure level (REL) that could cause adverse health effects. The RELs are published by OEHHA based on epidemiological research. The chronic reference exposure level for DPM was established by the California OEHHA as 5 $\mu g/m^3$.[4]

Estimated health risks and maximum $PM_{2.5}$ concentrations to receptors of different age groups at the MEIR are shown in **Table A-6** below and compared to the BAAQMD project-level thresholds that have been adopted by the City of Oakland.

TABLE A-6
MAXIMUM HEALTH RISKS FROM PROJECT CONSTRUCTION

Health Risk at MEIR	Maximum Cancer Risk (in a million)	Chronic Risk (Hazard Index)	Maximum $PM_{2.5}$ concentration
Uncontrolled Scenario			
Residential Receptor - Infant	7.1	0.007	0.032
Residential Receptor - Child	1	0.007	0.032
Residential Receptor - Adult	0.2	0.007	0.032
Project-level Threshold	10	1.0	0.3
Significant?	**No**	**No**	**No**

As shown in the table, health risks (cancer and chronic) to receptors of all age groups and $PM_{2.5}$ concentrations resulting from project construction would be less than the applicable significance thresholds. Therefore, the TAC impact of project construction on existing receptors would be less than significant and a Construction Emissions Minimization Plan would not be required.

[4] California Office of Environmental Health Hazards Assessment - Acute, 8-hour, and Chronic Reference Exposure Levels, June 2014, http://www.oehha.ca.gov/air/allrels.html

HJK - Construction emissions only

San Francisco Bay Area Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	149.00	1000sqft	0.00	149,000.00	0
General Light Industry	13.00	1000sqft	0.00	13,000.00	0
Unrefrigerated Warehouse-No Rail	15.00	1000sqft	0.00	15,000.00	0
Arena	49.50	1000sqft	4.79	49,500.00	0
Health Club	12.00	1000sqft	0.00	12,000.00	0
High Turnover (Sit Down Restaurant)	12.00	1000sqft	0.00	12,000.00	0
Racquet Club	15.00	1000sqft	0.00	15,000.00	0
Regional Shopping Center	14.00	1000sqft	0.00	14,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	294	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Based on PG&E's GHG emission factor for 2016
https://www.pgecurrents.com/2018/02/26/independent-registry-confirms-record-low-carbon-emissions-for-pge/
Land Use - Project data - using office scenario land uses

Construction Phase - Data from applicant

Off-road Equipment - Data from applicant

Off-road Equipment - Data from applicant

Off-road Equipment - Data from applicant

Off-road Equipment - Data from applicant

Off-road Equipment - Data from applicant

Off-road Equipment - Data from applicant

Trips and VMT - Data from applicant

Demolition -

Grading - Project data

Architectural Coating -

Vehicle Trips - Project data

Energy Use -

Water And Wastewater - 20% reduction in indoor water use assumed in compliance with CalGreen. 100% aerobic treatment of wastewater assumed.

Construction Off-road Equipment Mitigation - Tier 4 Final for BACT

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	18.00	54.00
tblGrading	AcresOfGrading	0.00	4.79
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tblLandUse	LotAcreage	0.34	0.00
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tblLandUse	LotAcreage	0.28	0.00
tblLandUse	LotAcreage	0.34	0.00
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tblOffRoadEquipment	HorsePower	63.00	80.00
tblOffRoadEquipment	HorsePower	63.00	80.00
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tblOffRoadEquipment	HorsePower	78.00	13.00
tblOffRoadEquipment	HorsePower	231.00	2,000.00
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tblOffRoadEquipment	HorsePower	8.00	4.00
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tblOffRoadEquipment	HorsePower	13.00	8.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
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tblOffRoadEquipment	UsageHours	6.00	5.00
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tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
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tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00

tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	3.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	294
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tblTripsAndVMT	HaulingTripNumber	0.00	4,956.00
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tblTripsAndVMT	VendorTripNumber	0.00	4.00
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tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
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tblTripsAndVMT	WorkerTripNumber	50.00	75.00
tblTripsAndVMT	WorkerTripNumber	101.00	75.00
tblTripsAndVMT	WorkerTripNumber	3.00	30.00
tblTripsAndVMT	WorkerTripNumber	10.00	30.00
tblTripsAndVMT	WorkerTripNumber	15.00	60.00
tblTripsAndVMT	WorkerTripNumber	20.00	50.00
tblVehicleTrips	ST_TR	10.71	20.61
tblVehicleTrips	ST_TR	1.32	3.68
tblVehicleTrips	ST_TR	2.46	6.34

tblVehicleTrips	ST_TR	20.87	18.14
tblVehicleTrips	ST_TR	158.37	53.54
tblVehicleTrips	ST_TR	21.35	12.04
tblVehicleTrips	ST_TR	49.97	19.19
tblVehicleTrips	ST_TR	1.68	1.42
tblVehicleTrips	SU_TR	10.71	20.61
tblVehicleTrips	SU_TR	0.68	3.68
tblVehicleTrips	SU_TR	1.05	6.34
tblVehicleTrips	SU_TR	26.73	18.14
tblVehicleTrips	SU_TR	131.84	53.54
tblVehicleTrips	SU_TR	17.40	12.04
tblVehicleTrips	SU_TR	25.24	19.19
tblVehicleTrips	SU_TR	1.68	1.42
tblVehicleTrips	WD_TR	10.71	20.61
tblVehicleTrips	WD_TR	6.97	3.68
tblVehicleTrips	WD_TR	11.03	6.34
tblVehicleTrips	WD_TR	32.93	18.14
tblVehicleTrips	WD_TR	127.15	53.54
tblVehicleTrips	WD_TR	14.03	12.04
tblVehicleTrips	WD_TR	42.70	19.19
tblVehicleTrips	WD_TR	1.68	1.42
tblWater	AerobicPercent	87.46	100.00
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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	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
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tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.3225	3.4671	2.2608	6.8400e-003	0.1175	0.1291	0.2466	0.0296	0.1215	0.1510	0.0000	616.6582	616.6582	0.1413	0.0000	620.1902
2019	0.3680	3.8241	2.6851	8.2300e-003	0.1970	0.1381	0.3351	0.0696	0.1320	0.2015	0.0000	733.1077	733.1077	0.1442	0.0000	736.7114
2020	3.3142	0.7644	0.6637	1.8700e-003	0.0646	0.0256	0.0901	0.0167	0.0242	0.0409	0.0000	166.0085	166.0085	0.0317	0.0000	166.8020
Maximum	**3.3142**	**3.8241**	**2.6851**	**8.2300e-003**	**0.1970**	**0.1381**	**0.3351**	**0.0696**	**0.1320**	**0.2015**	**0.0000**	**733.1077**	**733.1077**	**0.1442**	**0.0000**	**736.7114**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1082	1.9094	3.1865	6.8400e-003	0.1175	0.0146	0.1320	0.0296	0.0145	0.0440	0.0000	616.6576	616.6576	0.1413	0.0000	620.1896
2019	0.1204	2.2149	3.6331	8.2300e-003	0.1970	0.0170	0.2140	0.0696	0.0168	0.0864	0.0000	733.1070	733.1070	0.1442	0.0000	736.7108
2020	3.2688	0.4289	0.8493	1.8700e-003	0.0646	3.3800e-003	0.0679	0.0167	3.3400e-003	0.0200	0.0000	166.0084	166.0084	0.0317	0.0000	166.8019
Maximum	**3.2688**	**2.2149**	**3.6331**	**8.2300e-003**	**0.1970**	**0.0170**	**0.2140**	**0.0696**	**0.0168**	**0.0864**	**0.0000**	**733.1070**	**733.1070**	**0.1442**	**0.0000**	**736.7108**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**12.67**	**43.48**	**-36.71**	**0.00**	**0.00**	**88.06**	**38.37**	**0.00**	**87.52**	**61.76**	**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	**8-1-2018**	**10-31-2018**	2.2829	1.2146
2	**11-1-2018**	**1-31-2019**	2.0684	1.0461
3	**2-1-2019**	**4-30-2019**	0.9705	0.5589
4	**5-1-2019**	**7-31-2019**	0.9930	0.5731

5	**8-1-2019**	**10-31-2019**	0.9948	0.5749
6	**11-1-2019**	**1-31-2020**	2.4637	1.9590
7	**2-1-2020**	**4-30-2020**	2.3047	2.1470
		Highest	2.4637	2.1470

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	8/1/2018	1/1/2019	5	110	
2	Building Construction	Building Construction	8/1/2018	3/1/2020	5	413	
3	Site Preparation	Site Preparation	1/1/2019	2/1/2019	5	24	
4	Grading	Grading	1/1/2019	2/1/2019	5	24	
5	Paving	Paving	1/1/2020	2/1/2020	5	23	
6	Architectural Coating	Architectural Coating	1/1/2020	3/16/2020	5	54	

Acres of Grading (Site Preparation Phase): 4.79

Acres of Grading (Grading Phase): 4.79

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 419,250; Non-Residential Outdoor: 139,750; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	3	6.00	80	0.31
Demolition	Air Compressors	2	6.00	13	0.48
Demolition	Concrete/Industrial Saws	2	6.00	7	0.73
Demolition	Cranes	1	4.00	2000	0.29
Demolition	Excavators	1	6.00	40	0.38
Demolition	Excavators	0	0.00	158	0.38
Demolition	Excavators	2	6.00	235	0.38

Demolition	Generator Sets	1	8.00	10	0.74
Demolition	Pressure Washers	1	2.00	8	0.30
Demolition	Rubber Tired Dozers	1	4.00	235	0.40
Demolition	Tractors/Loaders/Backhoes	3	6.00	73	0.37
Building Construction	Aerial Lifts	3	6.00	80	0.31
Building Construction	Air Compressors	3	6.00	13	0.48
Building Construction	Cranes	1	4.00	2000	0.29
Building Construction	Forklifts	3	4.00	80	0.20
Building Construction	Generator Sets	2	6.00	10	0.74
Building Construction	Pressure Washers	1	2.00	8	0.30
Building Construction	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction	Welders	3	6.00	80	0.45
Site Preparation	Rubber Tired Dozers	1	3.00	235	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Grading	Excavators	0	0.00	158	0.38
Grading	Graders	0	0.00	187	0.41
Grading	Other General Industrial Equipment	1	6.00	8	0.34
Grading	Rubber Tired Dozers	1	4.00	235	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	160	0.37
Paving	Cement and Mortar Mixers	1	5.00	8	0.56
Paving	Pavers	0	0.00	130	0.42
Paving	Paving Equipment	1	8.00	150	0.36
Paving	Plate Compactors	1	4.00	4	0.43
Paving	Rollers	1	6.00	70	0.38
Paving	Tractors/Loaders/Backhoes	2	6.00	160	0.37
Architectural Coating	Aerial Lifts	3	6.00	80	0.31
Architectural Coating	Air Compressors	0	0.00	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	20	75.00	4.00	440.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	16	75.00	4.00	4,956.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	1	30.00	2.00	46.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	30.00	2.00	46.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	60.00	2.00	46.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	3	50.00	2.00	216.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0122	0.0000	0.0122	1.8500e-003	0.0000	1.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1522	1.7913	1.0325	2.9500e-003		0.0698	0.0698		0.0645	0.0645	0.0000	265.5854	265.5854	0.0810	0.0000	267.6102
Total	**0.1522**	**1.7913**	**1.0325**	**2.9500e-003**	**0.0122**	**0.0698**	**0.0820**	**1.8500e-003**	**0.0645**	**0.0664**	**0.0000**	**265.5854**	**265.5854**	**0.0810**	**0.0000**	**267.6102**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0900e-003	0.0719	0.0137	1.8000e-004	3.7100e-003	2.9000e-004	3.9900e-003	1.0200e-003	2.7000e-004	1.2900e-003	0.0000	17.0593	17.0593	9.0000e-004	0.0000	17.0819

Vendor	1.1500e-003	0.0292	7.7600e-003	6.0000e-005	1.4300e-003	2.2000e-004	1.6500e-003	4.1000e-004	2.1000e-004	6.3000e-004	0.0000	5.7837	5.7837	3.3000e-004	0.0000	5.7920
Worker	0.0164	0.0125	0.1263	3.3000e-004	0.0323	2.3000e-004	0.0325	8.5900e-003	2.1000e-004	8.8000e-003	0.0000	30.1199	30.1199	8.9000e-004	0.0000	30.1421
Total	**0.0197**	**0.1136**	**0.1478**	**5.7000e-004**	**0.0374**	**7.4000e-004**	**0.0382**	**0.0100**	**6.9000e-004**	**0.0107**	**0.0000**	**52.9629**	**52.9629**	**2.1200e-003**	**0.0000**	**53.0160**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0122	0.0000	0.0122	1.8500e-003	0.0000	1.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0387	0.8738	1.5669	2.9500e-003		6.8400e-003	6.8400e-003		6.8400e-003	6.8400e-003	0.0000	265.5851	265.5851	0.0810	0.0000	267.6099
Total	**0.0387**	**0.8738**	**1.5669**	**2.9500e-003**	**0.0122**	**6.8400e-003**	**0.0190**	**1.8500e-003**	**6.8400e-003**	**8.6900e-003**	**0.0000**	**265.5851**	**265.5851**	**0.0810**	**0.0000**	**267.6099**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0900e-003	0.0719	0.0137	1.8000e-004	3.7100e-003	2.9000e-004	3.9900e-003	1.0200e-003	2.7000e-004	1.2900e-003	0.0000	17.0593	17.0593	9.0000e-004	0.0000	17.0819
Vendor	1.1500e-003	0.0292	7.7600e-003	6.0000e-005	1.4300e-003	2.2000e-004	1.6500e-003	4.1000e-004	2.1000e-004	6.3000e-004	0.0000	5.7837	5.7837	3.3000e-004	0.0000	5.7920
Worker	0.0164	0.0125	0.1263	3.3000e-004	0.0323	2.3000e-004	0.0325	8.5900e-003	2.1000e-004	8.8000e-003	0.0000	30.1199	30.1199	8.9000e-004	0.0000	30.1421
Total	**0.0197**	**0.1136**	**0.1478**	**5.7000e-004**	**0.0374**	**7.4000e-004**	**0.0382**	**0.0100**	**6.9000e-004**	**0.0107**	**0.0000**	**52.9629**	**52.9629**	**2.1200e-003**	**0.0000**	**53.0160**

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Fugitive Dust					1.1000e-004	0.0000	1.1000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3600e-003	0.0156	9.4000e-003	3.0000e-005		5.9000e-004	5.9000e-004		5.4000e-004	5.4000e-004	0.0000	2.3983	2.3983	7.4000e-004	0.0000	2.4168
Total	**1.3600e-003**	**0.0156**	**9.4000e-003**	**3.0000e-005**	**1.1000e-004**	**5.9000e-004**	**7.0000e-004**	**2.0000e-005**	**5.4000e-004**	**5.6000e-004**	**0.0000**	**2.3983**	**2.3983**	**7.4000e-004**	**0.0000**	**2.4168**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.3000e-004	1.2000e-004	0.0000	2.7900e-003	0.0000	2.7900e-003	6.9000e-004	0.0000	6.9000e-004	0.0000	0.1549	0.1549	1.0000e-005	0.0000	0.1551
Vendor	1.0000e-005	2.5000e-004	6.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0527	0.0527	0.0000	0.0000	0.0528
Worker	1.4000e-004	1.0000e-004	1.0300e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2680	0.2680	1.0000e-005	0.0000	0.2682
Total	**1.7000e-004**	**9.8000e-004**	**1.2100e-003**	**0.0000**	**3.1000e-003**	**0.0000**	**3.1000e-003**	**7.7000e-004**	**0.0000**	**7.8000e-004**	**0.0000**	**0.4757**	**0.4757**	**2.0000e-005**	**0.0000**	**0.4761**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1000e-004	0.0000	1.1000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	8.0200e-003	0.0144	3.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	2.3982	2.3982	7.4000e-004	0.0000	2.4168
Total	**3.6000e-004**	**8.0200e-003**	**0.0144**	**3.0000e-005**	**1.1000e-004**	**6.0000e-005**	**1.7000e-004**	**2.0000e-005**	**6.0000e-005**	**8.0000e-005**	**0.0000**	**2.3982**	**2.3982**	**7.4000e-004**	**0.0000**	**2.4168**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.3000e-004	1.2000e-004	0.0000	2.7900e-003	0.0000	2.7900e-003	6.9000e-004	0.0000	6.9000e-004	0.0000	0.1549	0.1549	1.0000e-005	0.0000	0.1551

Vendor	1.0000e-005	2.5000e-004	6.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0527	0.0527	0.0000	0.0000	0.0528
Worker	1.4000e-004	1.0000e-004	1.0300e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2680	0.2680	1.0000e-005	0.0000	0.2682
Total	**1.7000e-004**	**9.8000e-004**	**1.2100e-003**	**0.0000**	**3.1000e-003**	**0.0000**	**3.1000e-003**	**7.7000e-004**	**0.0000**	**7.8000e-004**	**0.0000**	**0.4757**	**0.4757**	**2.0000e-005**	**0.0000**	**0.4761**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1268	1.3047	0.9054	2.4000e-003		0.0573	0.0573		0.0550	0.0550	0.0000	211.0284	211.0284	0.0542	0.0000	212.3841
Total	**0.1268**	**1.3047**	**0.9054**	**2.4000e-003**		**0.0573**	**0.0573**		**0.0550**	**0.0550**	**0.0000**	**211.0284**	**211.0284**	**0.0542**	**0.0000**	**212.3841**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.2700e-003	0.2157	0.0411	5.3000e-004	0.0341	8.6000e-004	0.0350	8.7000e-003	8.2000e-004	9.5200e-003	0.0000	51.1780	51.1780	2.7100e-003	0.0000	51.2458
Vendor	1.1500e-003	0.0292	7.7600e-003	6.0000e-005	1.4300e-003	2.2000e-004	1.6500e-003	4.1000e-004	2.1000e-004	6.3000e-004	0.0000	5.7837	5.7837	3.3000e-004	0.0000	5.7920
Worker	0.0164	0.0125	0.1263	3.3000e-004	0.0323	2.3000e-004	0.0325	8.5900e-003	2.1000e-004	8.8000e-003	0.0000	30.1199	30.1199	8.9000e-004	0.0000	30.1421
Total	**0.0239**	**0.2574**	**0.1752**	**9.2000e-004**	**0.0678**	**1.3100e-003**	**0.0691**	**0.0177**	**1.2400e-003**	**0.0190**	**0.0000**	**87.0815**	**87.0815**	**3.9300e-003**	**0.0000**	**87.1799**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0260	0.6646	1.2966	2.4000e-003		5.7000e-003	5.7000e-003		5.7000e-003	5.7000e-003	0.0000	211.0281	211.0281	0.0542	0.0000	212.3838

Total	**0.0260**	**0.6646**	**1.2966**	**2.4000e-003**		**5.7000e-003**	**5.7000e-003**		**5.7000e-003**	**5.7000e-003**	**0.0000**	**211.0281**	**211.0281**	**0.0542**	**0.0000**	**212.3838**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.2700e-003	0.2157	0.0411	5.3000e-004	0.0341	8.6000e-004	0.0350	8.7000e-003	8.2000e-004	9.5200e-003	0.0000	51.1780	51.1780	2.7100e-003	0.0000	51.2458
Vendor	1.1500e-003	0.0292	7.7600e-003	6.0000e-005	1.4300e-003	2.2000e-004	1.6500e-003	4.1000e-004	2.1000e-004	6.3000e-004	0.0000	5.7837	5.7837	3.3000e-004	0.0000	5.7920
Worker	0.0164	0.0125	0.1263	3.3000e-004	0.0323	2.3000e-004	0.0325	8.5900e-003	2.1000e-004	8.8000e-003	0.0000	30.1199	30.1199	8.9000e-004	0.0000	30.1421
Total	**0.0239**	**0.2574**	**0.1752**	**9.2000e-004**	**0.0678**	**1.3100e-003**	**0.0691**	**0.0177**	**1.2400e-003**	**0.0190**	**0.0000**	**87.0815**	**87.0815**	**3.9300e-003**	**0.0000**	**87.1799**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2941	3.0274	2.1656	5.7400e-003		0.1258	0.1258		0.1206	0.1206	0.0000	499.2319	499.2319	0.1289	0.0000	502.4543
Total	**0.2941**	**3.0274**	**2.1656**	**5.7400e-003**		**0.1258**	**0.1258**		**0.1206**	**0.1206**	**0.0000**	**499.2319**	**499.2319**	**0.1289**	**0.0000**	**502.4543**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0143	0.4904	0.0958	1.2500e-003	0.0380	1.8700e-003	0.0399	0.0101	1.7900e-003	0.0119	0.0000	121.2928	121.2928	6.3900e-003	0.0000	121.4526
Vendor	2.4700e-003	0.0661	0.0170	1.4000e-004	3.4200e-003	4.5000e-004	3.8800e-003	9.9000e-004	4.3000e-004	1.4200e-003	0.0000	13.7560	13.7560	7.6000e-004	0.0000	13.7750
Worker	0.0355	0.0263	0.2681	7.7000e-004	0.0773	5.3000e-004	0.0779	0.0206	4.9000e-004	0.0211	0.0000	69.9582	69.9582	1.8700e-003	0.0000	70.0050

Total	**0.0522**	**0.5828**	**0.3808**	**2.1600e-003**	**0.1187**	**2.8500e-003**	**0.1216**	**0.0317**	**2.7100e-003**	**0.0344**	**0.0000**	**205.0069**	**205.0069**	**9.0200e-003**	**0.0000**	**205.2327**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0623	1.5914	3.1048	5.7400e-003		0.0136	0.0136		0.0136	0.0136	0.0000	499.2313	499.2313	0.1289	0.0000	502.4537
Total	**0.0623**	**1.5914**	**3.1048**	**5.7400e-003**		**0.0136**	**0.0136**		**0.0136**	**0.0136**	**0.0000**	**499.2313**	**499.2313**	**0.1289**	**0.0000**	**502.4537**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0143	0.4904	0.0958	1.2500e-003	0.0380	1.8700e-003	0.0399	0.0101	1.7900e-003	0.0119	0.0000	121.2928	121.2928	6.3900e-003	0.0000	121.4526
Vendor	2.4700e-003	0.0661	0.0170	1.4000e-004	3.4200e-003	4.5000e-004	3.8800e-003	9.9000e-004	4.3000e-004	1.4200e-003	0.0000	13.7560	13.7560	7.6000e-004	0.0000	13.7750
Worker	0.0355	0.0263	0.2681	7.7000e-004	0.0773	5.3000e-004	0.0779	0.0206	4.9000e-004	0.0211	0.0000	69.9582	69.9582	1.8700e-003	0.0000	70.0050
Total	**0.0522**	**0.5828**	**0.3808**	**2.1600e-003**	**0.1187**	**2.8500e-003**	**0.1216**	**0.0317**	**2.7100e-003**	**0.0344**	**0.0000**	**205.0069**	**205.0069**	**9.0200e-003**	**0.0000**	**205.2327**

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0474	0.4840	0.3567	9.5000e-004		0.0191	0.0191		0.0183	0.0183	0.0000	80.9146	80.9146	0.0211	0.0000	81.4424
Total	**0.0474**	**0.4840**	**0.3567**	**9.5000e-004**		**0.0191**	**0.0191**		**0.0183**	**0.0183**	**0.0000**	**80.9146**	**80.9146**	**0.0211**	**0.0000**	**81.4424**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1500e-003	0.0754	0.0152	2.0000e-004	0.0324	2.4000e-004	0.0327	8.0900e-003	2.3000e-004	8.3200e-003	0.0000	19.7724	19.7724	1.0200e-003	0.0000	19.7979
Vendor	3.3000e-004	9.9200e-003	2.4900e-003	2.0000e-005	5.6000e-004	5.0000e-005	6.1000e-004	1.6000e-004	5.0000e-005	2.1000e-004	0.0000	2.2517	2.2517	1.2000e-004	0.0000	2.2546
Worker	5.3400e-003	3.8200e-003	0.0396	1.2000e-004	0.0127	9.0000e-005	0.0128	3.3900e-003	8.0000e-005	3.4700e-003	0.0000	11.1630	11.1630	2.7000e-004	0.0000	11.1698
Total	**7.8200e-003**	**0.0892**	**0.0573**	**3.4000e-004**	**0.0457**	**3.8000e-004**	**0.0461**	**0.0116**	**3.6000e-004**	**0.0120**	**0.0000**	**33.1871**	**33.1871**	**1.4100e-003**	**0.0000**	**33.2222**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.2622	0.5115	9.5000e-004		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	80.9145	80.9145	0.0211	0.0000	81.4423
Total	**0.0103**	**0.2622**	**0.5115**	**9.5000e-004**		**2.2500e-003**	**2.2500e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**80.9145**	**80.9145**	**0.0211**	**0.0000**	**81.4423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1500e-003	0.0754	0.0152	2.0000e-004	0.0324	2.4000e-004	0.0327	8.0900e-003	2.3000e-004	8.3200e-003	0.0000	19.7724	19.7724	1.0200e-003	0.0000	19.7979
Vendor	3.3000e-004	9.9200e-003	2.4900e-003	2.0000e-005	5.6000e-004	5.0000e-005	6.1000e-004	1.6000e-004	5.0000e-005	2.1000e-004	0.0000	2.2517	2.2517	1.2000e-004	0.0000	2.2546
Worker	5.3400e-003	3.8200e-003	0.0396	1.2000e-004	0.0127	9.0000e-005	0.0128	3.3900e-003	8.0000e-005	3.4700e-003	0.0000	11.1630	11.1630	2.7000e-004	0.0000	11.1698
Total	**7.8200e-003**	**0.0892**	**0.0573**	**3.4000e-004**	**0.0457**	**3.8000e-004**	**0.0461**	**0.0116**	**3.6000e-004**	**0.0120**	**0.0000**	**33.1871**	**33.1871**	**1.4100e-003**	**0.0000**	**33.2222**

3.4 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0296	0.0000	0.0296	0.0152	0.0000	0.0152	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8600e-003	0.0517	0.0183	4.0000e-005		2.5200e-003	2.5200e-003		2.3200e-003	2.3200e-003	0.0000	3.2836	3.2836	1.0400e-003	0.0000	3.3096
Total	**4.8600e-003**	**0.0517**	**0.0183**	**4.0000e-005**	**0.0296**	**2.5200e-003**	**0.0322**	**0.0152**	**2.3200e-003**	**0.0175**	**0.0000**	**3.2836**	**3.2836**	**1.0400e-003**	**0.0000**	**3.3096**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1000e-004	7.2000e-003	1.4100e-003	2.0000e-005	3.9000e-004	3.0000e-005	4.2000e-004	1.1000e-004	3.0000e-005	1.3000e-004	0.0000	1.7814	1.7814	9.0000e-005	0.0000	1.7838
Vendor	1.1000e-004	3.0400e-003	7.8000e-004	1.0000e-005	1.6000e-004	2.0000e-005	1.8000e-004	5.0000e-005	2.0000e-005	7.0000e-005	0.0000	0.6325	0.6325	4.0000e-005	0.0000	0.6333
Worker	1.3100e-003	9.7000e-004	9.8600e-003	3.0000e-005	2.8400e-003	2.0000e-005	2.8600e-003	7.6000e-004	2.0000e-005	7.7000e-004	0.0000	2.5732	2.5732	7.0000e-005	0.0000	2.5749
Total	**1.6300e-003**	**0.0112**	**0.0121**	**6.0000e-005**	**3.3900e-003**	**7.0000e-005**	**3.4600e-003**	**9.2000e-004**	**7.0000e-005**	**9.7000e-004**	**0.0000**	**4.9871**	**4.9871**	**2.0000e-004**	**0.0000**	**4.9920**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0296	0.0000	0.0296	0.0152	0.0000	0.0152	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5000e-004	1.9400e-003	0.0164	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.2836	3.2836	1.0400e-003	0.0000	3.3096
Total	**4.5000e-004**	**1.9400e-003**	**0.0164**	**4.0000e-005**	**0.0296**	**6.0000e-005**	**0.0297**	**0.0152**	**6.0000e-005**	**0.0152**	**0.0000**	**3.2836**	**3.2836**	**1.0400e-003**	**0.0000**	**3.3096**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1000e-004	7.2000e-003	1.4100e-003	2.0000e-005	3.9000e-004	3.0000e-005	4.2000e-004	1.1000e-004	3.0000e-005	1.3000e-004	0.0000	1.7814	1.7814	9.0000e-005	0.0000	1.7838
Vendor	1.1000e-004	3.0400e-003	7.8000e-004	1.0000e-005	1.6000e-004	2.0000e-005	1.8000e-004	5.0000e-005	2.0000e-005	7.0000e-005	0.0000	0.6325	0.6325	4.0000e-005	0.0000	0.6333
Worker	1.3100e-003	9.7000e-004	9.8600e-003	3.0000e-005	2.8400e-003	2.0000e-005	2.8600e-003	7.6000e-004	2.0000e-005	7.7000e-004	0.0000	2.5732	2.5732	7.0000e-005	0.0000	2.5749
Total	**1.6300e-003**	**0.0112**	**0.0121**	**6.0000e-005**	**3.3900e-003**	**7.0000e-005**	**3.4600e-003**	**9.2000e-004**	**7.0000e-005**	**9.7000e-004**	**0.0000**	**4.9871**	**4.9871**	**2.0000e-004**	**0.0000**	**4.9920**

3.5 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0387	0.0000	0.0387	0.0201	0.0000	0.0201	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0120	0.1233	0.0856	1.4000e-004		6.1600e-003	6.1600e-003		5.6600e-003	5.6600e-003	0.0000	12.7371	12.7371	4.0300e-003	0.0000	12.8379
Total	**0.0120**	**0.1233**	**0.0856**	**1.4000e-004**	**0.0387**	**6.1600e-003**	**0.0448**	**0.0201**	**5.6600e-003**	**0.0258**	**0.0000**	**12.7371**	**12.7371**	**4.0300e-003**	**0.0000**	**12.8379**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1000e-004	7.2000e-003	1.4100e-003	2.0000e-005	3.9000e-004	3.0000e-005	4.2000e-004	1.1000e-004	3.0000e-005	1.3000e-004	0.0000	1.7814	1.7814	9.0000e-005	0.0000	1.7838
Vendor	1.1000e-004	3.0400e-003	7.8000e-004	1.0000e-005	1.6000e-004	2.0000e-005	1.8000e-004	5.0000e-005	2.0000e-005	7.0000e-005	0.0000	0.6325	0.6325	4.0000e-005	0.0000	0.6333
Worker	1.3100e-003	9.7000e-004	9.8600e-003	3.0000e-005	2.8400e-003	2.0000e-005	2.8600e-003	7.6000e-004	2.0000e-005	7.7000e-004	0.0000	2.5732	2.5732	7.0000e-005	0.0000	2.5749
Total	**1.6300e-003**	**0.0112**	**0.0121**	**6.0000e-005**	**3.3900e-003**	**7.0000e-005**	**3.4600e-003**	**9.2000e-004**	**7.0000e-005**	**9.7000e-004**	**0.0000**	**4.9871**	**4.9871**	**2.0000e-004**	**0.0000**	**4.9920**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0387	0.0000	0.0387	0.0201	0.0000	0.0201	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7200e-003	7.4700e-003	0.0914	1.4000e-004		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	12.7371	12.7371	4.0300e-003	0.0000	12.8379
Total	**1.7200e-003**	**7.4700e-003**	**0.0914**	**1.4000e-004**	**0.0387**	**2.3000e-004**	**0.0389**	**0.0201**	**2.3000e-004**	**0.0204**	**0.0000**	**12.7371**	**12.7371**	**4.0300e-003**	**0.0000**	**12.8379**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1000e-004	7.2000e-003	1.4100e-003	2.0000e-005	3.9000e-004	3.0000e-005	4.2000e-004	1.1000e-004	3.0000e-005	1.3000e-004	0.0000	1.7814	1.7814	9.0000e-005	0.0000	1.7838
Vendor	1.1000e-004	3.0400e-003	7.8000e-004	1.0000e-005	1.6000e-004	2.0000e-005	1.8000e-004	5.0000e-005	2.0000e-005	7.0000e-005	0.0000	0.6325	0.6325	4.0000e-005	0.0000	0.6333
Worker	1.3100e-003	9.7000e-004	9.8600e-003	3.0000e-005	2.8400e-003	2.0000e-005	2.8600e-003	7.6000e-004	2.0000e-005	7.7000e-004	0.0000	2.5732	2.5732	7.0000e-005	0.0000	2.5749
Total	**1.6300e-003**	**0.0112**	**0.0121**	**6.0000e-005**	**3.3900e-003**	**7.0000e-005**	**3.4600e-003**	**9.2000e-004**	**7.0000e-005**	**9.7000e-004**	**0.0000**	**4.9871**	**4.9871**	**2.0000e-004**	**0.0000**	**4.9920**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.0800e-003	0.0895	0.1053	1.6000e-004		4.6800e-003	4.6800e-003		4.3200e-003	4.3200e-003	0.0000	14.3483	14.3483	4.5800e-003	0.0000	14.4627
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.0800e-003**	**0.0895**	**0.1053**	**1.6000e-004**		**4.6800e-003**	**4.6800e-003**		**4.3200e-003**	**4.3200e-003**	**0.0000**	**14.3483**	**14.3483**	**4.5800e-003**	**0.0000**	**14.4627**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9000e-004	6.7200e-003	1.3500e-003	2.0000e-005	3.9000e-004	2.0000e-005	4.1000e-004	1.1000e-004	2.0000e-005	1.3000e-004	0.0000	1.7627	1.7627	9.0000e-005	0.0000	1.7649
Vendor	9.0000e-005	2.6500e-003	6.7000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.6022	0.6022	3.0000e-005	0.0000	0.6030
Worker	2.2900e-003	1.6400e-003	0.0170	5.0000e-005	5.4500e-003	4.0000e-005	5.4900e-003	1.4500e-003	3.0000e-005	1.4800e-003	0.0000	4.7767	4.7767	1.2000e-004	0.0000	4.7796
Total	**2.5700e-003**	**0.0110**	**0.0190**	**8.0000e-005**	**5.9900e-003**	**7.0000e-005**	**6.0600e-003**	**1.6000e-003**	**6.0000e-005**	**1.6700e-003**	**0.0000**	**7.1416**	**7.1416**	**2.4000e-004**	**0.0000**	**7.1475**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2200e-003	0.0186	0.1221	1.6000e-004		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	14.3482	14.3482	4.5800e-003	0.0000	14.4626
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.2200e-003**	**0.0186**	**0.1221**	**1.6000e-004**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**14.3482**	**14.3482**	**4.5800e-003**	**0.0000**	**14.4626**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9000e-004	6.7200e-003	1.3500e-003	2.0000e-005	3.9000e-004	2.0000e-005	4.1000e-004	1.1000e-004	2.0000e-005	1.3000e-004	0.0000	1.7627	1.7627	9.0000e-005	0.0000	1.7649
Vendor	9.0000e-005	2.6500e-003	6.7000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.6022	0.6022	3.0000e-005	0.0000	0.6030
Worker	2.2900e-003	1.6400e-003	0.0170	5.0000e-005	5.4500e-003	4.0000e-005	5.4900e-003	1.4500e-003	3.0000e-005	1.4800e-003	0.0000	4.7767	4.7767	1.2000e-004	0.0000	4.7796

Total	**2.5700e-003**	**0.0110**	**0.0190**	**8.0000e-005**	**5.9900e-003**	**7.0000e-005**	**6.0600e-003**	**1.6000e-003**	**6.0000e-005**	**1.6700e-003**	**0.0000**	**7.1416**	**7.1416**	**2.4000e-004**	**0.0000**	**7.1475**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.2387					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0500e-003	0.0497	0.0844	1.3000e-004		1.1000e-003	1.1000e-003		1.0200e-003	1.0200e-003	0.0000	11.3806	11.3806	3.6800e-003	0.0000	11.4726
Total	**3.2418**	**0.0497**	**0.0844**	**1.3000e-004**		**1.1000e-003**	**1.1000e-003**		**1.0200e-003**	**1.0200e-003**	**0.0000**	**11.3806**	**11.3806**	**3.6800e-003**	**0.0000**	**11.4726**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-004	0.0316	6.3500e-003	9.0000e-005	1.8200e-003	1.0000e-004	1.9300e-003	5.0000e-004	1.0000e-004	6.0000e-004	0.0000	8.2768	8.2768	4.3000e-004	0.0000	8.2875
Vendor	2.1000e-004	6.2300e-003	1.5700e-003	1.0000e-005	3.5000e-004	3.0000e-005	3.8000e-004	1.0000e-004	3.0000e-005	1.3000e-004	0.0000	1.4138	1.4138	7.0000e-005	0.0000	1.4157
Worker	4.4700e-003	3.2000e-003	0.0332	1.0000e-004	0.0107	7.0000e-005	0.0107	2.8400e-003	7.0000e-005	2.9000e-003	0.0000	9.3458	9.3458	2.3000e-004	0.0000	9.3514
Total	**5.5800e-003**	**0.0410**	**0.0411**	**2.0000e-004**	**0.0128**	**2.0000e-004**	**0.0131**	**3.4400e-003**	**2.0000e-004**	**3.6300e-003**	**0.0000**	**19.0364**	**19.0364**	**7.3000e-004**	**0.0000**	**19.0546**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.2387					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5900e-003	6.9100e-003	0.0983	1.3000e-004		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	11.3806	11.3806	3.6800e-003	0.0000	11.4726

Total	**3.2403**	**6.9100e-003**	**0.0983**	**1.3000e-004**		**2.1000e-004**	**2.1000e-004**		**2.1000e-004**	**2.1000e-004**	**0.0000**	**11.3806**	**11.3806**	**3.6800e-003**	**0.0000**	**11.4726**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-004	0.0316	6.3500e-003	9.0000e-005	1.8200e-003	1.0000e-004	1.9300e-003	5.0000e-004	1.0000e-004	6.0000e-004	0.0000	8.2768	8.2768	4.3000e-004	0.0000	8.2875
Vendor	2.1000e-004	6.2300e-003	1.5700e-003	1.0000e-005	3.5000e-004	3.0000e-005	3.8000e-004	1.0000e-004	3.0000e-005	1.3000e-004	0.0000	1.4138	1.4138	7.0000e-005	0.0000	1.4157
Worker	4.4700e-003	3.2000e-003	0.0332	1.0000e-004	0.0107	7.0000e-005	0.0107	2.8400e-003	7.0000e-005	2.9000e-003	0.0000	9.3458	9.3458	2.3000e-004	0.0000	9.3514
Total	**5.5800e-003**	**0.0410**	**0.0411**	**2.0000e-004**	**0.0128**	**2.0000e-004**	**0.0131**	**3.4400e-003**	**2.0000e-004**	**3.6300e-003**	**0.0000**	**19.0364**	**19.0364**	**7.3000e-004**	**0.0000**	**19.0546**

OPERATIONAL EMISSIONS WERE NOT ESTIMATED IN THIS RUN.

```
OAKLAND CIVIC AUDITORIUM - UNCONTROLLED SCENARIO
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.5.0
** Lakes Environmental Software Inc.
** Date: 9/24/2018
** File: C:\Lakes\AERMOD View\Oakland Civic Auditorium\Oakland Civic Auditorium.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE C:\Lakes\AERMOD View\Oakland Civic Auditorium\Oakland Civic Auditori
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL "Oakland Civic Auditorium.err"
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION PAREA1       AREAPOLY   564960.367  4183709.918       5.000
** Source Parameters **
   SRCPARAM PAREA1       7.4897E-07     5.000        5
   AREAVERT PAREA1       564960.367 4183709.918 564915.604 4183614.653
   AREAVERT PAREA1       565065.963 4183542.343 565071.702 4183540.047
   AREAVERT PAREA1       565119.908 4183637.608

** Variable Emissions Type: "By Hour / Seven Days (HRDOW7)"
** Variable Emission Scenario: "Scenario 1"
   EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT PAREA1      HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1      HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1      HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
   INCLUDED "Oakland Civic Auditorium.rou"
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE C:\Users\jni\Desktop\HJK-160282\HRA\724930\724930.SFC
   PROFFILE C:\Users\jni\Desktop\HJK-160282\HRA\724930\724930.PFL
   SURFDATA 23230 2009 OAKLAND/WSO_AP
   UAIRDATA 23230 2009 OAKLAND/WSO_AP
   PROFBASE 10.0 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "Oakland Civic Auditorium.AD\AN00GALL.PLT" 31
   SUMMFILE "Oakland Civic Auditorium.sum"
OU FINISHED

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 16216r ***   *** C:\Lakes\AERMOD View\Oakland Civic Auditorium\Oakland Civic Auditori ***        09/24/18
 *** AERMET - VERSION  14134 ***   ***                                                                    ***        10:55:43
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** MODEL SETUP OPTIONS SUMMARY ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

-- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Uses Regulatory DEFAULT Options:
1. Stack-tip Downwash.
2. Model Accounts for ELEVated Terrain Effects.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.

**Other Options Specified:
CCVR_Sub - Meteorological data includes CCVR substitutions
TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: PM_10

**Model Calculates ANNUAL Averages Only

**This Run Includes: 1 Source(s); 1 Source Group(s); and 8 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 0 VOLUME source(s)
and: 1 AREA type source(s)
and: 0 LINE source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with 0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 14134

**Output Options Selected:
Model Outputs Tables of ANNUAL Averages by Receptor
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours

m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 10.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.5 MB of RAM.

**Detailed Error/Message File: Oakland Civic Auditorium.err
**File for Summary of Results: Oakland Civic Auditorium.sum

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	X (METERS)	Y (METERS)	ELEV. (METERS)	HEIGHT (METERS)	OF VERTS.	SZ (METERS)	SOURCE VARY BY	SCALAR
PAREA1	0	0.74897E-06	564960.4	4183709.9	5.0	5.00	5	0.00	NO	HRDOW7

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	PAREA1 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = PAREA1 ; SOURCE TYPE = AREAPOLY :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR

SCALAR HOUR SCALAR HOUR SCALAR

- -

DAY OF WEEK = MONDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = TUESDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = WEDNESDY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = THURSDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = FRIDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(565327.7, 4183509.1, 8.8, 8.8, 0.0); (565354.1, 4183536.6, 7.3, 7.3, 0.0);
(564766.4, 4183661.7, 9.2, 9.2, 0.0); (564687.2, 4183691.5, 10.1, 10.1, 0.0);
(564735.4, 4183482.7, 7.9, 7.9, 0.0); (565235.8, 4183380.5, 7.4, 7.4, 0.0);
(565257.6, 4183441.3, 8.1, 8.1, 0.0); (565301.3, 4183478.1, 8.1, 8.1, 0.0);

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: C:\Users\jni\Desktop\HJK-160282\HRA\724930\724930.SFC Met Version: 14134
Profile file: C:\Users\jni\Desktop\HJK-160282\HRA\724930\724930.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 23230 Upper air station no.: 23230
Name: OAKLAND/WSO_AP Name: OAKLAND/WSO_AP
Year: 2009 Year: 2009

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
09	01	01	1	01	-17.2	0.303	-9.000	-9.000	-999.	401.	147.2	0.63	0.86	1.00	2.36	81.	10.0	282.5	2.0
09	01	01	1	02	-21.8	0.383	-9.000	-9.000	-999.	569.	234.6	0.63	0.86	1.00	2.86	68.	10.0	282.0	2.0
09	01	01	1	03	-26.3	0.460	-9.000	-9.000	-999.	749.	337.1	0.63	0.86	1.00	3.36	84.	10.0	280.9	2.0
09	01	01	1	04	-15.4	0.270	-9.000	-9.000	-999.	368.	116.1	0.47	0.86	1.00	2.36	53.	10.0	280.9	2.0
09	01	01	1	05	-26.3	0.460	-9.000	-9.000	-999.	749.	336.3	0.63	0.86	1.00	3.36	73.	10.0	280.4	2.0
09	01	01	1	06	-21.9	0.383	-9.000	-9.000	-999.	573.	232.9	0.63	0.86	1.00	2.86	82.	10.0	280.4	2.0
09	01	01	1	07	-22.0	0.383	-9.000	-9.000	-999.	569.	232.5	0.63	0.86	1.00	2.86	95.	10.0	279.9	2.0
09	01	01	1	08	-11.2	0.196	-9.000	-9.000	-999.	238.	60.6	0.63	0.86	0.76	1.76	73.	10.0	279.9	2.0
09	01	01	1	09	-2.2	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	0.86	0.39	0.00	0.	10.0	280.4	2.0
09	01	01	1	10	6.8	0.266	0.264	0.016	98.	329.	-250.8	0.63	0.86	0.27	1.76	91.	10.0	280.9	2.0
09	01	01	1	11	15.5	-9.000	-9.000	-9.000	177.	-999.	-99999.0	0.45	0.86	0.22	0.00	0.	10.0	282.0	2.0
09	01	01	1	12	96.1	0.393	1.019	0.014	401.	591.	-57.4	0.22	0.86	0.21	3.36	266.	10.0	281.4	2.0
09	01	01	1	13	102.5	0.395	1.092	0.014	462.	595.	-54.4	0.22	0.86	0.20	3.36	283.	10.0	282.0	2.0
09	01	01	1	14	89.9	0.297	1.066	0.015	489.	394.	-26.5	0.22	0.86	0.21	2.36	249.	10.0	282.0	2.0
09	01	01	1	15	62.1	0.383	0.954	0.014	507.	569.	-82.1	0.22	0.86	0.24	3.36	242.	10.0	282.5	2.0
09	01	01	1	16	23.1	0.665	0.690	0.006	513.	1300.	-1150.4	0.52	0.86	0.33	4.86	304.	10.0	282.5	2.0
09	01	01	1	17	-37.0	0.486	-9.000	-9.000	-999.	846.	280.6	0.22	0.86	0.56	4.86	291.	10.0	281.4	2.0
09	01	01	1	18	-52.2	0.480	-9.000	-9.000	-999.	799.	191.9	0.52	0.86	1.00	3.86	307.	10.0	280.9	2.0
09	01	01	1	19	-25.6	0.224	-9.000	-9.000	-999.	327.	39.8	0.52	0.86	1.00	2.36	334.	10.0	280.4	2.0
09	01	01	1	20	-11.1	0.119	-9.000	-9.000	-999.	115.	13.8	0.52	0.86	1.00	1.76	317.	10.0	280.4	2.0
09	01	01	1	21	-10.3	0.119	-9.000	-9.000	-999.	98.	14.7	0.52	0.86	1.00	1.76	320.	10.0	280.4	2.0
09	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	0.86	1.00	0.00	0.	10.0	280.9	2.0
09	01	01	1	23	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	0.86	1.00	0.00	0.	10.0	281.4	2.0
09	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	0.86	1.00	0.00	0.	10.0	281.4	2.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
09	01	01	01	10.0	1	81.	2.36	282.6	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
565327.66	4183509.06	0.02280	565354.06	4183536.60	0.02214
564766.39	4183661.71	0.00225	564687.20	4183691.55	0.00122
564735.40	4183482.66	0.00129	565235.83	4183380.51	0.00882

565257.64 4183441.34 0.01718 565301.26 4183478.07 0.02125

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 5 YEARS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	NETWORK RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID
ALL	1ST HIGHEST VALUE IS	0.02280 AT (565327.66, 4183509.06, 8.79, 8.79, 0.00) DC
	2ND HIGHEST VALUE IS	0.02214 AT (565354.06, 4183536.60, 7.33, 7.33, 0.00) DC
	3RD HIGHEST VALUE IS	0.02125 AT (565301.26, 4183478.07, 8.11, 8.11, 0.00) DC
	4TH HIGHEST VALUE IS	0.01718 AT (565257.64, 4183441.34, 8.07, 8.07, 0.00) DC
	5TH HIGHEST VALUE IS	0.00882 AT (565235.83, 4183380.51, 7.42, 7.42, 0.00) DC
	6TH HIGHEST VALUE IS	0.00225 AT (564766.39, 4183661.71, 9.23, 9.23, 0.00) DC
	7TH HIGHEST VALUE IS	0.00129 AT (564735.40, 4183482.66, 7.91, 7.91, 0.00) DC
	8TH HIGHEST VALUE IS	0.00122 AT (564687.20, 4183691.55, 10.11, 10.11, 0.00) DC
	9TH HIGHEST VALUE IS	0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)
	10TH HIGHEST VALUE IS	0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 1 Warning Message(s)
A Total of 7953 Informational Message(s)

A Total of 43872 Hours Were Processed

A Total of 7152 Calm Hours Identified

A Total of 801 Missing Hours Identified (1.83 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
MX W481 43873 MAIN: Data Remaining After End of Year. Number of Hours= 48

****
*** AERMOD Finishes Successfully ***
****

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APPENDIX B
Greenhouse Gas Reduction Plan

1. Introduction

This Greenhouse Gas (GHG) Reduction Plan (GHGRP) has been prepared to comply with the City of Oakland Standard Condition of Approval (City SCA-42) "Greenhouse Gas Reduction Plan", herein referred to as SCA GHG-1, as identified in the *Oakland Civic Auditorium Rehabilitation Project CEQA Checklist* to which this GHGRP is incorporated as an appendix. The Oakland Civic Auditorium Rehabilitation Project (Project) is acquiring the necessary environmental entitlements under the California Environmental Quality Act (CEQA), with the City of Oakland as the lead agency. Under SCA GHG-1, the City of Oakland requires a GHGRP that requires the Project to increase energy efficiency and reduce GHG emissions below at least one of the Bay Area Air Quality Management District's (BAAQMD's) CEQA Thresholds of Significance, as defined in the City's Energy and Climate Action Plan (ECAP).

2. Project Description

The Project would rehabilitate the vacant Oakland Civic Auditorium (also known as the Henry J. Kaiser Convention Center or Oakland Municipal Auditorium), which is owned by the City of Oakland, to provide new uses while preserving the existing building. The project site consists of one parcel, Assessor's Parcel Number 018-0450-005-00, located at 10 10th Street, just south of Lake Merritt on the block bounded by Oak, 10th, 12th, and 14th Streets, and the Lake Merritt Channel. The project site is currently occupied by the existing vacant Oakland Civic Auditorium/Calvin Simmons Theatre, which consists of a single building with three stories and one basement level.

The Project would preserve the existing building envelope, while seismically upgrading the existing building, and add a podium along the north side of the building. It would rehabilitate the approximately 1,500 seat Calvin Simmons Theatre, the Theatre's ancillary spaces, and two third-floor ballrooms. The Project would adaptively reuse other portions of the existing building to create space for office and/or retail use and update the surrounding surface parking area. The Project uses are generally organized within four areas of the Project building: Theatre, Podium, Basement, and Arena. For the purposes of environmental review, the analysis herein provides for flexibility of use (either office or retail) for the 25,000 square feet in the second floor of the Arena. The Project construction period would last approximately 20 months.

The Project Applicant intends to meet LEED Silver certification standards or equivalent and comply with the Green Building ordinance and requirements, such as reduction in indoor and

outdoor water use. Through the building retrofits, the Project would optimize the efficiency of its building envelope, and through the use of efficient lighting and HVAC systems it would reduce energy use. The Project would meet the newly implemented Building Energy Efficiency Standards in compliance with the Historic Building Code.

A 20-month construction period for the Project is projected with the Project's first operational year is expected to be 2021. **Table GHG-1** shows the type and size of proposed land uses. Retail use is a more intensive land use with respect to GHG emissions. Therefore, the Optional Retail land use scenario is quantified in this GHGRP for required GHG reductions.

TABLE GHG-1
PROJECT SCENARIO LAND USE COMPARISON

Land Use	Project	Optional Retail
Restaurant/Retail	13,000	38,000
Public Space (Podium)	7,500	7,500
Theatre	40,800	40,800
Ballroom	16,000	16,000
Other (artisan workshops, arts/music practice space)	17,000	17,000
Office	84,000	59,000
Storage	18,000	18,000
Total	**196,300**	**196,300**
Total Employees	**288**	**297**

3. City of Oakland Standard Conditions of Approval (SCAs)

SCA GHG-1 applies to any project that meets **one or more** of the following three scenarios and has a net increase in GHG emissions:

Scenario A: Projects which:

(a) involve a land use development (i.e., a project that does not require a permit from the Bay Area Air Quality Management District [BAAQMD] to operate),

(b) exceed the GHG emissions screening criteria contained in the BAAQMD CEQA Guidelines, AND

(c) after a GHG analysis is prepared, would exceed both of the City's applicable thresholds of significance (1,100 metric tons of carbon dioxide equivalents [CO2e] annually and 4.6 metric tons of CO_2e per service population annually).

Scenario B: Projects which

(a) involve a land use development,

(b) Exceed the GHG emissions screening criteria contained in the BAAQMD CEQA Guidelines,

(c) after a GHG analysis is prepared, would exceed at least one of the City's applicable thresholds of significance (1,100 metric tons of CO2e annually or 4.6 metric tons of CO_2e per service population annually), AND

(d) are considered to be "Very Large Projects."

Scenario C: Projects which

(a) involve a stationary source of GHG (i.e., a project that requires a permit from BAAQMD to operate) AND

(b) after a GHG analysis is prepared, would exceed the City's applicable threshold of significance (10,000 metric tons of CO_2e annually).

The Project is required to prepare a GHGRP as it satisfies all the criteria under Scenario A. The Project includes a mix of land uses that would exceed the GHG screening criteria in Table 3-1[1] of the BAAQMD's 2017 *CEQA Air Quality Guidelines.* Further, as shown below, the Project (both options) would exceed both the City's threshold of 1,100 metric tons of CO_2e per year threshold and the 4.6 metric tons of CO_2e per service population threshold. The Project would not satisfy all the criteria under Scenario B. While the Project would include a mix of land uses that would exceed the GHG screening criteria and exceed both of the City's thresholds, the mix of land uses proposed would not individually or cumulatively exceed the City's definition of a "Very Large Project."

A "Very Large Project" is defined as any of the following:

(A) Residential development of more than 500 dwelling units;

(B) Shopping center or business establishment employing more than 1,000 persons or encompassing more than 500,000 square feet of floor space;

(C) Commercial office building employing more than 1,000 persons or encompassing more than 250,000 square feet of floor space;

(D) Hotel/motel development of more than 500 rooms;

(E) Industrial, manufacturing, processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or encompassing more than 650,000 square feet of floor area; or

(F) Any combination of smaller versions of the above that when combined result in equivalent annual GHG emissions as the above.

The Project would not include residential uses, hotel/motel uses, or an industrial, manufacturing, processing plant, or industrial park and therefore would not be considered a very large project under definitions (A), (D) or (E) above. As shown in Table GHG-1 above, the Project would not involve construction of more than 500,000 square feet of development nor would it employ more than 1,000 people considering cumulative development of all land uses. Therefore the Project would not be considered a very large project under definition (B) above.

The maximum proposed office use totals, at most, 84,000 square feet and would be less than the 250,000 square feet required to trigger a very large project under definition (C) above.

[1] Screening sizes include 53,000 square feet of general office building, 7,000 square feet of restaurant, and 19,000 square feet of retail. It should be noted that these screening sizes were developed using the URBEMIS model which is no longer in use and used many data points developed prior to implementation of AB32.

With respect to definition (F) above, as stated earlier, the Project would result in fewer than 1,000 employees. Additionally, the maximum proposed office use would be 34 percent (84 ksf /250 ksf) below the definition threshold for such uses. Therefore, the Project would not be considered a very large project under definition (F) above considering cumulative development of all land uses.

SCA GHG-1: Greenhouse Gas Reduction Plan

SCA GHG-1 requires that project applicants retain a qualified air quality consultant to develop a GHGRP for City review and approval and shall implement the approved GHGRP. The goal of the GHGRP is to increase energy efficiency and reduce GHG emissions to below at least one of the City's CEQA Thresholds of Significance (1,100 metric tons of CO_2e per year or 4.6 metric tons of CO_2e per year per service population).

The GHGRP is to include, at a minimum, (a) a detailed GHG emissions inventory for the Project under a "business-as-usual" scenario with no consideration of project design features, or other energy efficiencies, (b) an "adjusted" baseline GHG emissions inventory for the project, taking into consideration energy efficiencies included as part of the Project (including the City's SCAs, proposed mitigation measures, project design features, and other City requirements), and additional GHG reduction measures available to further reduce GHG emissions, and (c) requirements for ongoing monitoring.

The GHGRP shall be implemented beginning with Project construction; for instance, construction of physical GHG reduction measures are to be incorporated into the design of the Project. The Project Applicant shall commit to ongoing monitoring and reporting, during and after Project construction, to ensure that GHG reduction measures are being implemented.

The GHGRP shall be considered fully attained when the City confirms through an established monitoring program that project emissions are less than at least one of the two applicable City Thresholds of significance.

4. Overview of GHG Emissions Inventories

Methodology and Assumptions

As part of this GHGRP, ESA prepared a detailed GHG emissions inventory for the Project under a 2005 "business-as-usual" (BAU) scenario[2] (hereafter called the "2005 BAU Project") without considering any of the regulatory standards adopted thereafter designed to reduce GHG emissions or other energy efficiencies. This 2005 BAU Project inventory is compared to a Project Buildout (2021) scenario (hereafter called the "Project Buildout scenario"), taking into consideration energy efficiencies included as part of the Project (including the City's SCAs, project design features, other City requirements, and federal, state and other local regulatory standards enacted since 2005). Year 2005 is the baseline year because the City's GHG emissions reduction goal specified in its ECAP is

[2] AB32, the California Global Warming Solutions Act of 2006 requires CARB to adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions to reduce statewide GHG emissions to 1990 levels by 2020 — a reduction of approximately 15 percent below emissions expected under a "business as usual" scenario.

based on what GHG emissions were in 2005. Year 2021 is the buildout year when construction of the Project is anticipated to be complete. Consistent with the methodology used in the Oakland ECAP, ESA analyzed the 2005 BAU Project as if it were operating in 2005 using the California Emissions Estimator Model (CalEEMod), version 2016.3.2.[3]

GHG emissions were estimated using CalEEMod version 2016.3.2. Assumptions for the emissions inventories were based on a combination of Project-specific information provided to the City and ESA by the Project Applicant for the CEQA Analysis and default assumptions of the model such as emission factors.

Emission Sources

GHG emission sources associated with the Project include both direct and indirect sources. Direct emissions include emissions from off-road construction equipment, on-road vehicles, area sources such as hearths and landscape equipment, stationary sources such as emergency generators, and emissions from solid waste disposal. GHG emissions from purchased electricity, including electricity needed for the conveyance and treatment of water and wastewater, are indirect sources.

BAAQMD, GHG emissions from permitted stationary source equipment are not to be assessed as part of the operational emissions of a land development project, but are instead to be directly compared to BAAQMD's 10,000 metric ton per year threshold for such equipment for the purposes of impact assessment relative to CEQA. The Project would not include a backup diesel generator or any other stationary source of GHG emissions.

The following source categories are included in the GHG emissions inventories in this document:

- Construction
- Mobile sources (motor vehicles)
- Area Sources
- Energy Use (Natural Gas)
- Energy Use (Grid Electricity)
- Water and Wastewater Conveyance & Treatment
- Solid Waste

Each source category is discussed individually below.

Construction

Estimated total construction emissions of the Project over the 20-month construction period, are 1,474 metric tons of CO_2e[4]. Construction emissions are annualized because the proposed operational GHG emissions thresholds are analyzed in terms of metric tons "per year." Therefore,

[3] 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 GHG emissions associated with both construction and operations from a variety of land use projects.

[4] GHG emissions are often quantified and reported as CO_2-equivalent (CO_2e) emissions because GHGs have different global warming potentials (i.e., the amount of heat trapped in the atmosphere by a certain mass of the gas), and CO_2 is the most common reference gas for climate change. For any quantity and type of GHG, its CO_2e signifies the amount of CO_2 which would have the equivalent global warming impact.

assuming a 40-year development life (which is the common standard currently used in practice) of the Project until it is demolished or remodeled for energy efficiency, amortized annual construction emissions are estimated to be 36.8 metric tons of CO_2e per year.

The City's CEQA Thresholds do not include a specific threshold or methodology for assessing construction-related GHG emissions for the CEQA analysis. The City's methodology adds the 40-year amortized construction-related GHG emissions to the Project's total operational-related emissions, to assess construction-related GHG emissions against the thresholds. The same activity level and emission factors were used to estimate emissions in both the 2005 BAU Project and Project Buildout scenarios. This is a conservative approach as emission factors in 2005 would have been higher as they do not include characteristics that contribute to it being consistent with Assembly Bill (AB) 32 GHG reduction goals during construction.

Mobile Sources

The project would generate vehicle trips from workers, employees and vendors traveling to and from the site for commercial or work purposes. ESA relied on the trip generation data in the transportation impact analysis prepared by Fehr & Peers to estimate year Project Buildout scenario emissions using CalEEMod. The 2005 BAU Project mobile source GHG emissions rely on the same trip generation data and 2005 mobile fleet emission factors, consistent with the methods of the ECAP analysis. The emission factors for Project Buildout scenario and 2005 BAU Project are generated by EMFAC2014 model of the California Air Resources Board. Trip generation rates and trip lengths are identical in the 2005 BAU Project and Project Buildout scenario inventories. The trip generation data account for a combined mode split trip rate reduction and pass-by trip reduction of 46.9 percent as determined in the Transportation analysis.[5,6]

The transportation analysis also estimates that theater events would occur on 211 days per year with 208 of these (four per week) being typical events with 85 percent seated capacity (approximately 1,275 attendees) and 3 of these events per year being attended at full capacity including use of both ballrooms (approximately 2,400 attendees). These characteristics were used to develop a composite daily trip generation rate that reflects annual trips from the rehabilitated theater.

Area Sources

The Project includes area sources of air pollutants such as architectural coatings, consumer products use, and landscaping equipment. Architectural coatings and consumer products are not considered sources of GHG emissions.

Project operations would employ gasoline and diesel landscaping equipment. Emissions from lawn and garden equipment are estimated using CalEEMod. CalEEMod's emissions estimates are

[5] While some technical analyses in the CEQA Checklist rely on a more intensive land use scenario for the Arena as the basis of evaluation, the trip generation was updated for the GHG analysis in the CEQA Checklist and GHGRP to match the Project as currently proposed and presented in the CEQA Checklist Project Description and Project Plans.

[6] For the purposes of a conservative analysis, the Project quantified here is the Optional Retail scenario detailed in Table GHG-1.

based on emission factors for the landscaping equipment from the California Air Resources Board (CARB) OFFROAD2011 model.

Energy Use (Natural Gas)

The Project would emit GHGs from on-site natural gas combustion for space and water heating. ESA estimated Project Buildout scenario emissions using CalEEMod based on the type and size of land uses associated with the Project. CalEEMod default values for natural gas usage for the Project take into account the 2016 Title 24 building energy efficiency standards. However, the Project is likely exempt from these requirements as it is an alteration to an Historic Resource and may implement only portions of the energy efficiency standards. Therefore, for the purposes of a conservative analysis, adjustments have been made to account for the 2008 Title 24 building energy efficiency standards. The 2005 BAU Project inventory relies on the historical energy consumption data in CalEEMod, which is more representative of energy consumption in 2005.

Energy Use (Grid Electricity)

This category includes GHG emissions from the generation of electricity that is used for on-site lighting, heating, household electronics and other uses not associated with water and wastewater treatment and conveyance.

CalEEMod estimates emissions based on electricity use and carbon intensity of electricity. CalEEMod provides default electricity demand based on the type and size of land uses associated with the Project consistent with 2016 Title 24 building energy efficiency standards which were adjusted to year 2008 Title 24 energy demand values to reflect the age of the existing structure. The 2005 BAU Project inventory relies on the historical energy consumption data in CalEEMod, which is more representative of energy consumption in 2005.

For estimating GHG emissions from electricity use for the Project Buildout scenario, the Pacific Gas and Electric Company (PG&E) most recently verified CO_2 intensity factor (2016) was used in place of the default carbon intensity in CalEEMod.[7] This intensity factor takes into account the implementation of the State's Renewable Portfolio Standard (RPS) that requires 33 percent of electricity to be from renewable sources in 2020. The 2005 BAU Project uses PG&E's 2005 CO_2 intensity factor.

Water and Wastewater Conveyance & Treatment

Electricity is also required to treat and distribute water as well as treat and dispose wastewater generated by the Project, and as such water use is a source of GHG emissions. The water use estimate for the Project Buildout scenario is the CalEEMod default for the project land uses for Alameda County, minus a 20 percent reduction in indoor water consumption to comply with mandatory CalGreen requirements. Therefore, the indoor water demand is 20 percent higher for 2005 BAU Project than the Project Buildout scenario, while the outdoor water demand is the same

[7] Pacific Gas and Electric Company (PG&E). Currents, News and Perspectives from Pacific Gas and Electric Company, "Independent Registry Confirms Record Low Carbon Emissions for PG&E" Posted March 28 2018. Available online at: https://www.pgecurrents.com/2018/03/26/independent-registry-confirms-record-low-carbon-emissions-for-pge/

for 2005 as for the Project Buildout scenario. Based on the design of the East Bay Municipal Utility District's wastewater treatment plant, emissions estimated from wastewater treatment assumed a process with 100 percent aerobic biodegradation and 100 percent anaerobic digestion.

As with GHG emissions from purchased electricity not related to water use, the most recently verified PG&E CO_2 intensity factor for 2016 was used in place of the default carbon intensity to estimate Project Buildout scenario emissions in CalEEMod. The 2005 BAU Project uses the default CalEEMod CO_2 intensity factor.

Solid Waste

Waste generated by the 2005 BAU Project was also estimated using CalEEMod. The Oakland ECAP accounts for the City of Oakland Zero Waste goal, which reduces GHG emissions from waste by 89 percent between 2005 and 2020. This reduction has been incorporated into the Project Buildout scenario as a calculation outside CalEEMod. Therefore, GHG emissions associated with waste disposal for the Project Buildout scenario are 11 percent of those estimated for the 2005 BAU Project using CalEEMod.

Current State and Local Requirements that Reduce GHG Emissions

As noted above, the following state programs and existing City requirements will reduce GHG emissions from the 2005 BAU Project and are incorporated in the GHG inventory for the Project Buildout scenario:

- The City of Oakland's Zero Waste goal will reduce GHG emissions from waste by 89 percent.
- The State of California Renewable Portfolio Standard will reduce GHG from PG&E electricity generation
- Increased residential and nonresidential building energy efficiency due to 2016 Title 24 standards

The following requirements reduce emissions from mobile sources from the 2005 BAU Project and are incorporated in the GHG inventory for the Project Buildout scenario:

- The Pavley Act and Advanced Clean Cars (ACC) programs reduce on-road vehicle fleet emissions
- Increased penetration of electric vehicles will reduce GHG emissions from on-road mobile sources, even without assuming mandated changes to charging infrastructure

City of Oakland SCAs are incorporated and required as part of a Project and are adopted as conditions of approval. In addition to GHG-1, which is the subject of this GHGPR, several SCAs are required as part of the Project resulting in a further reduction in project GHG emissions from the 2005 BAU Project. While the following SCAs would reduce project GHG emissions, the reductions from these measures would be insubstantial for the Project and are not considered quantifiable.

- SCA AES-3, Landscape Requirements and Tree Replacement, addresses landscape requirements for frontages of commercial buildings and replacement of trees removed as part of a project. This SCA that maintains and increases landscaping and trees effect cooler climate, reduce excessive solar gain, and absorb CO2e emissions.
- SCA AIR-2, Criteria Air Pollutant Controls – Construction Related, includes measures that will reduce or limit the amount of GHG emissions during construction, including limitations on vehicle idling, preference over electricity over petroleum-based combustion equipment, and accelerated use of off-road equipment with emissions control.
- SCA AIR-3: Diesel Particulate Matter Controls-Construction Related, includes measures that will reduce or limit the amount of GHG emissions during construction by requiring the most cleaner engine types for off-road diesel equipment and preparation of a Construction Emissions Minimization Plan.
- SCA UTIL-1, Construction and Demolition Waste Reduction and Recycling, requires a project-level Construction & Demolition Waste Reduction and Recycling Plan (WRRP) to reduce construction–related emissions from haul trips by reducing off-site disposal truck trips and/or trip lengths.

The GHG reductions from the following SCAs are considered quantifiable and were considered in the CalEEMod Model and adjustments.

- SCA UTIL-4, Green Building Requirements, requires Project compliance with the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance. GHG reductions from these measures were considered in the CalEEMod model and adjustments accounting for 2008 Title 24 standards.
- SCA TRA-6, Plug-In Electric Vehicle (PEV) Charging Infrastructure, requires PEV-ready and PEV-capable parking spaces per the requirements of Chapter 15.04 of the Oakland Municipal Code are included in Project plans, and that the plans show the location of future accessible Electric Vehicle Charging Station (EVCS) parking spaces as required under Title 24 Chapter 11B Table 11B-228.3.2.1. Based on this table and the Project's proposed 187 parking spaces, the Project would require 1 van accessible EVCS, 5 standard EVCS, and 5 ambulatory EVCS for a total of 11 EVCS. GHG reductions from required charging infrastructure were calculated using CEQA-specific methodologies and conservative charging assumptions (six hours per day) (see attached Technical Memorandum).[8]

Additionally, implementation of City of Oakland Plans and Policies also reduce GHG emissions, and they are implemented through many of the mandated measures and SCAs listed above. The 2012 Oakland ECAP was developed using a GHG reduction target equivalent to 36 percent below 2005 BAU GHG emissions by 2020 (City of Oakland, Resolution No. 82129 C.M.S., 2009). Certain development projects must meet this target (see SCA GHG-1, above). However, this target does not apply to the proposed project as it is not considered a "very large project". City of Oakland Sustainability Programs were proactively adopted sustainability programs in an effort to reduce the City's impact on climate change. Two main categories that address reducing GHG emissions

[8] ICF, 2018. Electric Vehicle Charging Stations as CEQA Mitigation: Greenhouse Gas Reductions and Cost Effectiveness. Available at: https://www.sccgov.org/sites/dnz/Documents/Task-3D-EV-Charging-Stations-as-GHG-Mitigation-Mechanism-under-CEQA_White-Paper.pdf. Accessed December 29, 2018.

from a development project are renewable energy (for City facilities) and green building (see CalGreen/Green Building Requirements, above).

Finally, SCA TRA-4, Transportation and Parking Demand Management (TDM), requires the Project-specific TDM Plan containing strategies to reduce on-site parking demand and single occupancy vehicle (SOV) travel. GHG emissions reductions attributable to a TDM Plan assume 20 percent reduction in vehicle trip generation. GHG reductions from TDM are considered "additional measures" in this GHGRP and are considered later in Section 5.

Comparison of 2005 BAU Project and Project Buildout Scenario Emissions

Table **GHG-2** shows the 2005 BAU Project and Project Buildout scenario GHG inventories as well as the percent reduction in emissions from the 2005 BAU Project inventory by source category.

TABLE GHG-2
COMPARISON OF ANNUAL GHG EMISSIONS –
2005 BAU PROJECT COMPARED TO PROJECT BUILDOUT

	2005 BAU Project [a] Metric tons of CO_2e per year	**Project Buildout[a,b] Metric tons of CO_2e per year**	**Reduction from 2005 BAU Scenario**
Source Category			
Area Source Emissions (Landscape Maintenance)	<0.01	<0.01	No change
Mobile Source Emissions	1,718	1,487	13.5%
Energy Emissions (Natural Gas and Grid Electricity)	792	575	27.4%
Solid Waste	205	23	89%
Water and Wastewater Conveyance & Treatment	111	48	56.7%
Annualized Construction Emissions (Over 40 Years)	37	37	No change
Electric Vehicle Charging Stations	0	-111	NA
Total	**2,863**	**2,059**	**28.1%**
City of Oakland Threshold	1,100	1,100	---
Exceedance of Project Threshold?	**Yes**	**Yes**	**---**
Service Population	**297**	**297**	
Total Emissions per Service Population	9.8	6.9	---
City Emissions per Service Population Threshold	4.6	4.6	---
Exceedance of Service Population (Efficiency) Threshold?	Yes	Yes	---
Significant?	**Yes**	**Yes**	**---**

[a] Project operational emissions estimates were made using CalEEMod, version 2016.3.2.
[b] Assumes energy and utility assumptions conservatively factoring in 2008 Title 24 standards due to the age of the existing structure, actual PG&E emission factors, and compliance with City's waste reduction goals.

SOURCE: ESA, 2018

Emissions from area sources (landscaping) are the same under the Project Buildout scenario and the 2005 BAU Project scenario.

Emissions related to energy use (both electricity and natural gas) decrease by 27.4 percent compared to the 2005 BAU Project inventory due to the combined impacts of increased building energy efficiency and reductions in the carbon intensity of electricity provided by PG&E. These reductions are from the Title 24 building energy efficiency standards and the state Renewables Portfolio Standard.

Emissions related to water use, which are from wastewater treatment and the purchased electricity used to supply, distribute and treat the water, are reduced by 56.7 percent compared to the 2005 BAU Project inventory due to the state Renewables Portfolio Standard lowering the carbon intensity of purchased electricity between the 2005 BAU Project and Project Buildout scenarios.

Compared to the 2005 BAU Project, the Project Buildout scenario emissions from solid waste are reduced by 89 percent taking into account implementation of Oakland's Zero Waste goal by 2020.

On-road mobile source emissions decrease by 13.5 percent compared to the 2005 BAU Project inventory. This is primarily due to the reduction in fleet average emission factors in CalEEMod as the vehicle fleet gets more efficient by 2021 (estimated buildout year) with the adoption of Pavley and ACC standards as well as an increased penetration of electric vehicles into the fleet.

Overall, at Project Buildout, the total annual GHG emissions generated by the Project would be reduced by 28.1 percent compared to the 2005 BAU Project inventory.

As shown in the far right column of Table GHG-2, the most substantial reductions achieved under the Project Buildout scenario are associated with reduction in water demand and energy use - primarily the Project's adherence to mandatory CalGreen/Green Building and 2008 Title 24 standards (in compliance with SCA UTIL-4) not assumed in the 2005 BAU Project scenario.

Conclusion

As presented in Table GHG-2, GHG emissions would still exceed both of the City's applicable thresholds of significance (1,100 metric tons of carbon dioxide equivalents [CO2e] annually and 4.6 metric tons of CO_2e per service population annually). Consequently, additional reduction measures are required.

5. Additional GHG Reduction Measures

To meet the SCA GHG-1 requirements, even after complying with other SCAs, local, and state regulations, the Project must reduce its GHG emissions to below either the 4.6 MT CO_2e/SP/year threshold or the bright-line threshold of 1,100 MT/yr, the former of which is the target threshold for this GHGRP. To meet the 4.6 MT CO_2e/SP/year limit, the Project must reduce its emissions. Specifically, emissions would need to be reduced by an additional 693 MT CO_2e/year to 1,366 MT CO_2e/year in order to achieve GHG emissions to below 4.6 MT CO_2e/SP/year.

Table GHG-3, presents additional available measures (Additional GHG Reduction Measures) that would further decrease GHG emissions. The available Additional GHG Reduction Measures are as follows:

- TDM Plan: As required by SCA TRA-4, the Project will implement a TDM program to reduce trips by 20%. The trips reduction will have a direct effect on running exhaust emissions from on-road vehicles. If trips are reduced by a different percentage, this reduction in emissions can be scaled linearly.
- Additional PEV Charging Infrastructure (or EVCS) beyond that required by SCA TRA-6. Specifically, an additional 39 EVCS beyond the 11 EVCS required by Title 24. As noted above, this GHGRP used CEQA-specific methodologies and conservative charging assumptions to calculate GHG reductions from EVCS (see attached Technical Memorandum).[9] Consistent with other recent CEQA analyses, this GHGRP relies on the hours of EVCS use as the basis for estimates. Considering current state of assumptions for daily EVCS usage, project-specific GHG reduction value was calculated based on a conservative six hours EVCS usage per day. This calculation assumed project-specific emission factors for Alameda County and only light duty vehicle use of the chargers. This revised calculation is provided as in the Attached Technical Memorandum and estimates a GHG Reduction of 10.1 metric tons of CO2e per EVCS per year.

As shown in **Table GHG-3**, the Additional GHG Reduction Measures would be sufficient to achieve GHG emissions below 4.6 MT CO_2e/SP/year.

TABLE GHG-3
GHG REDUCTIONS OF ADDITIONAL MEASURES AND FURTHER REDUCTIONS REQUIRED

Source Category	Mitigation Measures	Reduction from Optional Retail Scenario (MT CO2e)
On-Road Exhaust	Comply with TDM Plan under SCA TRA4 (20% reduction in vehicle trips)	297
EVCS	39 additional stations beyond 11 required	394
Total Reduction from Additional Measures	--	691
Total Adjusted GHG Emissions with Additional Measures	--	1,368 (2,059-691)
Service Population	--	297
Adjusted Emissions per Service Population	--	4.6
City Emissions per Service Population Threshold		4.6
Exceedance of Service Population (Efficiency) Threshold?		No
Significant?		No

[9] ICF, 2018. Electric Vehicle Charging Stations as CEQA Mitigation: Greenhouse Gas Reductions and Cost Effectiveness. Available at: https://www.sccgov.org/sites/dnz/Documents/Task-3D-EV-Charging-Stations-as-GHG-Mitigation-Mechanism-under-CEQA_White-Paper.pdf. Accessed December 29, 2018.

Compliance Monitoring and Reporting

Upon City review and approval of the GHGRP program, the Project Applicant shall satisfy the following requirements for ongoing monitoring and reporting to demonstrate that reduction measures are being implemented to reduce the Project's emissions to below at least one of the City's thresholds. The GHGRP requires regular periodic evaluation over the life of the Project (generally estimated to be at least 40 years) to determine how the Plan is achieving required GHG emissions reductions over time, as well as the efficacy of the specific reduction measures identified in the Plan.

Implementation of the GHG reduction measures and related requirements shall be ensured through the Project Applicant's compliance with Conditions of Approval adopted for the project. Generally, starting two years after the City issues the first Certificate of Occupancy for the Project, the Project Applicant shall prepare each year of the useful life of the Project an Annual GHG Emissions Reduction Report (Annual Report), subject to review and approval by the City Planning Director or his/her designee. The Annual Report shall be paid for by the Project Applicant, and shall be submitted to the City within two months of the anniversary of the first Certificate of Occupancy.

The Annual Report shall summarize the project's implementation of GHG reduction measures over the preceding year, intended upcoming changes and compliance with the conditions of the GHGRP, and shall include a brief summary of the previous year's Annual Report results (starting the second year). The Annual Report shall include a comparison of annual project emissions to the baseline (Project Buildout scenario) emissions reported in the GHGRP.

The GHGRP shall be considered fully attained when the City confirms through an established monitoring program that project emissions are less than at least one of the two applicable City Thresholds of Significance. Monitoring and reporting activities will continue at the City's discretion.

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ESA

550 Kearny Street
Suite 800
San Francisco, CA 94108
415.896.5900 phone
415.896.0332 fax

www.esassoc.com

Technical Memorandum

date	January 9, 2019
to	Catherine Payne, Mike Rivera City of Oakland
cc	Elizabeth Kanner
from	Chris Sanchez
subject	GHG Reduction Estimate for Electric Vehicle Charging Station

This memo summarizes my work to calculate a project-specific GHG reduction value for Electric Vehicle Charging Stations (EVCS) in relation to the Oakland Civic Auditorium Rehabilitation Project (Project). ESA reviewed previous estimates of EVCS reductions from the Greenhouse Gas Reduction Plan (GHGRP) for the 24th and Broadway Project performed in January of 2017. Since submittal of the GHGRP for the 24th and Broadway project, ICF submitted a White Paper to the Santa Clara County Office of Sustainability in March of 2018 entitled *Electric Vehicle Charging Stations as CEQA Mitigation: Greenhouse Gas Reductions and Cost Effectiveness* (White Paper).[1] This White Paper outlines two distinct approaches to calculating GHG reductions from EVCS. GHG reductions estimates presented in this document vary from 1.7 metric tons of CO2e per EVCS to 19.6 metric tons of CO2e per EVCS, the latter of which is close to what was calculated in the GHGRP for the 24th and Broadway project.

The first method (Method 1 in the White Paper) is presented as having been used for calculations for CEQA documents and relies on the hours of EVCS use as the basis for its estimates. The Second method (Method 2 of the White Paper) is primarily shown associated with emission inventories for Climate Action Plans. Method 2 relies primarily on an estimate of vehicle miles travelled for determining GHG reductions. There are pros and cons to both methods. However, ESA is recommending Method 1 (similar to what was done for the GHGRP for the 24th and Broadway project). This recommendation is based on:

1. The fact that the White Paper associates this method with CEQA analysis while Method 2 is associated with Climate Plan inventories; and

2. Method 2 relies solely on the assumed trip length of the vehicle at the EVCS and ignores additional VMT that may be provided from charging for trips beyond the trip to and from the destination.

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1 ICF, 2018. Electric Vehicle Charging Stations as CEQA Mitigation: Greenhouse Gas Reductions and Cost Effectiveness. Available at: https://www.sccgov.org/sites/dnz/Documents/Task-3D-EV-Charging-Stations-as-GHG-Mitigation-Mechanism-under-CEQA_White-Paper.pdf. Accessed December 29, 2018.

ESA prepared a project-specific estimate of GHG reduction from EVCS using Method 1. An important consideration of this estimate is that we revisited the hourly usage assumption of the EVCS. The White Paper showed that earlier Method 1 calculations performed for the Newhall Ranch Project were far higher than that of other estimated is the study. After reviewing assumptions of both the Newhall Ranch study (performed by Ramboll) and the GHGRP for the 24th and Broadway Project (also performed by Ramboll), ESA felt that the hours of daily usage per EVCS were not conservative enough for the Project and hence vulnerable to challenge. The following daily EVCS usage assumptions were identified:

a. Newhall Ranch EIR Addendum 10 hours per day per EVCS (from White Paper)

b. 24th and Broadway GHGRP: 8 hours per day per EVCS

c. ICF EVCS Tool: 3.6 hours per day per EVCS (from White Paper)

ESA conducted a literature search to ascertain the current state of assumptions for daily EVCS usage. The Idaho National Laboratory has been analyzing electrical vehicle use nationally for the past several years. Its 2016 document *Plugged In: How Americans Charge their Electric Vehicles* is a summary report from the largest plug-in electric vehicle infrastructure demonstration in the world. This study found that long-term venues where vehicles are parked for long periods of time such as ride-share lots or public transit stations average 8.6 hours per charge cord per day. It is reasonable to assume that an office use where people charge while at work would be somewhat less than this average duration since ride-share lots or public transit stations would likely have a longer residence time. Consequently, ESA calculated a project specific GHG reduction value based on a more conservative 6 hours per day. This calculation assumed project specific emission factors for Alameda County and only light duty vehicle use of the chargers. This revised calculation is provided in Table 1 below and estimates a GHG Reduction of 10.1 metric tons of CO2e per EVCS per year. The table provides updated sources for data points used provides a defensible estimate given the wide range of values presented in the White Paper.

Our analysis also assumes that the Project would require 11 EVCS pursuant to the 2016 building code with the EVCS requirements. Oakland's updated GHG SCA (2018) specifically calls out table 11B-228.3.2.1 of the code. Based on this table and the project's proposed 187 parking spots, the Project would require 1 van accessible EVCS, 5 standard EVCS (3+2) and 5 ambulatory EVCS (3+2). GHG reductions associated with 11 EVCS would total 111 metric tons of CO2e per year.

TABLE 1
PROJECT EVCS CALCULATIONS AND SOURCES

		Sources
Usage Assumption	6 hours/ day/ charging station	Conservative estimate based on Idaho National Laboratory Study, Plugged In: How Americans Charge their Electric Vehicles; Findings from the Largest Plug-in Electric Vehicle Infrastructure Demonstration in the World, 2016, Page 14: Available at https://avt.inl.gov/sites/default/files/pdf/arra/PluggedInSummaryReport.pdf; Accessed December 5, 2018
Fuel Economy of Electric Vehicle	0.3 kWh per mile	Conservative Estimate based on U.S. Department of Energy website query: https://www.fueleconomy.gov/feg/PowerSearch.do?action=noform&path=1&year1=2017&year2=2019&vtype=Electric&pageno=6&sortBy=Comb&tabView=0&rowLimit=10; Accessed December 5, 2018.
Days per year	260	Assumed weekdays only for office use
Range per hour	25 miles per hour charge	For a Level 2 charger from Charge Point Website: Defining RHP: Miles of Range per Hour an EV Charging Station Delivers available at https://www.chargepoint.com/about/news/defining-rph-miles-range-hour-ev-charging-station-delivers/ Accessed December 5, 2018.
EVCS Demand	7.5 kWh per hour charge	Calculated Value: Demand = Fuel Economy (kWh/mile) x Range (mile/hour charged)
Annual VMT by charging		Calculated Value: VMT = Number of Stalls x Usage Assumption x days/year x Range/hour charged
Electrical Demand	128.7 MWh/yr	Calculated Value with conversions: Demand = Number of Stalls x Usage Assumption x EVCS Demand
PG&E Emission Factor	294 lb/MWh	PG&E, Independent Registry Confirms Record Low Carbon Emissions for PG&E, Posted March 26, 2018 Available at: https://www.pgecurrents.com/2018/03/26/independent-registry-confirms-record-low-carbon-emissions-for-pge/
Additional GHG Emissions from EV's	17.2 MT/yr	Calculated Value with conversions: Electrical Demand x PG&E Emission Factor
GHG Emissions from Fossil Fuel Trips	128.2 MT//yr	Calculated Value with conversions: VMT x EMFAC2014 Emission Factors for light duty cars and trucks
Realized GHG Reduction	111.0 MT/yr	Calculated Value: Additional GHG Emissions from EV's – GHG Emission from Fossil Fuel Trips
GHG Reduction Per Charger	10.1 MT/yr	Calculated Value: Realized GHG Reduction/ Number of Chargers

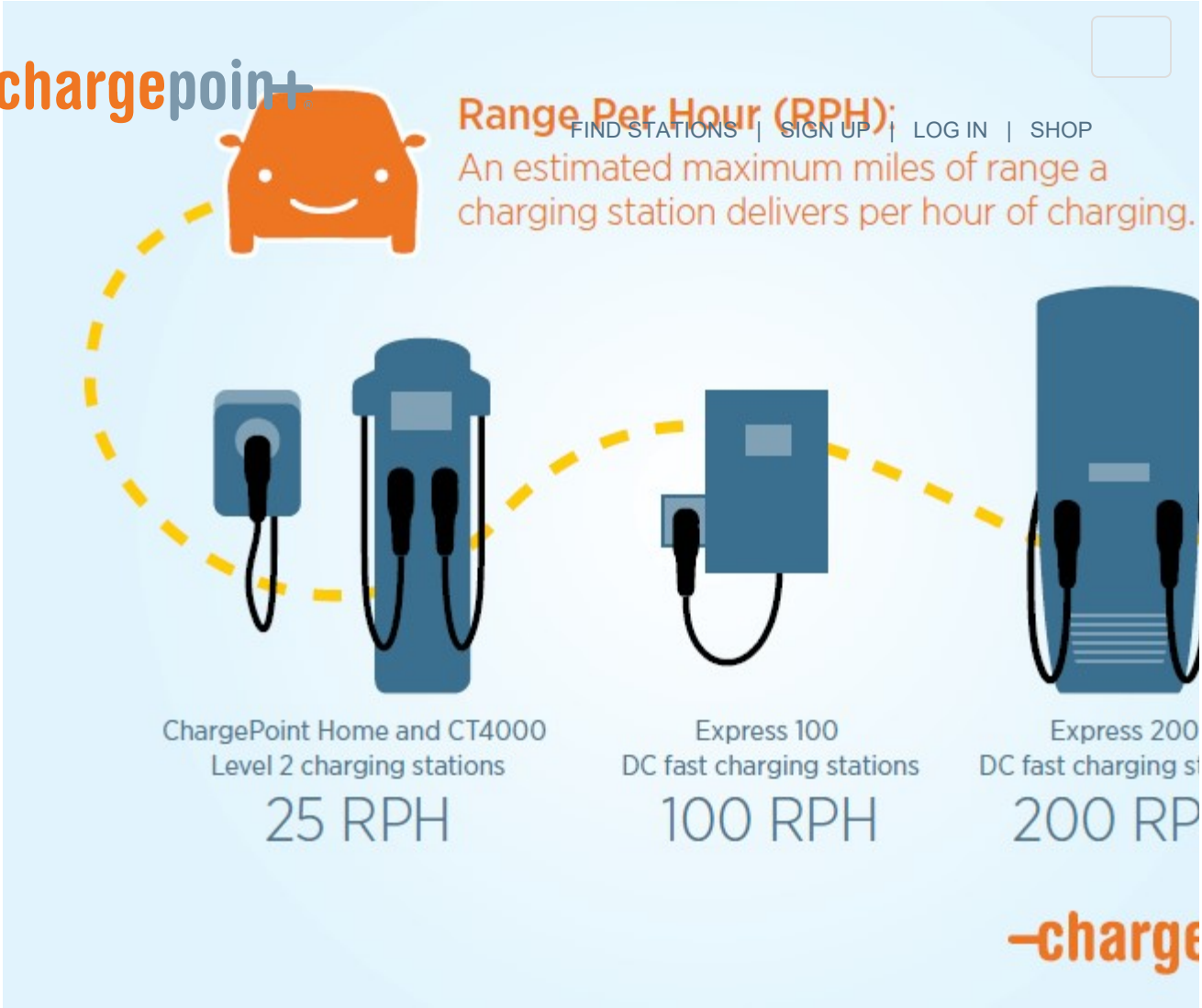
Defining RPH: Miles of Range Per Hour an EV Charging Station Delivers

Campbell, Calif. Last week, we unveiled the ChargePoint Express 100, a new 24 kW output DC fast charger that allows electric vehicle (EV) drivers to recharge their cars in just 20 to 40 minutes.

Wondering what the “100” refers to? It’s the estimated, maximum number of miles of Range Per Hour, or “RPH,” that the charging station can deliver. RPH is the new metric by which we’re measuring the power of our EV chargers and by which drivers can estimate how far they can go after plugging in. And with the ChargePoint mobile app, drivers can see how many miles they’ve added in real time.

The amount of range a charging station can deliver depends on a number of things including but not limited to the car’s state of charge, its on-board charger and the battery’s temperature. RPH is just an estimate, but it can give you an idea of how many miles you’ll add during a charging session on different stations.

Our commercial level 2 stations and the new ChargePoint Home both can deliver up to 25 RPH. The Express 100, up to 100 RPH and the Express 200 DC fast charger up to (you guessed it), 200 RPH. Check out the graphic below for reference:



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Plugged In: How Americans Charge Their Electric Vehicles

Findings from the largest plug-in electric vehicle infrastructure demonstration in the world

Idaho National Laboratory


VOLT
blink

Building the Laboratory

Widespread adoption of plug-in electric vehicles (PEVs) has the potential to significantly reduce our nation's transportation petroleum consumption and greenhouse gas emissions.

Barriers to PEV adoption remain, however. One of the most commonly cited barriers is the need for places for PEV drivers to plug in their vehicles. How many and what kind of charging stations are needed? Where and how often do PEV drivers charge?

To answer these questions, the U.S. Department of Energy launched The EV Project and the ChargePoint America project. Combined, these projects form the largest PEV infrastructure demonstration in the world. Between Jan. 1, 2011, and Dec. 31, 2013, this combined project installed nearly 17,000 alternating current (AC) Level 2 charging stations for residential and commercial use and over 100 dual-port direct current (DC) fast chargers in 22 regions across the United States. More than 8,000 privately owned Nissan Leafs and Chevrolet Volts and more than 300 Smart ForTwo Electric Drive vehicles in Car2Go car-sharing fleets were enrolled in the project.

This project was not just about installing charging infrastructure; the purpose was to build a living laboratory to study its use and learn.

To accomplish this, Idaho National Laboratory partnered with the Blink Network, ChargePoint, General Motors and OnStar, Nissan North America, and Car2Go to collect and analyze data from the electric vehicle charging stations and vehicles enrolled in the project.

Private vehicle owners participating in the project had an AC Level 2 (240-volt) charging unit installed in their residences. In return, they gave written consent for researchers to collect and analyze data from their home charging units and their PEVs. Data also was collected from publicly accessible charging stations installed at a wide variety of venues in and between metropolitan areas around the United States.

Data collected from vehicles and charging infrastructure over the 3-year project period captured almost 125 million miles of driving and 6 million charging events, providing the most comprehensive view of PEV and charging usage to date.

Through partnerships with states, municipalities, electric utilities, local business owners, and numerous other stakeholders, The EV Project and ChargePoint America installed charging stations in 22 regions across the United States, shown in Figure 1.

THREE Years

8,300 EVs

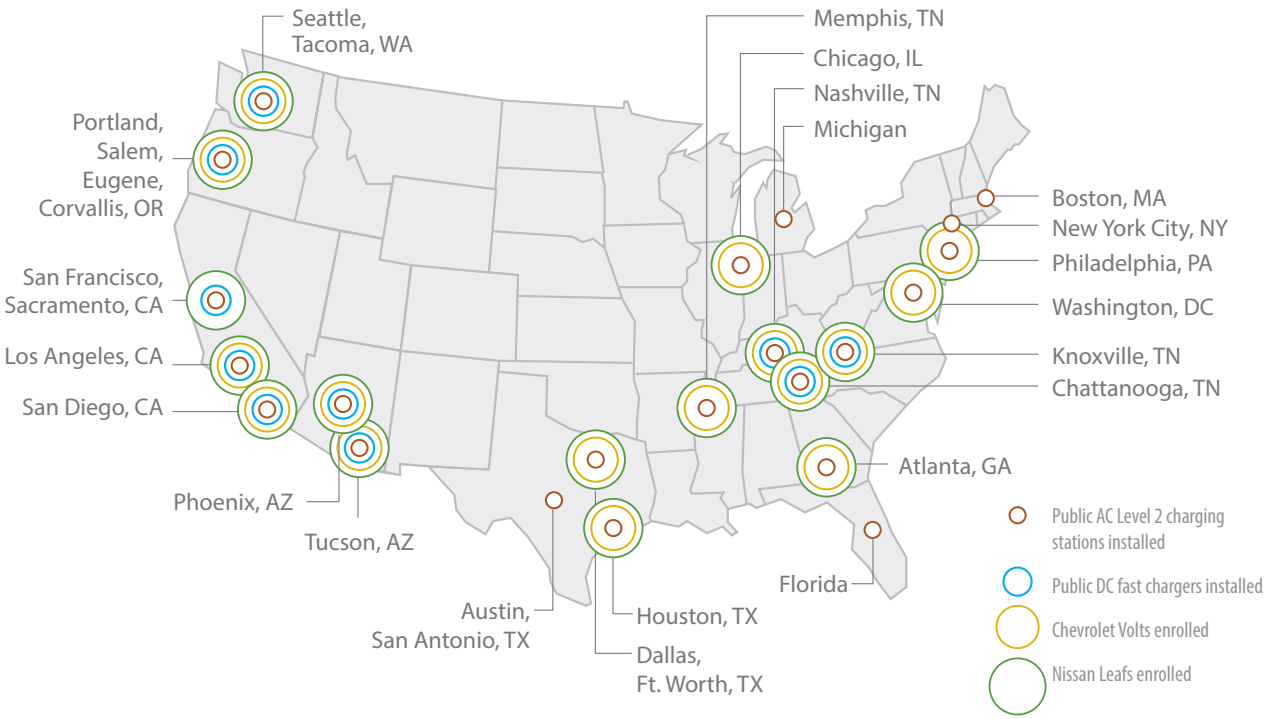
22 Regions in the U.S.

125 Million Miles of driving

6 Primary project partners

Million charging events

Figure 1.
Areas where public charging infrastructure was installed and vehicles were enrolled in The EV Project and ChargePoint America.



What Have We Learned?

With gas stations seemingly on every block, it would seem logical to expect that a similarly ubiquitous network of public charging stations would be needed to refuel, or rather, recharge PEVs. However, charging stations can be installed where gas stations cannot – at people's homes, workplaces, and destinations where their cars spend a long time parked. The project installed AC Level 2 and DC fast charging stations in a wide variety of locations, including homes, workplaces, stores, restaurants, gas stations, and many other venues, to allow researchers to observe where PEV drivers charge. Would they plug in around town at the nearest charging station, following the pattern they followed with the gas-powered cars they grew up with, or would they adopt a new refueling paradigm and charge at the few places where they park their cars for the longest periods of time?

This study is the largest plug-in electric vehicle infrastructure demonstration in the world.

Photo courtesy of ChargePoint

The answer was clear: despite the installation of extensive public charging infrastructure in most of the project areas, the majority of charging was done at home and work. About half the project participants charged at home almost exclusively. Of those who charged away from home, the vast majority favored three or fewer away-from-home charging locations, and one or more of these locations was at work for some drivers.

This is not to say that public charging stations are not necessary or desirable. Many DC fast chargers (all of which were accessible to the public) experienced heavy use to support both in-town and inter-city driving. Also, a relatively small number of public AC Level 2 public charging sites saw consistently high use. This begs the question: what is it about the small number of highly used charging sites that led to their popularity?

There was some correlation between public charging location characteristics and utilization. Public Level 2 charging stations installed in locations where vehicles were typically parked for longer periods of time often were, in fact, among those most often used. These locations included shopping malls, airports and commuter lots, and downtown parking lots or

garages with easy access to a variety of venues. Also, not surprisingly, public charging station utilization was higher in regions with higher PEV sales. However, there were examples of highly utilized charging sites in almost every region and at venues that did not seem to be well-suited for charging. Conversely, there were also many charging sites in seemingly ideal locations that did not experience much use.

In the end, it is apparent that the exact factors that determine what makes a public charging station popular are predominantly community-specific. More research is needed to pinpoint these local factors. Nevertheless, to support PEV driving, the

To support PEV driving, charging infrastructure should be focused at home, workplaces, and in public "hot spots" where demand for Level 2 or DC fast charging stations is high.

project demonstrated that charging infrastructure should be focused at home, workplaces, and in public "hot spots" where demand for Level 2 or DC fast charging stations is high.

host, but when they were used, they provided a vital function to the driver.

Regardless of motivation for installing public charging infrastructure, the project found that public charging stations were more expensive to install than residential and workplace units. Installation costs also varied widely by region and by venue. This further emphasizes the benefit of focusing the bulk of charging infrastructure at home, work, and strategic public charging locations.

drivers of the Chevrolet Volt, an extended-range electric vehicle, tended to charge more frequently and to more fully deplete their vehicle's battery than drivers of the Nissan Leaf, a battery electric vehicle. This allowed the overall group of Volts studied to average nearly as many electric vehicle (EV) mode miles traveled as the Leafs in the project. Finally, based on observed charging patterns, the project found that there are opportunities to use pricing structures and other policies to manage demand for PEV charging, both in terms of charging station throughput at charging hot spots and electricity demand on the electric grid.

Public and workplace charging infrastructure enabled drivers to increase their electric driving range, although most drivers did not charge away from home frequently.

Naturally, there are exceptions to this rule. There may be reasons for an organization to install public charging stations even if they are not used, such as to attract a certain customer demographic, communicate a "green" image, or encourage PEV adoption. The project did not study the effectiveness of charging infrastructure in meeting these goals. Additionally, DC fast chargers along travel corridors were found to effectively enable long-distance range extension for battery electric vehicles. These chargers were not typically used frequently so their value is hard to quantify from the perspective of the charger

The project shed light on other facets of PEV use. It found that public and workplace charging infrastructure enabled drivers to increase their electric driving range, although most drivers did not charge away from home frequently. It was also discovered that

The next section of this report provides the basis for these conclusions by summarizing what we have learned about…

- PEV driving patterns and charging preferences
- Away-from-home charging for range extension
- Workplace charging
- Public charging station use
- Charging at home
- Charging infrastructure installation costs.

The final section of this report provides examples of how the findings of this project have helped organizations promote or prepare for PEV adoption.

What have we learned about PEV driving patterns and charging preferences?

By focusing on data collected in 2012 and 2013 from over 4,000 Leafs and 1,800 Volts across the United States, the project provided insights into how PEV early adopters drove and charged their vehicles.

Volt drivers averaged only 6% fewer EV miles per year than Leaf drivers, despite having less than half as much battery energy storage capacity. There were two reasons for this. First, Volt drivers tended to fully deplete their batteries prior to recharging, whereas Leaf drivers favored recharging with significant charge left in their batteries. This is an expected difference between pure electric vehicles like the Leaf and range-extended electric vehicles like the Volt, which has an internal combustion engine that allows the vehicle to continue driving after the battery is depleted. Second, Volt drivers plugged in more often than Leaf drivers. Volts were charged an average of 1.5 times on each day the vehicle was driven, whereas Leafs were charged 1.1 times per day driven, on average. Much of the difference between Leaf and Volt charging frequency is attributed to the fact that Volts were charged more often during the day at home.

6% Volt drivers averaged only 6% fewer EV miles per year than Leaf drivers, despite having less than half as much battery energy storage capacity.

Volt drivers averaged slightly more miles traveled annually than the 2013 national average, while the Leafs studied were driven noticeably less than the national average (see Table 1).

Table 1

	Leaf	Volt	National Average[1]
Average annual vehicle miles traveled	9,697	12,238	11,346
Average annual electric vehicle miles traveled	9,697	9,112	–

[1] *Office of Highway Policy Information, Federal Highway Administration, "Highway Statistics 2013-Table VM-1," January, 2015, www.fhwa.dot.gov/policyinformation/statistics/2013/vm1.cfm*

Average driving distance and charging frequency were consistent over time as the number of vehicles reporting data increased, with only slight seasonal variation. Figure 2 shows seasonal variation in average monthly distance traveled for the last 15 months of the project. Charging frequency (not shown) followed the same up-and-down trend.

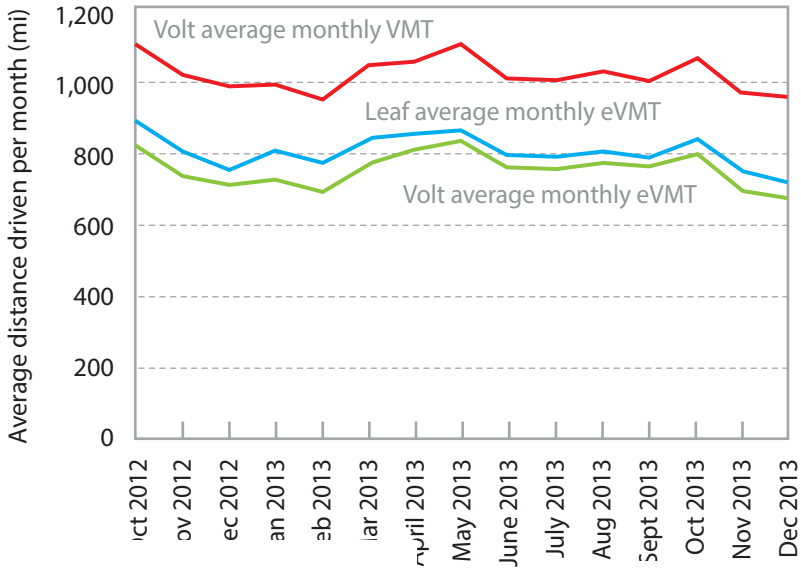


Figure 2.
Average monthly vehicle miles traveled varied seasonally but was otherwise consistent over time.

Preference for charging frequency and location

Overall, Leaf and Volt drivers performed most of their charging at home (see Figure 3). Nearly all overnight charging was at home. Daytime charging was split between home and other locations, including work.

Over the weekend, daytime charging preference for both Leafs and Volts shifted slightly from away-from-home locations to at home. Overnight charging patterns remained the same on weekdays versus weekend days, with both groups of vehicles averaging a charge nearly every night.

Drivers of 5% of Volts and 13% of Leafs only ever charged at home, and about half the drivers charged away from home less than 5% of the time. Of the drivers that charged away from home, some spread their charging across many locations, but most had just a few favorite places to charge outside of home (see Figure 4). Many drivers performed a vast majority of their away-from-home charging at only one location. Much of this can be attributed to workplace charging.

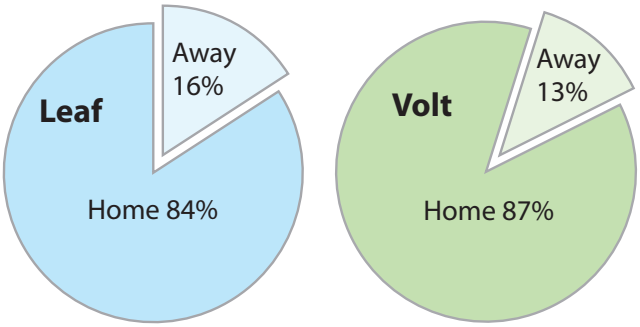


Figure 3.
Leaf and Volt drivers performed most of their charging at home.

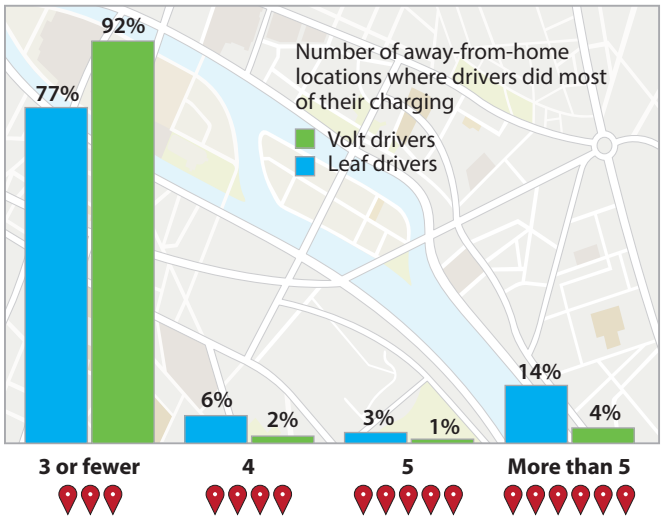


Figure 4.
92% of Volt drivers and 77% of Leaf drivers did most (at least 80%) of their away-from-home charging at three or fewer locations.

Preference for charging equipment

Both the Leaf and the Volt come with AC Level 1 charging cords. They are also compatible with AC Level 2 charging stations that use SAE J1772-compliant connectors. All Leafs enrolled in the project also were capable of charging using DC fast chargers with CHAdeMO-compliant connectors. All project participants had a Level 2 charging unit installed in their homes. When charging away from home, they had the option of using any charging equipment available to them.

For the Volts collectively, about half of away-from-home charging was done using Level 2 equipment. The other half was Level 1 charging using a dedicated charging station or a standard 120-volt outlet.

For Leafs, 8% of away-from-home charging events was performed using DC fast chargers. The rest was AC Level 1 or AC Level 2 charging.

Each driver used a different mix of charging equipment types when charging away from home, depending on their preference and what was available. Some Volt drivers chose only Level 1 charging, which includes standard 120-volt outlets, while others chose a mix of Level 1 and Level 2 charging. Some only ever used Level 2 charging stations. For Leaf drivers charging away from home in areas where DC fast chargers were installed, some chose to only charge using Level 1 or Level 2 charging equipment, some mixed Level 1, Level 2, and DC fast charging, and a small number of drivers only charged using DC fast chargers (see Figure 5).

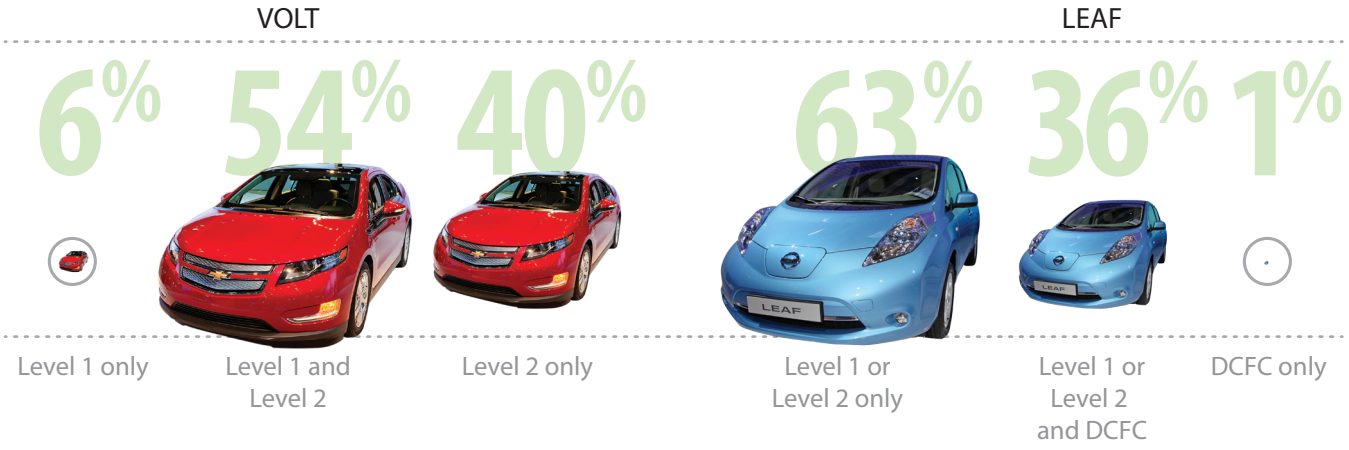


Figure 5.
How Volt and Leaf drivers charging away from home chose between charging equipment types.

What have we learned about away-from-home charging for range extension?

PEV drivers who plugged in away from home tended to drive more EV miles (see Table 2). In fact, drivers who frequently used away-from-home charging stations averaged 72% more daily miles on electricity alone than drivers who never charged away from home.

Table 2

Tendency to charge away from home:	Never	Sometimes[2]	Frequently[3]	Most of the time[4]
Leaf average daily driving distance (mi)	25	31	43	32
Volt average daily driving distance in EV mode (mi)	25	29	40	26

[2]>0 to 30% of all charging events [3]>30 to 60% of all charging events [4]>60% of all charging events

However, most drivers did not charge away from home frequently (see Table 3), so the overall contribution to EV miles traveled was small.

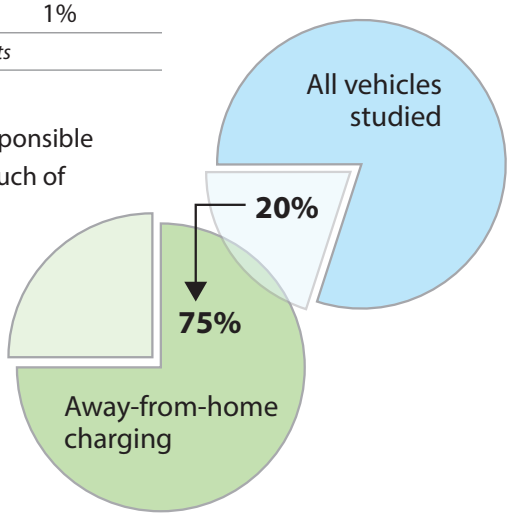
Table 3

Tendency to charge away from home:	Never	Sometimes[2]	Frequently[3]	Most of the time[4]
Percent of Leafs	13%	69%	14%	4%
Percent of Volts	5%	81%	13%	1%

[2]>0 to 30% of all charging events [3]>30 to 60% of all charging events [4]>60% of all charging events

Overall, 20% of the vehicles studied were responsible for 75% of the away-from-home charging. Much of this away-from-home charging can be attributed to workplace charging (see Figure 6).

Figure 6.
A small fraction of vehicles were responsible for the majority of away-from-home charging.



What have we learned about workplace charging?

A subgroup of project participants was identified that had access to both home and workplace charging. Consistent with conventional wisdom, Leaf and Volt drivers with access to home and work charging performed the vast majority of their charging at those locations (see Figure 7).

Considering only days when drivers went to work, the effect is even more pronounced. PEV drivers performed 98% of their charging events either at home or work and only 2% at other locations. Charging at work was free for many of these drivers, which may have been one reason why they frequently charged there.

On weekends and other days when they did not go to work, Leaf drivers averaged 8% of their charging events at locations other than home and Volt drivers averaged 11% of their charging away from home. This increased use of public charging on the weekend suggests that public charging still plays a role in these drivers' travel routines.

98%

Of charging events were performed at home and work on work days.

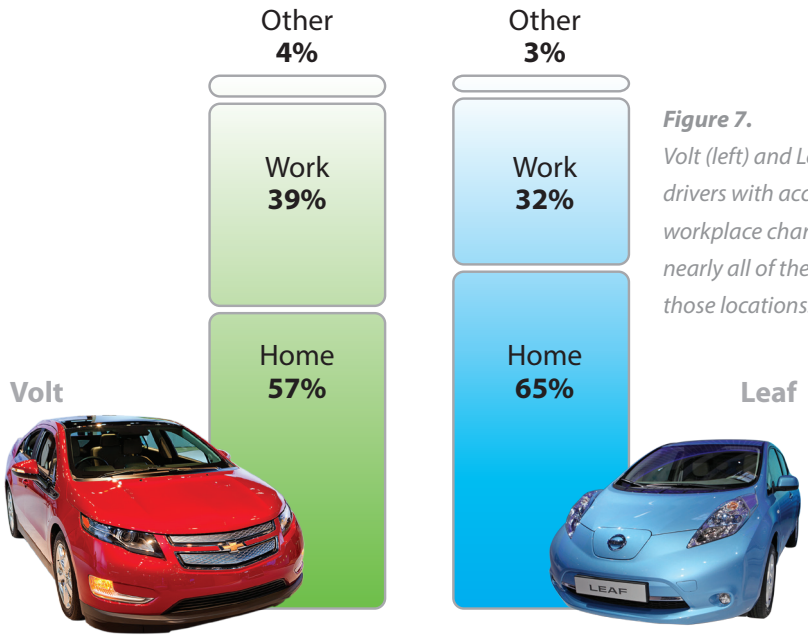


Figure 7.
Volt (left) and Leaf (right) drivers with access to home and workplace charging performed nearly all of their charging at those locations.

Range extension from workplace charging
Workplace charging was found to be an effective range extender, allowing some Leaf owners to drive their Leaf to work even on days when their round-trip commute exceeded the vehicle's range based on home charging alone (see below).

6%
OF DRIVERS DROVE A LEAF TO WORK EVEN THOUGH THEY COULD NOT MAKE IT BACK HOME UNLESS THEY CHARGED AT WORK.

8%
OF LEAF DRIVERS COULD COMPLETE THEIR DIRECT COMMUTE WITHOUT CHARGING AT WORK, BUT THEIR ROUTINE ON MOST DAYS REQUIRED THEM TO DRIVE ADDITIONAL DISTANCE, WHICH NECESSITATED CHARGING AT WORK IN ORDER TO MAKE IT HOME.

40%
OF LEAF DRIVERS RELIED ON WORKPLACE CHARGING ON AT LEAST ONE DAY A MONTH TO COMPLETE THEIR DAILY COMMUTES.

On days when Leaf drivers had to charge at work in order to complete their daily commute, workplace charging provided an average of 15 miles of range extension required to make it home. The entire daily commute on these days, which averaged 73 miles, arguably was enabled by workplace charging.

Volt drivers saw similar electric range-extending benefits from workplace charging. On days when Volt drivers' commutes were long enough to require a charge at work in order to complete the commute on electricity alone, workplace charging provided an additional 18.5 miles of EV driving, on average. On these days, round-trip commutes averaged 62 miles, with 57 miles of EV range.

Leaf and Volt drivers with known access to workplace charging in this study averaged 23% and 26% higher annual EV miles traveled than the overall groups of vehicles in the project, respectively (see Figure 8).

Workplace charging as a substitute for home charging
About 30% of drivers only charged at work on most days. This shows that workplace charging could make PEVs viable for people without access to home charging.

Management of workplace charging
PEV drivers demonstrated that they adjust their charging habits based on conditions, such as fees and rules for use. Not surprisingly, drivers were less likely to plug in at work if they had to pay to charge or if they were required to move their vehicle after charging (and that rule was enforced). PEV drivers also showed a willingness to use communication tools, such as social media, to coordinate the use of charging stations with other employees. At work sites studied, there also was a culture of common courtesy and willingness to follow local practices, such as a driver plugging in a neighboring

car after unplugging his vehicle. In many cases, this self-management by employers led to exceptionally high charging station utilization and opportunity for a large number of employees to charge regularly.

Photo courtesy of Facebook

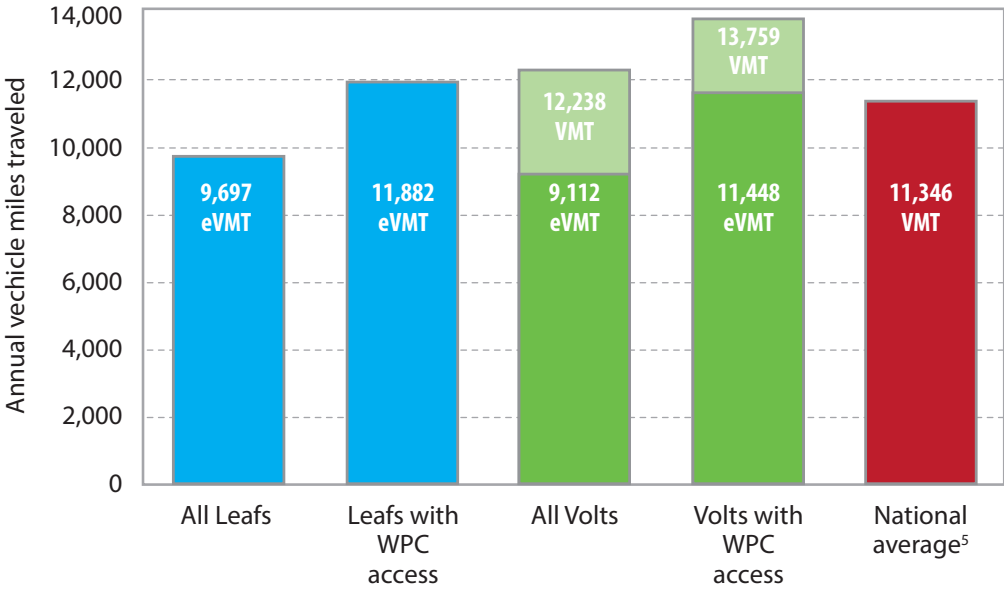


Figure 8.
Volt and Leaf drivers with access to home charging and workplace charging (WPC) had considerably higher annual electric vehicle miles traveled (eVMT) than the overall project averages, and their eVMT exceeded the national average annual total vehicle miles traveled (VMT).

[5] *Office of Highway Policy Information, Federal Highway Administration, "Highway Statistics 2013-Table VM-1," January, 2015, www.fhwa.dot.gov/policyinformation/statistics/2013/vm1.cfm*

What have we learned about public charging station use?

Public Level 2 charging station usage (excluding workplace charging units) was low overall. The median charging frequency per site was 1.4 charges per week, with 75% of the 2,400 public Level 2 sites nationwide averaging four or fewer charging events per week. However, popular public Level 2 sites saw very high usage. Well-designed charging sites at retail stores, especially shopping malls, and parking lots and garages serving multiple venues demonstrated the potential to support from 7 to 11 charges per day.

Charging sites at venues where vehicles are parked for long periods of time, like airports, ride-share parking lots, or parking lots at public transit stations, should not be measured by the number of events per week, but rather by the time vehicles spent connected to charging stations in a day or week. In the project, these kinds of sites had vehicles connected for an average of 8.6 hours per charge cord per day. The average time vehicles were plugged in for each individual charge event ranged from 4 to 42 hours, with a median plug-in time of 22.6 hours per event. These types of locations are prime candidates for slower, lower cost Level 1 charging equipment.

The most highly utilized DC fast chargers tended to be located close to interstate highway exits.

DC fast chargers were used much more frequently than most public Level 2 stations, with a median use frequency of 7.2 events per week, based on averaging each fast charger's use over the course of the entire project. A quarter of the fast chargers averaged over 15 events per week, and one unit averaged 70 events per week. The most highly utilized DC fast chargers tended to be located close to interstate highway exits. Interestingly, these units were used by local vehicles as much or more than they were used to recharge vehicles traveling on the interstate.

Public charging station usage varied significantly by region, with average utilization rates generally tracking with regional PEV sales. However, highly utilized individual public charging sites were found in most regions, proving that public charging station utilization is dependent on local factors. More research is needed to fully characterize public charging "hot spots" and develop rules of thumb for identifying public charging locations with potential for high utilization.

How did public usage change over time?

As mentioned, overall usage of public Level 2 charging stations was low, but it slowly increased over the course of the projects, with usage of ChargePoint units increasing at a faster rate than Blink units on average nationwide (see Figure 9). The cost to use public Level 2 charging stations varied from site to site. Most Blink public units charged a fee after September 2012. Many ChargePoint public stations were free through the end of the project, but the exact number is not known.

Blink DC fast chargers were initially free and usage increased quickly. However, usage dropped dramatically when the Blink Network implemented a usage fee in the summer of 2013. Data provided by the Blink Network after the end of the project showed that average Blink DC fast charger usage bottomed out in early 2014 and then steadily increased, reaching 2.4 charging events per day by the end of 2014.

Prior to the onset of fees, Blink DC fast charger sessions lasted an average of 19.5 minutes. When the Blink Network began charging a per-session fee to fast charge, the average time spent charging increased by 20%. Drivers presumably stayed connected longer to get their money's worth.

19.5

The average number of minutes in a Blink DC fast charger session prior to the onset of fees.

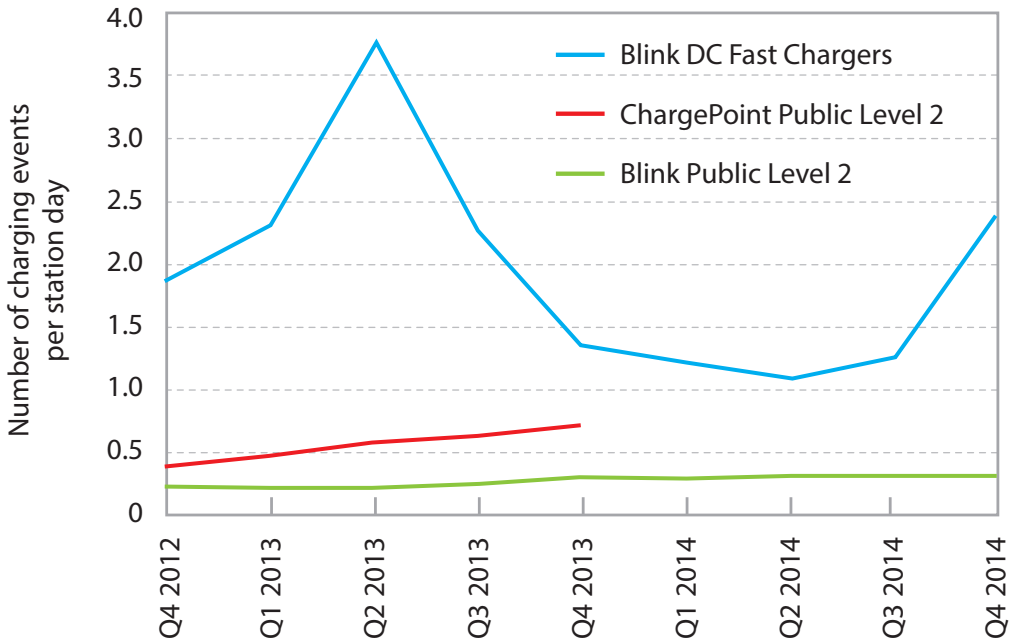


Figure 9.
Blink DC fast charger usage fell dramatically in the middle of 2013, coinciding with the onset of fees for use, but increased again in the second half of 2014.

What have we learned about charging at home?

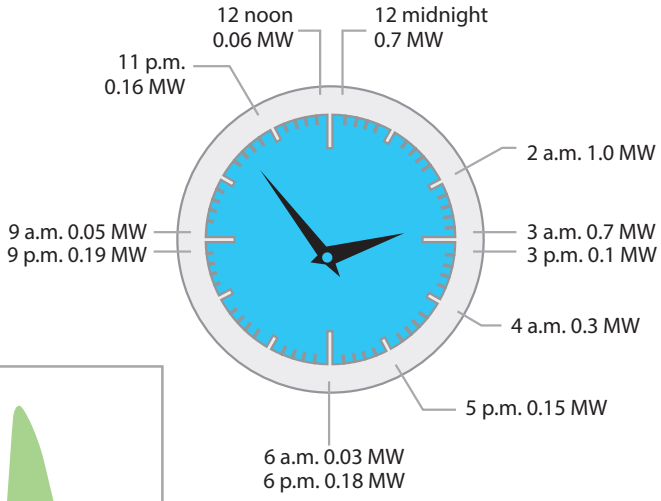
When do they charge?
PEV owners have the option of delaying the start of charging electronically, allowing them to plug in their vehicle at a convenient time but not start consuming electricity from the grid until later, such as when electricity prices are lowest. Project participants could program either their vehicle or their home charging unit to delay charging. Of those who chose to delay their charging using these tools, about half programmed their charging unit and half programmed their vehicle. Some customers chose to program their charging unit, rather than their vehicle, to avoid needing to override the vehicle's charge delay setting when they plug in away from home during the day.

Participants in the project left their vehicles plugged in at home overnight for an average of 12 hours per charge. The vehicles always required less than 5 hours to fully charge at home using the Level 2 charging units, and usually only took 1 to 3 hours to charge completely. This means that even though most vehicles were plugged in for the night by 10 p.m.,

The vehicles always required less than 5 hours to fully charge at home using the Level 2 charging units, and usually only took 1 to 3 hours to charge completely.

overnight charging at home typically could be delayed until the early morning hours when overall demand on the electric grid is the lowest. In fact, many electric utilities offer reduced home electricity prices during off-peak times to incentivize their customers to shift electricity consumption off peak. PEV owners in the project in areas where utilities offer cheaper rates at night showed a willingness to delay charging at home until these off-peak periods. In San Diego, where the cheapest time to charge was between midnight and 5 a.m., most PEV owners programmed their charging to start at midnight or 1 a.m. (see Figure 10).

The Volt and Leaf both offer a charge scheduling option that allows the owner to tell the vehicle what time they plan to depart on their next trip. The vehicle chooses what time to start charging, based on how empty the battery is and how much time it calculates it needs to charge. This "depart-by time" scheduling function is helpful for the electric grid, because it essentially randomizes the charge start time from household to household, thus preventing all vehicles from initiating charging at the same time, such as the start of the off-peak period.



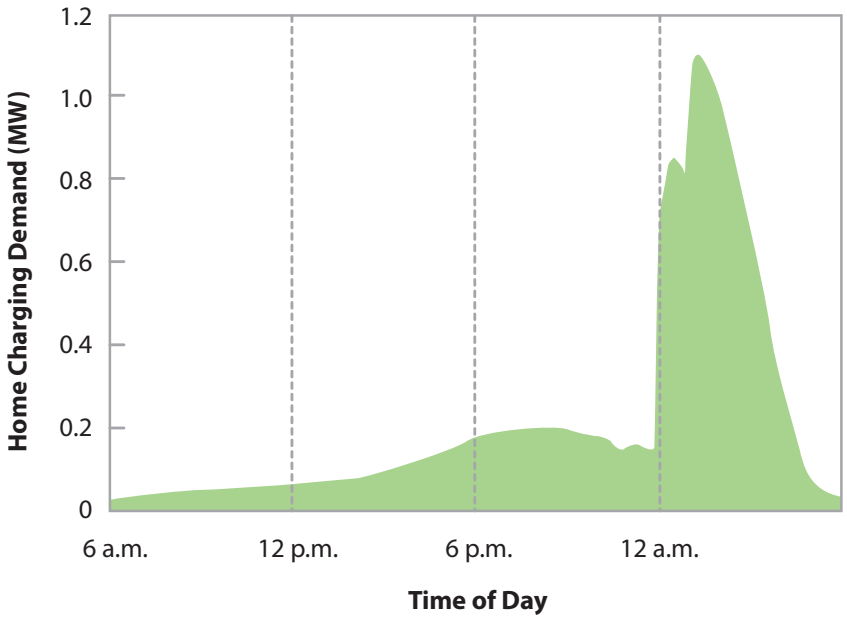


Figure 10.
The total power drawn over the course of a day by all EV Project vehicles charging at home on a typical weekday in San Diego.

RESIDENTIAL LEVEL 2 AVERAGE INSTALLATION

$1,354

WORKPLACE LEVEL 2 AVERAGE INSTALLATION

$2,223

PUBLIC LEVEL 2 AVERAGE INSTALLATION

$3,108

BLINK DC FAST CHARGER AVERAGE INSTALLATION

$22,626

What have we learned about charging station installation costs?

Installation cost for residential, workplace, and public charging stations was documented for the Blink stations installed in the project. Residential Level 2 unit installation cost ranged from a few hundred dollars to over $8,000. The average residential installation cost was $1,354. This average was driven up by expensive installations that required upgraded electrical service, which was often necessary in older homes. Cost varied regionally based on electrician labor wages and permitting fees.

The installation cost of public Level 2 charging stations ranged from $600 to $12,660, with an average cost of $3,108. Cost primarily depended on the distance from the facility's electrical panel to the charging station location, and varied regionally due to labor costs.

Workplace Level 2 charging unit installations averaged $2,223, or 28% less than the average public Level 2 unit cost. This difference was attributed to workplaces having more flexibility in choosing the locations of their charging stations and the type of equipment to be installed. However, employers that installed additional charging stations often found the second round of installations to be more expensive because the inexpensive locations had been taken already.

Blink DC fast charger installation cost in the project ranged from $8,500 to over $50,000, with an average cost of $22,626. This average actually may be artificially low, because installation proposals that exceeded a spending limit were turned down. Many DC fast charger installations required the addition of electrical service to support the chargers' 60-kW power rating and requirement for 480-volt 3-phase power. This significantly increased the installation cost. As with Level 2 units, costs varied regionally depending on permitting requirements and labor costs.

How have the findings of this project helped organizations promote or prepare for PEV adoption?

Project staff had the goal of disseminating as many findings as possible from the project to help other organizations in their efforts to accelerate PEV adoption. Researchers at Idaho National Laboratory were specifically assigned to regularly publish reports and present results to key government and industry stakeholders. Here are some examples of the organizations and efforts that benefitted from the project:

Photo courtesy of ChargePoint

National policy recommendations

Project researchers provided the National Research Council of the National Academy of Sciences with numerous presentations and reports to help them prepare the recently released report "Overcoming Barriers to Deployment of Plug-in Electric Vehicles." This 204-page report is the result of an intensive 2-year study conducted by the National Research Council for the U.S. Department of Energy and makes recommendations to the federal government and others on actions to take or avoid to enable the adoption of PEVs by the mass market.

State infrastructure planning decisions

The California Air Resources Board, the California Energy Commission, and the California Public Utilities Commission solicited information from project researchers about away-from-home charging observed in The EV Project and ChargePoint America in California to guide development of sustainable public charging infrastructure for the growing number of PEVs in California. The information provided assisted the California Energy Commission in validating model assumptions used in its Statewide PEV Infrastructure Plan, and ultimately fed into the PEV Infrastructure Assessment that was presented to the Air Resources Board in October 2014.

Analysis of data collected from PEVs and charging stations in Washington was performed for the Washington State Department of Transportation (WSDOT). WSDOT incorporated findings of this work into the Washington State Electric Vehicle Action Plan. The plan details WSDOT's expectations and plans to achieve the Washington governor's goal of 50,000 electric vehicles on the road in the state by 2020.

Regional electric utility planning

PEV charging patterns were analyzed and presented to a group of seven electric utilities based in the Northeast, called the Regional Electric Vehicle Initiative. The work analyzed diversity patterns and coincidence of PEV charging with utility system loads. The utilities requested this information to guide decisions regarding system planning, rate design, and development of rate/program strategies to mitigate system impacts.

Vehicle regulation
As an independent third party, Idaho National Laboratory performed analysis of PEV driving data from the project and additional data sets and presented results to the California Air Resources Board to support deliberations between the Air Resources Board and automakers about the redefinition of zero-emission vehicle credits. A revision to this regulatory framework applied to cars sold in California, the largest market in the United States, would potentially shift billions of research and development dollars at various auto companies. The study was performed on a data set of 158,000,000 miles from 21,000 vehicles operated throughout the United States. Eight models from five automakers (Ford, GM, Nissan, Honda and Toyota) were included.

Other partners and beneficiaries
Analysis results and findings published over the course of the project have been used by a host of other organizations, including standards development committees, other auto companies and electric utilities in the United States and abroad, PEV charging equipment manufacturers, facilities management companies, PEV advocacy groups, and federal and state government agencies to inform PEV and charging infrastructure design and deployment decisions, electricity grid load forecasting, cost/benefit analyses, and a variety of other endeavors.

For more information about The EV Project and ChargePoint America, including publications detailing additional findings and lessons learned, visit avt.inl.gov/evproject and avt.inl.gov/chargepoint.

Numerous organizations were provided with special reports or presentations to aid their research, planning or policy decisions related to electric vehicles and charging infrastructure design, promotion and environmental impact. These groups include the following:

- Argonne National Laboratory
- Arizona Public Service
- California Air Resources Board
- California Energy Commission
- Cardiff University, UK
- Center for Climate and Energy Solutions (formerly the Pew Center on Global Climate Change)
- City of Chattanooga, TN
- City of Knoxville, TN
- Clinton Foundation - Clinton Climate Initiative
- Colorado State University
- Columbia Hospitality
- Commonwealth Edison Company
- Delaware Valley Regional Planning Commission
- Electric Drive Transportation Association
- Energy & Environmental Resources Group, LLC
- Eugene Water & Electric Board
- Harvard University
- International Energy Agency
- Georgia Power
- Green Mountain College
- London Hydro, Inc.
- Los Angeles Department of Water & Power
- Memphis Light Gas & Water
- Middle Tennessee Electric Membership Corporation
- Nashville Electric Service
- National Academy of Sciences Committee on Overcoming Barriers to EV Adoption
- National Renewable Energy Laboratory
- Oak Ridge National Laboratory
- Oncor Electric Delivery
- Pacific Gas & Electric
- PacifiCorp
- PECO Energy Company
- Portland General Electric
- Public Utility District No. 1 of Snohomish County
- Puget Sound Energy
- Sacramento Municipal Utility District
- Salem Electric
- Salt River Project
- San Diego Gas & Electric
- Seattle City Light
- Seattle University
- Southern Company
- Tucson Electric Power
- Union of Concerned Scientists
- University of California - Davis Institute for Transportation Studies
- University of Central Florida
- University of Georgia
- University of Texas Austin
- Vermont Energy Investment Corporation
- Wall Street Journal
- Washington State Department of Transportation

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Idaho National Laboratory is one of the U.S. Department of Energy's 10 multiprogram national laboratories. The laboratory performs work in each of the U.S. Department of Energy's strategic goal areas: energy, national security, science, and the environment. Idaho National Laboratory is the nation's leading center for nuclear energy research and development. Day-to-day management and operation of the laboratory is the responsibility of Battelle Energy Alliance.

For more information about INL, visit www.inl.gov.

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Idaho National Laboratory

NEWS AND PERSPECTIVES FROM PACIFIC GAS AND ELECTRIC COMPANY
JANUARY 8, 2019

Posted on March 26, 2018

Independent Registry Confirms Record Low Carbon Emissions for PG&E

By Tom Schmitz

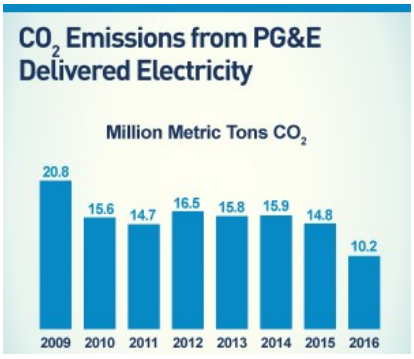
In keeping with its continued commitment to clean energy, PG&E has reduced the carbon emissions from its delivered electricity to its lowest level on record, according to the latest figures with The Climate Registry, a nonprofit registry of greenhouse gas emissions for North America.

In 2016, the carbon dioxide emissions rate for all of PG&E's delivered electricity, including power purchased from third parties, dropped more than 25 percent, falling to 294 pounds of carbon dioxide per megawatt-hour, down from the prior year's figure of 405 pounds of carbon dioxide per megawatt-hour. The reduction made PG&E's electricity nearly 75 percent cleaner than the latest national average among energy providers.

In 2016, the carbon dioxide emissions rate for all of PG&E's delivered electricity dropped more than 25 percent.

The 2016 figures are available after a thorough, third-party verification of the emissions data in accordance with the standards of The Climate Registry.

The drop in emissions was largely due to added renewable energy, which increased from 30 percent to nearly 33 percent of PG&E's power mix, and a doubling of large hydroelectric generation.



In all, nearly 70 percent of PG&E's power in 2016 came from greenhouse-gas free resources: 24 percent from nuclear, nearly 33 percent from renewables and 12 percent from large hydroelectric resources. The remainder came from natural gas (17 percent) and unspecified power (14 percent).

PG&E also saw a corresponding reduction in total carbon dioxide emissions from its electricity sales, falling 4.6 million metric tons in 2016, also its lowest level on record.

Building on these results in 2017, PG&E's clean energy deliveries continued to grow, reaching California's 2020 renewable energy goal three years ahead of schedule. In 2017, 33 percent of its customers' electricity came from renewable resources including solar, wind, geothermal, biomass and small hydroelectric sources. In total last year, nearly 80 percent of its electricity came from greenhouse gas-free resources, which includes nuclear and large hydro in addition to the renewable sources of energy that count towards the state's 2020 goal.

From year to year, several factors affect PG&E's power mix and emissions, including electricity demand and the availability of clean hydroelectric power.

Email Currents at Currents@pge.com.

Keywords: Clean Energy, Geothermal Power, Greenhouse Gas Emissions, Hydropower, News, Renewables, Solar Power, Wind Power

Search Results

Sorting is based on EPA Combined City/Hwy MPG.

Sort | Personalize | Edit Search

MPG | Energy & Environment | Costs

Vehicle	EPA Fuel Economy	Driver MPG	Annual Fuel Cost
☐ 2018 Tesla Model S P100D Automatic (A1), Electricity			
Compare 	**98** MPGe combined city/hwy: 92 105 city hwy; 35 kWh/100 mi	NA	$650
☐ 2017 Tesla Model S AWD - P90D Automatic (A1), Electricity			
Compare 	**95** MPGe combined city/hwy: 92 100 city hwy; 35 kWh/100 mi	NA	$700
☐ 2018 Tesla Model X 75D Automatic (A1), Electricity			
Compare 	**93** MPGe combined city/hwy: 91 95 city hwy; 36 kWh/100 mi	NA	$700
☐ 2017 Tesla Model X AWD - 75D Automatic (A1), Electricity			
Compare 	**93** MPGe combined city/hwy: 91 95 city hwy; 36 kWh/100 mi	NA	$700
☐ 2017 Tesla Model X AWD - 60D Automatic (A1), Electricity			
Compare 	**93** MPGe combined city/hwy: 91 94 city hwy; 36 kWh/100 mi	NA	$700
☐ 2017 Tesla Model X AWD - 90D Automatic (A1), Electricity			

Vehicle	EPA Fuel Economy	Driver MPG	Annual Fuel Cost
Compare 	**92** MPGe combined (90 city, 94 hwy) city/hwy 37 kWh/100 mi	NA	$700
☐ 2017 Tesla Model X AWD - P90D Automatic (A1), Electricity			
Compare 	**89** MPGe combined (89 city, 90 hwy) city/hwy 38 kWh/100 mi	NA	$750
☐ 2018 Tesla Model X 100D Automatic (A1), Electricity			
Compare 	**87** MPGe combined (86 city, 89 hwy) city/hwy 39 kWh/100 mi	NA	$750
☐ 2017 Tesla Model X AWD - 100D Automatic (A1), Electricity			
Compare 	**87** MPGe combined (86 city, 89 hwy) city/hwy 39 kWh/100 mi	NA	$750
☐ 2017 Tesla Model X AWD - P100D Automatic (A1), Electricity			
Compare 	**86** MPGe combined (81 city, 92 hwy) city/hwy 39 kWh/100 mi	NA	$750

Page 6

Showing 51 to 60 of 65 vehicles

My Selections

Years: 2017–2019
Vehicle Type: Electric

Modify

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APPENDIX C

Construction Noise Management Plan

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ESA

180 Grand Avenue
Suite 1050
Oakland, CA 94612
510.839.5066 phone
510.839.5825 fax

www.esassoc.com

Construction Noise Management Plan

date	August 31, 2018
to	Mike Rivera, Project Planner, Oakland Planning Bureau
from	Chris Sanchez, Senior Technical Associate Elizabeth Kanner, Project Manager
subject	Oakland Civic Auditorium Rehabilitation Project Construction Noise Management Plan

Introduction

This Construction Noise Management Plan (CNMP) is prepared to comply with City of Oakland Standard Conditions of Approval (SCA) **NOI-1, Construction Days/Hours (SCA 62); SCA NOI-2, Construction Noise (SCA 63); SCA NOI-3 Extreme Construction Noise (SCA 64);** and **SCA NOI-4, Construction Noise Complaints (SCA 66)** identified in the Lake Merritt Station Area Plan (LMSAP) EIR and the CEQA Checklist for the Oakland Civic Auditorium Rehabilitation Project (Project). The CNMP identifies measures for construction contractors to include in construction contracts to ensure that construction activities are conducted pursuant to SCA NOI-1, NOI-2, NOI-3, and SCA NOI-4.

Project Overview

As described in the CEQA Checklist for the Project, the Project would rehabilitate the vacant Oakland Civic Auditorium. The Project would preserve the existing building envelope, while seismically upgrading the existing building. The Project construction period would last approximately 20 months. Construction activities on the project site would consist of renovations to the existing building, construction of the podium, reconfiguration of the parking lot, landscaping, and finishing interiors.

Project Construction-Related Noise

Construction-related activities would temporarily increase ambient noise levels within and around the project vicinity over the duration of construction. Construction-related noise levels generally fluctuate depending on the construction phase, equipment type and duration of use, distance between noise source and receptor, and presence or absence of barriers between the noise source and receptor. The initial phase of work would include demolition which would be one of the noisier phases of construction.

Existing sensitive receptors within and near the project vicinity include Dewy High School, approximately 400 feet to the southeast and apartment buildings on 2nd Avenue, approximately 800 feet to the southeast.

The City's comprehensive construction noise-related SCAs already address a wide range of practices and requirements for equipment, timing and duration, implementation practices, and public information to address construction noise and vibration effects. The Project will implement the City of Oakland construction noise SCAs that apply to the specific conditions of the project site and surrounding noise-sensitive receptors.

Project-Specific Construction Noise Measures

Pursuant to SCA NOI-2, SCA NOI-3, and SCA NOI-4, this Project-specific CNMP is appropriate to the Project's proposed construction methods and the type and proximity of noise-sensitive receptors to the project site identified during the CEQA analysis of the Project. Although the Project does not propose any extreme noise generating construction activity (e.g., pier drilling, pile driving and other activities generating greater than 90 dBA) and consequently SCA NOI-3 (SCA 65) does not apply to the Project, certain other measures included in this CNMP are "potential attenuation measures" identified in SCA NOI-3 which address extreme construction noise, to the extent they are appropriate to the Project and its context.

The Project shall implement the following site-specific noise attenuation measures to reduce construction noise impacts. The following should be adhered to by all contractors for the Project and included within their construction contracts:

1. **Construction Time Limits:**
    a. Construction activities shall be limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday.
    b. Construction activities shall be limited to between 9:00 a.m. and 5:00 p.m. on Saturday.
    c. Construction shall not be conducted on Sundays.

2. **Noise Reduction Measures**
    a. Equipment and trucks used for project construction shall utilize best available noise control techniques such as use of mufflers, silencers or shrouds.
    b. Impact tools shall be hydraulically or electrically powered, or if infeasible, an exhaust muffler shall be employed.
    c. Use of grid power shall be preferred over portable generators to the extent feasible.
    d. Stationary sources (i.e., generators and compressors) shall be located on the west side of the construction area or shielded or located within an enclosure.

3. **Project-Specific Measures to Control Extreme Construction Noise:**
    a. **Pile Driving**. Impact pile driving shall not be used as a construction method.

4. **Project-Specific Complaint Response Mechanisms**
    a. **Designation of Enforcement Manager**. Any complaints received with respect to construction noise shall be forwarded to the Compliance Manager: _____. Contact Number: _____.
    b. **Signage**. A large on-site sign shall be placed near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit. Example signage provided as **Attachment A**.

c. Complaints. The noise and Compliance Enforcement Manager for the Project shall ensure response and corrective action to complaints within the same working day if the complaint is received during the noise-related incident and within 48 hours if the complaint is received after working hours. A complaint log shall be maintained by the Compliance Enforcement Manager indicating the date and time of each received noise complaint, the noise source of concern, and how the issue was resolved. Example complaint log provided as **Attachment B**.

Attachment A: Example Signage for Noise Complaints

SIGN REQUIREMENTS FOR POSTING CONSTRUCTION HOURS

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Contractor shall post a sign at all entrances to the construction site upon commencement of construction. Sign(s) shall be posted in a conspicuous place visible from the public right-of-way near the entrance to the job site, at least five feet (5') above ground level, and shall be of a white background, with legible black lettering. Lettering shall be a minimum of one and one-half inches (1 1/2") in height. The sign shall read as follows:

Address: 8750 Mountain Boulevard

CONSTRUCTION HOURS (includes any and all deliveries)
MONDAY--FRIDAY 7:00 a.m. to 7:00 p.m.
SATURDAY 9:00 a.m. to 5:00 p.m.
SUNDAY/HOLIDAYS Prohibited

Responsible Party Contact: "Sean Lennan" "925-449-5764"
This sign and construction hours posting requirement is for the purpose of informing all contractors and subcontractors, their employees, agents, material, men and all other persons at the construction site. Construction includes: alteration, demolition, maintenance of construction equipment, deliveries of materials or equipment, or repair activities.

NOISE LIMITS
The construction site noise level at any point outside of the construction property line shall not exceed ninety (90) dBA. Violation of the construction hours and/or noise limits may be enforced as either an infraction or a misdemeanor punishable by fines or jail time or both or by an administrative citation with a fine, or by a civil action with a monetary penalty, injunction and/or other remedies.

ATTACHMENT B

CONSTRUCTION NOISE COMPLAINT LOG

Complainant Name	Home Address	Phone Number	Disturbance Date/Time	Description of Complaint	Method and Date of Resoulution

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APPENDIX D

Transportation Demand Management Plan

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FEHR PEERS

MEMORANDUM

Date: February 27, 2019

To: Elizabeth Kanner, ESA

From Sam Tabibnia

Subject: Oakland Civic Auditorium – Transportation and Parking Management Plan

OK16-0141

The proposed Oakland Civic Auditorium Project (Project) is required to prepare a Transportation and Parking Demand Management (TDM) Plan per the City of Oakland Standard Condition of Approval (SCA) 79 (Department of Planning and Building, Bureau of Planning, November 5, 2018). According to the SCA, the TDM Plan goal is to achieve a 20 percent vehicle trip reduction (VTR) because the Project would generate more than 100 net new peak hour trips.

This memorandum describes the Project and its setting, lists the mandatory TDM strategies that the Project shall implement to achieve the 20 percent VTR, provides the additional strategies that should be considered if the 20 percent VTR is not achieved, and describes the monitoring, evaluation, and enforcement of the TDM Plan.

PROJECT DESCRIPTION

The Project is located between Lake Merritt Boulevard to the north, the Lake Merritt Channel to the east, 10th Street to the south, and the Oakland Museum of California to the west. The Project would occupy the currently vacant Oakland Civic Auditorium. The Project would provide 187 automobile parking spaces in the existing surface parking lot located to the north and east of the existing building. The parking lot would continue to be served by three existing driveways: a signalized right-in/ right-out only driveway on Lake Merritt Boulevard and two driveways on 10th Street on either side of the existing building.

PROJECT LOCATION

The Project is located in Downtown Oakland, a high-density, transit-rich, pedestrian-friendly area with limited parking supply. Pedestrian, bicycle and transit access between the site and nearby commercial areas is good, with continuous sidewalks throughout the area, and bikeways connecting the Project site to adjacent commercial and recreational areas.

Existing bicycle facilities serving the Project site include Class 1 paths along Lake Merritt and Lake Merritt Channel, Class 2 lanes on both directions of Lake Merritt Boulevard, and buffered bikes lanes in both directions of 10th Street. The planned East Bay Greenway project, which would provide a continuous bikeway between the Lake Merritt BART Station in Oakland and Fremont, would provide a two-way cycletrack on the south side of 10th Street adjacent to the project site.

Transit service providers in the project vicinity include Bay Area Rapid Transit (BART), Amtrak, and AC Transit. The nearest BART station to the project site is the Lake Merritt BART Station. The nearest station portal is at the southeast corner of the 9th Street/Oak Street intersection, which is about 0.2 miles west of the Project site. The Jack London Square Amtrak station is about 0.8 miles south of the Project site.

AC Transit operates multiple major routes in the vicinity of the Project. The nearest bus stops to the Project site are:

- On both directions of 10th Street just west of the Project site. Line 62 serves these stops. The stops in both directions provide a bus shelter, a bench, and a trash receptacle.
- On the east side of Oak Street (northbound), just north of 10th Street. Lines 88 and 96 serve this stop. No amenities are provided at this stop.
- On the north side of 12th Street (westbound), just west of Fallon Street. Lines 1, 29, 33, 40, and 801/840 (night service) serve this stop. The stop provides a bus shelter, a bench, and a trash receptacle.
- On the south side of 11th Street (eastbound), just west of Madison Street. Lines 1, 29, 33, 40, 88, 96 and 801/840 (night service) serve this stop. The stop provides a bus shelter, a bench, and a trash receptacle.

AC Transit is currently constructing the East Bay Bus Rapid Transit (BRT) Project, which would replace Route 1 along Lake Merritt Boulevard adjacent to the Project, 11th and 12th Streets west of the Project, and East 12th Street and International Boulevard east of the Project. BRT buses would operate in mixed-flow lanes along most of Lake Merritt Boulevard adjacent to the Project and in exclusive lanes further east and west. Lake Merritt Boulevard adjacent to the site would not provide

any bus stops for BRT. The nearest BRT stop to the Project site would be on 11th and 12th Streets at Madison Street, about 0.2 miles to the west.

In addition, a large day-time and night-time population in downtown Oakland can easily walk or bike to the various uses at the Project site. These consist of about 90,000 workers and about 25,000 residents in downtown Oakland, and about 11,000 students at Laney Community College, which is located across 10th Street from the Project site.

The project's location is expected to result in a relatively high rate of pedestrian, bicycle, and transit trips. As a result, the automobile trips generated by the Project is estimated to be slightly more than half of the Project trip generation if the Project was located in a typical suburban setting. **Table 1** summarizes the trip generation by various modes assuming a typical event at the Calvin Simmons Theatre[1].

Similarly, the VMT per worker in the project area is about 85 percent of the regional VMT per worker (The project VMT per worker is 18.5 compared to the regional VMT of 21.8) as documented in the CEQA document. The project's parking supply would also be less than the current parking demand rate in Downtown Oakland, which would further discourage driving to and from the project site.

TABLE 1: PROJECT TRIP GENERATION BY TRAVEL MODE

Mode	Mode Share Adjustment Factors[1]	Daily	AM Peak Hour	PM Peak Hour
Automobile	53.1%	2,710	144	521
Transit	29.7%	1,520	81	291
Bike	5.1%	260	14	50
Walk	10.5%	540	28	103
	Total Trips	**5,030**	**267**	**965**

Notes:

1. Based on *City of Oakland Transportation Impact Study Guidelines* assuming project site is in an urban environment less than 0.5 miles from a BART station.

Source: Fehr & Peers, 2019.

[1] See Oakland Civic Auditorium – Transportation Impact Review (non-CEQA) Memorandum (January 29, 2019) for more details on Project trip generation.

MANDATORY TDM STRATEGIES

This section describes the mandatory strategies that shall be implemented at the Project. Some of these strategies shall be directly implemented by the building management and others shall be implemented by individual tenants. If the mandatory measures do not achieve the required VTR goals, additional voluntary measures are to be implemented, as described in the following section. **Table 2** lists the mandatory strategies that are part of the City's *Transportation Impact Review Guidelines* (TIRG, April 14, 2017) and their applicability to the Project.

Table 3 lists the mandatory TDM strategies, the responsible party for implementation, and the effectiveness of each strategy based on research compiled in Quantifying Greenhouse Gas Mitigation Measures (California Air Pollution Control Officers Association (CAPCOA), August 2010). This report is a resource for local agencies to quantify the benefit, in terms of reduced travel demand, of implementing various TDM strategies.

Operational TDM strategies are most effective for persons that commute to and from a site on a regular basis, especially during weekday peak commute periods when transit service peaks and is most conveniently available. Thus, the mandatory strategies in Table 3 are generally targeted at Project employees. The retail/restaurant customers, entertainment venue attendees, and other site visitors are not directly targeted because they either would visit the Project too infrequently to be aware of the TDM benefits or to make them cost effective, or they would be local residents and workers in Downtown Oakland who would mostly walk or bike to the site. However, some of the mandatory strategies, especially the ones that would improve the infrastructure, would also benefit the site visitors.

The VTR ranges in **Table 2** represent conservative assumptions about potential trip reduction at the low end of the range. Due to the location of the Project in an area that has very good transit bicycle, and pedestrian access, it is expected that the high end of the VTR range would be achieved with this TDM program.

The TDM strategies include both one-time physical infrastrcucutre improvements and on-going operational strategies. Physical improvements will be implemented as part of the Project and thus are anticipated to have a one-time capital cost. Some level of ongoing maintenance cost may also be required for certain measures. Operational strategies provide on-going incentives and support for the use of non-auto transportation modes. These TDM measures have monthly or annual costs and will require on-going management.

TABLE 2
APPLICABILITY OF TDM STRATEGIES REQUIRED BY CITY OF OAKLAND TIRG[1]

TDM Strategy	Required When	Applicability to the Proposed Project?
Bus boarding bulbs or islands	• A bus boarding bulb or island does not already exist and a bus stop is located along the project frontage; and/or • A bus stop along the project frontage serves a route with 15 minutes or better peak hour service and has a shared bus-bike lane curb	No, there are no bus stops located along the Project frontage. However, the Project will coordinate with AC Transit to explore the feasibility of providing a BRT station adjacent to the Project.
Bus shelter	• A stop with no shelter is located within the project frontage, or • The project is located within 0.10 miles of a flag stop with 25 or more boardings per day	No, bus stops within 0.1 miles of the Project have bus shelters.
Concrete bus pad	• A bus stop is located along the project frontage and a concrete bus pad does not already exist	No, there are no bus stops located along the Project frontage.
Curb extensions or bulb-outs	• Identified as an improvement within site analysis	**Yes, the site analysis identified bulb-outs at the Project driveways on 10th Street. (A1)[2]**
Implementation of a corridor-level bikeway improvement	• A buffered Class 2 or Class 4 bikeway facility is in a local or county adopted plan within 0.10 miles of the project location; and • The project would generate 500 or more daily bicycle trips	No, the Project would generate fewer than 500 daily bicycle trips. However, the Project may consider implementing or contributing to the implementation of a two-way cycletrack along the south side of 10th Streets is identified as part of the East Bay Greenway (A2)
Implementation of a corridor-level transit capital improvement	• A high-quality transit facility is in a local or county adopted plan within 0.25 miles of the project location; and • The project would generate 400 or more peak period transit trips	No, the Project would generate fewer than 400 peak period transit trips**.**
Installation of amenities such as lighting; pedestrian-oriented green infrastructure, trees, or other greening landscape; and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan	• Always required	**Yes, Project would upgrade the pedestrian amenities adjacent to the site (A4)**

TABLE 2
APPLICABILITY OF TDM STRATEGIES REQUIRED BY CITY OF OAKLAND TIRG[1]

TDM Strategy	Required When	Applicability to the Proposed Project?
Installation of safety improvements identified in the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.)	• When improvements are identified in the Pedestrian Master Plan along project frontage or at an adjacent intersection	No, the Pedestrian Master Plan does not identify improvements along project frontage or at an adjacent intersection
In-street bicycle corral	• A project includes more than 10,000 square feet of ground floor retail, is located along a Tier 1 bikeway, and on-street vehicle parking is provided along the project frontages.	**Yes, the Project would include more than 10,000 square feet of ground floor retail (A5)**
Intersection improvements, including but not limited to visibility improvements, shortening corner radii, pedestrian safety islands, accounting for pedestrian desire lines.	• Identified as an improvement within site analysis	**Yes, convert the 10th Street/ Fallon Street intersection to all-way stop-controlled operations (A6)**
New sidewalk, curb ramps, curb and gutter meeting current City and ADA standards	• Always required	**Yes, Project would upgrade the sidewalks along Project frontage (A7)**
No monthly permits and establish minimum price floor for public parking	• If proposed parking ratio exceeds 1:1,000 s.f. (commercial)	No, Project would provide parking at less than 1:1,000 s.f.
Parking garage is designed with retrofit capability	• Optional if proposed parking ratio exceeds 1:1.25 (residential) or 1:1000 sf (commercial)	No, Project would not include a garage
Parking space reserved for car-share	• A project is located within downtown (CBD and D-LM zones). One car-share space preserved for buildings between 50 – 200 units, then one car-share space per 200 units.	**Yes, the Project would offer to provide parking spaces reserved for car-share (H)**
Paving, lane striping or restriping (vehicle and bicycle), and signs to midpoint of street section	• Typically required	**Yes, provided (A8)**
Pedestrian crossing improvements, pedestrian-supportive signal changes, including but not limited to reducing signal cycle lengths to less than 90 seconds to avoid pedestrian crossings against the signal, providing a leading pedestrian interval, provide a "scramble" signal phase where appropriate.	• Identified as an improvement within site analysis • Identified as an improvement within operations analysis	No, the site analysis did not identify any pedestrian crossing improvements

TABLE 2
APPLICABILITY OF TDM STRATEGIES REQUIRED BY CITY OF OAKLAND TIRG[1]

TDM Strategy	Required When	Applicability to the Proposed Project?
Real-time transit information system	• A project frontage block includes a bus stop or BART station and is along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better	**Yes, the Project would provide real-time transit information (L2) in one or more central public locations to be determined.**
Relocating bus stops to far side	• A project is located within 0.10 mile of any active bus stop that is currently near-side	No, the Project is located more than 0.1 miles of a near-side bus stop
Signal upgrades, including typical traffic lights, pedestrian signals, bike actuated signals, transit only signals	• Project size exceeds 100 residential units, 80,000 sf of retail, or 100,000 sf of commercial; and • Project frontage abuts an intersection with signal infrastructure older than 15 years	No, signal infrastructure abutting the Project frontage are less than 15 years old.
Transit queue jumps	• Identified as a needed improvement within operations analysis of a project with frontage along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better	No, transit queue jumps not identified in any operations analysis
Trenching and placement of conduit for providing traffic signal interconnect	• Project size exceeds 100 units, 80,000 sf of retail, or 100,000 sf of commercial; and • Project frontage block is identified for signal interconnect improvements as part of a planned ITS improvement; and • A major transit improvement is identified within operations analysis requiring traffic signal interconnect	No, major transit improvements have not been identified in an operations analysis requiring traffic signal interconnect
Unbundled parking	• New multifamily dwelling residential facilities of ten (10) or more units, with the exception of affordable housing	No, the Project is not residential

Notes:
1. Per Table 4 in City of Oakland Transportation Impact Review Guidelines, 2017
2. Number refers to the TDM strategy number described starting on page 9 of this memorandum

Sources: City of Oakland Transportation Impact Review Guidelines, 2017 and City of Oakland Municipal Code, 2018

TABLE 3: MANDATORY TDM PROGRAM COMPONENTS

TDM Strategy	Responsible Party	Estimated Trip Reduction [1]
A. Infrastructure Improvements	Building Management	NA[2]
B. Alternative Work Schedule/Flexible Hours/ Telecommuting	Project Tenants	1%
C. Pre-tax Commuter Benefit	Project Tenants	1%
D. Transit Fare Subsidy	Building Management and Project Tenants	10% [3]
E. Parking Management	Building Management	5%
F. Carpool and Ride-Matching Assistance	Building Management	2%
G. Preferential Parking for Carpoolers	Building Management	
H. Designate On-Site Car-Share Spaces	Building Management	1%
I. Bicycle Facility Monitoring	Building Management	NA [2]
J. Guaranteed Ride Home	Project Tenants	NA [2]
K. TDM Coordinator	Building Management and Project Tenants	NA [2]
L. TDM Marketing and Employee Education	Building Management and Project Tenants	2%
Total Estimated Vehicle Trip Reduction		***22%***

Notes:

1. The focus of the CAPCOA document is reductions to VMT but the research used to generate the reductions also indicates vehicle trip reductions are applicable as well. For the purposes of this analysis the VTR is assumed to equal the VMT reduction. See the cited CAPCOA research for more information and related information on page 8 of the BAAQMD *Transportation Demand Management Tool User's Guide* (June 2012)
2. The effectiveness of this strategy cannot be quantified at this time. This does not necessarily imply that the strategy is ineffective. It only demonstrates that at the time of the CAPCOA report development, existing literature did not provide a robust methodology for calculating its effectiveness. In addition, many strategies are complementary to each other and isolating their specific effectiveness may not be feasible.
3. This strategy assumes that 50% of employees would receive a transit subsidy of $3.00 per day.

Sources: Fehr & Peers, 2018.

A more detailed description of the TDM measures that comprise the mandatory TDM program is provided below:

A. *Infrastructure Improvements* – the following infrastructure improvements in the Project vicinity, which were identified in the Project site plan evaluation or required by the City's TIRG, would improve the bicycling, walking, and transit systems in the area and further encourage the use of these modes:

   1. Explore the feasibility and if determined feasible by City of Oakland staff, install directional curb ramps and/or bulb-outs for the crosswalks at the two Project driveways on 10th Street.

   2. Explore the feasibility and if determined feasible by City of Oakland staff, consider implementing or contributing to the implementation of the segment of the East Bay Greenway adjacent to the Project, which would consist of a two-way cycletrack along the south side of 10th Street between Fallon Street and 2nd Avenue.

   3. Coordinate with AC Transit to explore the feasibility of providing a BRT stop on Lake Merritt Boulevard adjacent to the Project site to provide either regular bus service or to serve just the events at the Calvin Simmons Theatre.

   4. Upgrade the pedestrian amenities adjacent to the Project, including the installation of amenities such as lighting; pedestrian-oriented green infrastructure, trees, or other greening landscape; and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.

   5. Explore the feasibility and if determined feasible by City of Oakland staff, provide an in-street bicycle corral on 10th Street, adjacent to the Project site.

   6. Consistent with the East Bay Greenway recommendations, install stop-signs on the eastbound and westbound 10th Street approaches of the 10th Street/Fallon Street intersection.

   7. Where applicable on the sidewalks adjacent to the Project, provide new sidewalk, curb ramps, curb and gutter meeting current City and ADA standards.

   8. Where applicable on the streets adjacent to the Project, upgrade the paving, lane striping or restriping (vehicle and bicycle), and signs to midpoint of street section

B. *Alternative Work Schedule/Flexible Hours/Telecommuting* – Encourage project tenants to offer alternative work schedules, flexible hours, and or telecommuting, which can eliminate employee trips or shift them to non-peak periods.

C. *Pre-tax Commuter Benefits* – Encourage project tenants to enroll in WageWorks or other service to help with pre-tax commuter savings. This strategy allows employees to deduct monthly

transit passes or other amount using pre-tax dollars. This can help to lower payroll taxes and allows employees to save on transit.

D. *Transit Fare Subsidy* – Building management shall either provide or require project tenants to provide free or reduced cost transit for their employees in order to increase transit mode share. Options include:

1. Employers can offer a monthly commuter check (or alternatively Clipper Card, which is accepted by BART, AC Transit, and other major transit providers in the Bay Area) to employees to use public transit. Note that as of 2018, IRS allows up to $260 per employee per month.

2. Employers can participate in AC Transit's EasyPass program, which enables employers to purchase annual bus passes for their employees in bulk at a deep discount. The passes allow unlimited rides on all AC Transit buses for all employees. For more information, see www.actransit.org/rider-info/easypass.

Based on the CAPCPA report, a transit fare subsidy of about $3.00 per employee per day (value to rider) available to 50 percent of the site employees would translate to an approximately 10 percent reduction in driving trips generated by the Project employees.

E. *Parking Management* – Building management shall charge for all parking spaces in the project parking lot unless noted in other strategies, remove the cost of parking from the lease agreements, and set the fee for monthly, daily, and/or hourly parking shall be same as or higher than other nearby garages.

F. *Carpool and Ride-Matching Assistance Program* – The building management shall offer personalized ride-matching assistance to pair employees interested in forming commute carpools. As an enhancement, building management may consider using specific services such as ZimRide, ComoVee, or 511.org RideShare.

G. *Preferential Parking for Carpoolers* – The building management shall offer free or discounted preferential carpool parking for eligible commuters. To be eligible for carpool parking, the carpool shall consist of three or more people. The building management shall monitor and provide adequate carpool spaces to meet and exceed potential demand. Considering the limited parking supply in Downtown Oakland, all or some of the unoccupied parking spaces designated for carpool shall be available for general use after 10:00 AM.

H. *Car-Share Spaces* – Offer to designate at least two on-site parking spaces for car-sharing (such as Getaround, Zip Car, etc.) for free. Monitor the usage of the car sharing spaces and adjust if necessary. As an additional strategy, encourage project tenants to provide free/ subsidized car-share membership to their employees.

I. *Bicycle Facility Monitoring* – Building management shall monitor the usage of short-term and long-term bicycle parking, including during events at the Calvin Simmons Theatre and provide additional bicycle parking if necessary.

J. *Guaranteed Ride Home* – Encourage project tenants to register for the Guaranteed Ride Home (GRH) program. Employees may be hesitant to commute by any other means, besides driving alone, since they lose the flexibility of leaving work in case of an emergency. GRH programs encourage alternative modes of transportation by offering free rides home in the case of an illness or crisis, if the employee is required to work unscheduled overtime, if a carpool or vanpool is unexpectedly unavailable, or if a bicycle problem arises. The Alameda County Transportation Commission offers a GRH service for all registered permanent employees who are employed within Alameda County, live within 100 miles of their worksite, and do not drive alone to work. The GRH program is offered at no cost to the employer, and employers are not required to register in order for their employees to enroll and use the program.

K. *TDM Coordinator* – Each tenant shall designate a staff person as their TDM coordinator to coordinate, monitor and publicize TDM activities. Building management shall also designate a "Building TDM coordinator."

L. *TDM Marketing and Tenant/Employee Education*- Building management shall provide tenants and employees information about various transportation options in the project area and the TDM strategies provided by the building. This information shall include:

1. *Transit Routes* – Promote the use of transit by providing user-focused maps. These maps provide residents with wayfinding to nearby transit stops and transit-accessible destinations, and are particularly useful for those without access to portable mapping applications.

2. *Real-Time Transit Information* – Building Management shall provide real-time transit information, such as TransitScreen, in one or more visible locations to provide employees and visitors, including event attendees, with up-to-date transit arrival and departure times.

3. *Transit Fare Discounts* – Provide information about local discounted fare options offered by BART and AC Transit, including discounts for youth, elderly, persons with disabilities, and Medicare cardholders.

4. *Car Sharing* – Promote accessible car sharing programs, such as Zipcar and Getaround, by informing employees of on-site and nearby car sharing locations and applicable membership information.

5. *Ridesharing* – Provide employees with phone numbers and contact information for ride sharing options including Uber, Lyft, and Oakland taxi cab services.

6. *Carpooling* – Provide employees with phone numbers and contact information for carpool matching services such as the Metropolitan Transportation Commission's 511 RideMatching.

7. *Walking and Biking Events* – Provide information about local biking and walking events, such as Oaklavia, as events are planned.

8. *Bike-share* – Educate employees about nearby bike sharing station locations and membership information. The nearest Ford Go Bike Station is on 10th Street just south of the Project.

9. Bay Area Commuter Benefits Program – Building management shall provide information on the Bay Area Commuter Benefits Program to all building tenants. As of September 30, 2014, Bay Area employers with 50 or more full-time employees within the Bay Area Air Quality Management District (Air District) geographic boundaries are required to register and offer commuter benefits to their employees in order to comply with Air District Regulation 14, Rule 1, also known as the Bay Area Commuter Benefits Program. Employers must select one of four Commuter Benefit options to offer their employees: a pre-tax benefit, an employer-provided subsidy, employer-provided transit, or an alternative commute benefit. (Information about Commute Benefits Program is at 511.org/employers/commuter/overview.)

ADDITIONAL TDM STRATEGIES

The project should consider the implementation of some or all of the following additional strategies to limit automobile use and encourage non-automotive travel. If the mandatory TDM strategies do not meet the required goals, the implementation of some or all of these measures may become necessary.

M. *Increased Transit Subsidy* – Encourage tenants to increase the transit subsidy provided to employees. Alternatively, the building management can include a specific number of transit passes with each lease agreement.

N. *Increased Parking Fees* – Increase the cost of on-site parking to further discourage site employees from driving.

O. *Car-Share Membership* – Encourage increased usage of car-share by encouraging tenants to fully or partially pay for their employees' yearly membership fee and insurance associated with car-sharing.

P. *Bike-Share Membership* – Encourage increased usage of bike-share by encouraging tenants to fully or partially pay for their employees' yearly membership fee and insurance associated with bike-sharing.

Q. *Personalized Trip Planning* – In the form of in-person assistance or as a web tool, this provides employees with a customized menu of options for commuting. Trip planning reduces the barriers employees see to making a walk, bike, or transit trip to the site. Transit trip making tools, such as those available from Google or 511.org, could be promoted to inform employees of transit options to/from work. Providing a map of preferred walking routes to destinations within one mile of the site and a map of bicycling routes within five miles of the site would be a proactive

strategy to encourage those employees to use alternatives to driving. Building management can make presentation to employers and their employees upon request or at set times.

MONITORING, EVALUATION AND ENFORCEMENT

Since the Project would generate more than 100 peak hour trips, this TDM program requires regular periodic evaluation of the program to determine if the program goals in reducing automobile trips are satisfied and to assess the effectiveness of the various strategies implemented. The Project applicant shall submit an annual compliance report for the first five years following completion of the Project for review and approval by the City. The annual report shall document the status and effectiveness of the TDM program, including the actual VTR achieved by the Project and summary of travel mode surveys to monitor the percentage of site trips that are made by driving.

If deemed necessary, the City may elect to have a peer review consultant, paid for by the Project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the Project applicant has failed to implement the TDM Plan, the Project will be considered in violation of the Conditions of Approval and the City may initiate enforcement action as provided for in the Project Conditions of Approval. The Project shall not be considered in violation of this Condition if the TDM Plan is implemented but the VTR goal is not achieved.

If in two successive years the Project's TDM goals are not satisfied, site management shall implement additional TDM measures. If in five successive years the Project is found to meet the stated TDM goal, additional surveys and monitoring shall be suspended until such a time as the City deems they are needed.

Please contact Sam with questions or comments.

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APPENDIX E

Non-CEQA Transportation Analysis/ Transportation Tables

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FEHR PEERS

MEMORANDUM

Date: January 29, 2019

To: Elizabeth Kanner, ESA

From: Sam Tabibnia

Subject: Oakland Civic Auditorium – Transportation Impact Review (non-CEQA)

OK17-0141

This memorandum summarizes the non-CEQA transportation assessment that Fehr & Peers completed for the proposed Oakland Civic Auditorium (OCA) Project in Oakland. This document provides a brief description of the Project, followed by an estimation of the Project trip generation and a review of project site plan. The memorandum also provides recommendations that improve multi-modal access, circulation, and safety.

PROJECT DESCRIPTION

The Project is located between Lake Merritt Boulevard to the north, the Lake Merritt Channel to the east, 10th Street to the south, and the Oakland Museum of California to the west. The Project would occupy the currently vacant Oakland Civic Auditorium. The Project would provide about 187 automobile parking spaces in the existing surface parking lot located to the north and east of the existing building. The parking lot would continue to be served by three existing driveways: a signalized right-in/right-out only driveway on Lake Merritt Boulevard which would remain unchanged, a stop-controlled exit-only driveway onto 10th Street on the east which would become full-access, and the full-access entrance/exit on the west side of the building which would become entrance-only with fire-lane access.

Table 1 summarizes the uses for the Project. The building would be occupied by entertainment/ assembly venues (Calvin Simmons Theatre, Gold Room, and Ball Room), restaurants, artisan/custom goods production, music/arts practice rooms, storage, office, and retail.

TABLE 1: PROJECT LAND USE SUMMARY

Land Use	–Project
Calvin Simmons Theatre	40.8 KSF (2,400 capacity)
Gold Room & Ball Room	16.0 KSF
Restaurant	11.0 KSF
Public Space	7.5 KSF
Artisan/Custom Goods Production	3.0 KSF
Music/Arts Practice Rooms	14.0 KSF
Storage	18.0 KSF
Office	59.0 KSF
Retail	27.0 KSF
Total	**196.3 KSF**

Source: Orton Development as summarized by Fehr & Peers, 2019.

PROJECT TRIP GENERATION

Trip generation is the process of estimating the number of vehicles that would likely access the Project on any given day. **Table 2** summarizes the trip generation for the Project with a typical and a capacity event at the Calvin Simmons Theatre. Table A1 at the end of this memorandum provides the detailed trip generation calculations and assumptions.

The trip generation for events at the Calvin Simmons Theatre was estimated separately to account for typical and capacity sold-out events. Based on information provided by the Project applicant, typical events at 85 percent seated occupancy (approximately 1,275 attendees) are expected about four times a week and sold out events using both ballrooms (approximately 2,400 attendees) are expected about three times per year.

TABLE 2: PROJECT TRIP GENERATION SUMMARY

Project [1]	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
With typical event at the Theatre	2,450	99	45	144	377	101	478
With capacity event at the Theatre	2,930	99	45	144	590	112	702

1. See Table A1 for more detail.

Source: Fehr & Peers, 2019.

Trip generation data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual* (Ninth Edition) was used as a starting point to estimate the vehicle trip generation for all of the Project uses, except for the entertainment/assembly venues (Calvin Simmons Theatre, Gold Room, and Ball Room). The ITE data is based on data collected at mostly single-use suburban sites where the automobile is often the only travel mode. However, the Project site is in a dense, mixed-use urban environment where many trips are walk, bike, or transit trips. Since the Project is about 0.2 miles from the Lake Merritt BART Station, the City of Oakland's TIRG recommends a 47-percent reduction from the ITE-based trip generation to account for non-automobile trips. This reduction is based on Census commute data for Alameda County from the 2014 5-Year Estimates of the American Community Survey (ACS), which shows that the non-automobile mode share for areas less than 0.5 miles from a BART Station is about 46.9-percent.

The trip generation also accounts for pass-by trips for the retail and restaurant components of the Project. Pass-by trips are trips attracted to a site from adjacent roadways as an intermediate stop on the way to a final destination. Pass-by trips alter travel patterns in the immediate study area, but do not add new vehicle trips to the roadway network, and should therefore be excluded from trip generation estimates.

The trip generation for events at the Calvin Simmons Theatre was estimated assuming a seated capacity of 1,500 attendees, a maximum capacity of 2,400 attendees, a non-automobile mode share of 46.9-percent, and an occupancy of 2.8 people per automobile based on observations at other similar events. Considering that most events would occur during evenings, the trip generation assumes that all the event attendees would arrive during the PM peak hour. It is estimated that a

typical event at 85 percent seated occupancy (about 1,275 attendees) at the Theatre would generate about 540 daily and 250 PM peak hour automobile trips, and a capacity event would generate about 1,020 daily and 480 PM peak hour automobile trips.

As summarized in **Table 2**, the Project would generate about 140 AM peak hour trips, and about 480 PM peak hour trips with a typical event and about 700 PM peak hour trips with a capacity event at the Theatre.

Non-Automobile Trip Generation

Consistent with the City of Oakland TIRG, **Table 3** presents the estimates of project trip generation for all travel modes for the project site. The automobile trip generation shown in Table 3 does not account for pass-by reductions.

TABLE 3: PROJECT TRIP GENERATION BY TRAVEL MODE

Mode	Mode Share Adjustment Factors[1]	Daily	AM Peak Hour	PM Peak Hour
Automobile	53.1%	2,710	144	521
Transit	29.7%	1,520	81	291
Bike	5.1%	260	14	50
Walk	10.5%	540	28	103
	Total Trips	**5,030**	**267**	**965**

1. Based on *City of Oakland Transportation Impact Study Guidelines* assuming project site is in an urban environment less than 0.5 miles from a BART station.

Source: Fehr & Peers, 2019.

SITE PLAN EVALUATION

An evaluation of access and circulation for all travel modes, based on existing conditions in and around the site and a Project site plan dated May 18, 2018, is summarized below.

Automobile Access and Circulation

The Project is accessed through Lake Merritt Boulevard to the north and 10th Street to the south. Lake Merritt Boulevard provides three auto lanes and a Class 2 bike lane in each direction with a center median and no on-street parking. 10th Street provides one auto lane and one buffered bike lane in each direction with metered on-street parking on both sides of the street.

The Project would provide 187 automobile parking spaces in the existing surface parking lot located to the north and east of the existing building. The parking lot would continue to be served by three existing driveways: a signalized right-in/right-out only driveway on Lake Merritt Boulevard which would remain unchanged; From 10th Street, the stop-controlled exit-only east driveway would become full-access and the full-access entrance/exit on the west side of the building which would become entrance-only with fire-lane access. The driveway on 10th Street on the west side of the building would continue to provide access to the adjacent Oakland Museum of California. The main entrance for Calvin Simmons Theatre would be on this driveway. The Project would designate this area for passenger loading (pick-ups and drop offs) for events at the Theatre.

All three driveways currently provide and would continue to provide adequate sight distance between vehicles entering or existing the driveways and pedestrians in both directions on the adjacent sidewalks. The driveways would also continue to provide adequate sight distance between exiting motorists and automobiles and bicycles traveling on the adjacent streets.

The Lake Merritt Boulevard entrance would provide two-way access. From 10th Street, the west driveway would provide an entrance into the parking lot and the east driveway would provide both entrance and exiting from the parking lot. The parking lot on the north side of the building would continue to provide two one-way drive aisles to serve the angled parking spaces. The parking lot would continue to provide adequate internal circulation for vehicles.

The Project proposes to designate the currently metered parking spaces on the north side of 10th Street adjacent to the Project site for ridesharing (i.e., Uber and Lyft) pick-ups and drop offs. The loading entrances for the building are also located along the 10th Street frontage.

> **Recommendation 1:** While not required to address a CEQA impact, the following should be considered as part of the final design for the Project:
>
> - Designate spaces on 10th Street near the building loading entrances for typical truck loading.

- Develop a truck loading plan for events at the Calvin Simmons Theatre that identifies spaces for truck loading and truck storage.

Bicycle Access and Bicycle Parking

Existing bicycle facilities serving the Project site include Class 1 paths along Lake Merritt and Lake Merritt Channel, Class 2 lanes on both directions of Lake Merritt Boulevard, and buffered bikes lanes on both directions of 10th Street. The nearest Ford Go Bike bikeshare station to the site is just south of the Project on the south side of 10th Street.

The East Bay Greenway (EBGW) Project, sponsored by the Alameda County Transportation Commission (CTC), would provide a mostly separated pedestrian and bicycle facility connecting the Lake Merritt BART Station to Fremont generally along the BART right-of-way. Near the project, EBGW proposes to provide a two-way cycletrack along the south side of 10th Street, which would replace the existing buffered bike lanes on both sides of the street.

Chapter 17.117 of the Oakland Municipal Code requires long-term and short-term bicycle parking for new buildings and major remodels to existing buildings. Long-term bicycle parking includes lockers or locked enclosures and short-term bicycle parking includes bicycle racks.

Table B1 at the end of this memorandum provide the detailed bicycle parking calculations for the Project. The Project is required to provide at least 16 long-term and 17 short-term bicycle parking spaces

Note that the summary does not include the bicycle parking requirements for the assembly spaces (Calvin Simmons Theatre, Gold Room, and Ball Room), because the Code does not provide bicycle parking requirements for this use and it requires the Director of Planning to determine the bicycle parking supply for these components of the Project.

The Code (Section 17.117.130) requires a minimum of two showers per gender and four lockers per shower for buildings with more than 150,000 square feet of commercial space. Thus, the Project would be required to provide showers and lockers. The Project site plan does not identify the location or number of long-term and short-term bicycle parking spaces.

The Project will provide the required number of short-term and long-term bicycle spaces, showers and lockers, as required by the City of Oakland Municipal Code.

Recommendation 2: While not required to address a CEQA impact, the following should be considered as part of the final design for the Project:

- Explore the feasibility and if determined feasible by City of Oakland staff, consider implementing or contributing to the implementation of the segment of the East Bay Greenway adjacent to the Project, which would consist of a two-way cycletrack along the south side of 10th Street between Fallon Street and 2nd Avenue.

Pedestrian Access and Circulation

Primary pedestrian access to the Project would be through lobbies on the north, south, east, and west sides of the building. The lobby on the south side of the building would be located on 10th Street. Paths within the site would connect all the lobbies to the sidewalks on 10th Street and Lake Merritt Boulevard and the path adjacent to the Lake Merritt Channel. Signalized intersections on Lake Merritt Boulevard at the Project driveway and 11th/12th Streets connect the site to the Class 1 Lake Merritt Path. These two signalized intersections on Lake Merritt Boulevard provide marked crosswalks, and directional curb-ramps and pedestrian countdown signal heads. The two Project driveways on 10th Street do not provide directional curb ramps.

The Project is expected to increase pedestrian traffic between the Project site and the Lake Merritt BART Station, especially during events at the Calvin Simmons Theatre. Many pedestrians are expected to cross 10th Street at Fallon Street. Currently, the 10th Street approaches at this intersection are not controlled; however, the East Bay Greenway project recommends converting the intersection to all-way stop-control or signalized operations to improve pedestrian and bicycle crossings at the intersection.

Recommendation 3: While not required to address a CEQA impact, the following should be considered as part of the final design for the Project:

- Explore the feasibility and if determined feasible by City of Oakland staff, install directional curb ramps and/or bulb-outs for the crosswalks at the two Project driveways on 10th Street.
- Install stop-signs on the eastbound and westbound 10th Street approaches at Fallon Street and convert the 10th Street/Fallon Street intersection to all-way stop-controlled operations, which would be consistent with the East Bay Greenway Project recommendation at this location.

Transit Access

Transit service providers in the Project vicinity include Bay Area Rapid Transit (BART) and AC Transit.

BART provides regional rail service throughout the East Bay and across the Bay. The Project is about 0.2 miles east of the Lake Merritt BART Station. The nearest station portal is at the southeast corner of the 9th Street/Oak Street intersection. The Project would not modify access between the Project site and the BART Station.

AC Transit is the primary bus service provider in the City of Oakland. AC Transit operates multiple major routes in the vicinity of the Project. The nearest bus stops to the Project site are:

- On both directions of 10th Street just west of the Project site. Line 62 serves these stops. The stops in both directions provide a bus shelter, a bench, and a trash receptacle.
- On the east side of Oak Street (northbound), just north of 10th Street. Lines 88 and 96 serve this stop. No amenities are provided at this stop.
- On the north side of 12th Street (westbound), just west of Fallon Street. Lines 1, 29, 33, 40, and 801/840 (night service) serve this stop. The stop provides a bus shelter, a bench, and a trash receptacle.
- On the south side of 11th Street (eastbound), just west of Madison Street. Lines 1, 29, 33, 40, 88, 96 and 801/840 (night service) serve this stop. The stop provides a bus shelter, a bench, and a trash receptacle.

AC Transit is currently constructing the East Bay Bus Rapid Transit (BRT) Project, which would replace Route 1 along Lake Merritt Boulevard adjacent to the Project, 11th and 12th Streets west of the Project, and East 12th Street and International Boulevard east of the Project. BRT buses would operate in mixed-flow lanes along most of Lake Merritt Boulevard adjacent to the Project and in exclusive lanes further east and west. Lake Merritt Boulevard adjacent to the site would not provide any bus stops for BRT. The nearest BRT stop to the Project site would be on 11th and 12th Streets at Madison Street, about 0.2 miles to the west.

No other major changes to the bus routes operating in the vicinity of the Project are planned and the Project would not modify access between the Project site and these bus stops.

> **Recommendation 4:** While not required to address a CEQA impact, the following should be considered as part of the final design for the Project:

- Coordinate with AC Transit to explore the feasibility of providing a BRT stop on Lake Merritt Boulevard adjacent to the Project site to provide either regular bus service or to serve just the events at the Calvin Simmons Theatre.

Automobile Parking Requirements

The City of Oakland Municipal Code sets minimum and maximum parking requirements. According to Section 17.116.080, the Project, which is located in D-LM-4 zone, has no minimum required parking and a maximum of one space for each 300 square feet of floor area on the ground level and 500 square feet of floor area on other floors for the commercial (retail/restaurant, office, and entertainment) components of the Project. According to Sections 17.116.070 and 117.116.090, the other components of the Project have no minimum or maximum required parking.

Table 4 presents the off-street automobile parking requirements for the Project, per City Code. The Code requires minimum of no parking and maximum of 296 parking spaces for the Project. The Project would provide 187 off-street parking spaces, which is consistent with City of Oakland Municipal Code requirements for the Project.

TABLE 4: AUTOMOBILE PARKING CODE REQUIREMENTS

Land Use	Size[1]	Required Parking Supply		Parking Supply	Within Range?
		Minimum	Maximum		
Ground Level commercial[2]	76.5 KSF	0	255		
Other Level Commercial[2]	20.5 KSF	0	51		
Other uses[3]	99.3 KSF	0	0		
Total	**196.3 KSF**	**0**	**296**	**187**	**Yes**

1. KSF = 1,000 square feet.
2. City of Oakland off-street parking requirement for commercial uses in D-LM-4 zone is a minimum of zero spaces and a maximum of one space per 300 square foot of ground floor area and one space per 500 square feet of floor area on other floors (Section 17.116.080).
3. City of Oakland has no minimum or maximum off-street parking requirements for the other project uses in the D-LM-4 zone (Sections 17.116.070 and 17.116.090).

Source: Fehr & Peers, 2019.

Loading Requirements

The Project would not provide any off-street loading spaces but proposes to designate one space on 10th Street for loading. City Municipal Code Sections 17.116.130 and 17.116.140 require two or three off-street loading dock for the Project. The Project would not meet the Code requirements for loading.

> **Recommendation 5:** While not required to address a CEQA impact, the following should be considered as part of the final design for the Project:
>
> - Determine the loading requirements for the project and designate the appropriate number of permanent or temporary loading spaces (temporary loading spaces can be designated for loading during specific times of the day and available for parking at other times; they can also be used for loading for special events only) within the Project parking lot and/or along the Project's 10th Street frontage.

Please contact Sam with questions or comments.

TABLE A1: TRIP GENERATION

Land Use	Size[1]		Daily	AM Peak			PM Peak		
				In	Out	Total	In	Out	Total
Gold Room & Ball Room[2]	150	Attendees	340	--	--	--	150	10	160
Restaurants [3]	11.0	KSF	1,400	65	54	119	65	43	108
Artisan/Custom Goods Production[4]	3.0	KSF	20	3	0	3	0	3	3
Music/Arts Practice Rooms[5]	14.0	KSF	470	19	10	29	19	19	38
Storage[6]	18.0	KSF	50	2	1	3	3	2	5
Office [7]	59.0	KSF	650	81	11	92	15	73	88
Retail[8]	27.0	KSF	1,150	16	10	26	48	52	100
Project Raw Trip Generation			*4,080*	*186*	*86*	*272*	*300*	*202*	*502*
City of Oakland Trip Generation Adjustment (46.9%)[9]			*-1,910*	*-87*	*-41*	*-128*	*-141*	*-94*	*-235*
Pass-By Trips – Restaurant (21% Daily, 0% AM, 43% PM)[10]			*-160*	*0*	*0*	*0*	*-15*	*-10*	*-25*
Pass-By Trips – Shopping Center (17% Daily, 0% AM, 34% PM)[11]			*-100*	*0*	*0*	*0*	*-9*	*-9*	*-18*
Total Trip Generation – Typical Conditions without Event at the Theatre			***1,910***	***99***	***45***	***144***	***135***	***89***	***224***
Theatre (Typical Event)[12]	1,275	Attendees	540	--	--	--	242	12	254
Total Trip Generation – with Typical Event at the Theatre			***2,450***	***99***	***45***	***144***	***377***	***101***	***478***
Theatre (Capacity Event)[12]	2,400	Attendees	1,020	--	--	--	455	23	478
Total Trip Generation – With Capacity Event at the Theatre			***2,930***	***99***	***45***	***144***	***590***	***112***	***702***

Footnotes

1. Attendees = Expected number of attendees; KSF = 1,000 square feet
2. Based on information provided by the applicant, typical events held in the Gold Room and Ball Room would have approximately 150 attendees, collectively.
3. ITE Trip Generation (9th Edition) land use category 932 (High-Turnover (Sit-Down) Restaurant):
   Daily: T = 127.2*(X),
   AM Peak Hour: T = 10.81*(X) (55% in, 45% out)
   PM Peak Hour: T = 9.85 *(X) (60% in, 40% out)
4. ITE Trip Generation (9th Edition) land use category 110 (General Light Industrial):
   Daily: T = 7.0*(X)
   AM Peak Hour: T = 0.92*(X) (88% in, 12% out)
   PM Peak Hour: T = 0.97 *(X) (12% in, 88% out)
5. Although the Project Applicant estimates practice rooms would be used approximately two hours every weekday with approximately 25 participants total, for the purposes of a conservative analysis, the trip generation relied on ITE Trip Generation (9th Edition) land use category 495 (Recreational Community Center):
   Daily: T = 33.8*(X)
   AM Peak Hour: T =2.05*(X) (66% in, 34% out)
   PM Peak Hour: T = 2.74 *(X) (49% in, 51% out)
6. ITE Trip Generation (9th Edition) land use category 151 (Mini-Warehouse):
   Daily: T = 2.5*(X)
   AM Peak Hour: T = 0.14*(X) (55% in, 45% out)
   PM Peak Hour: T = 0.26 *(X) (50% in, 50% out)
7. ITE Trip Generation (9th Edition) land use category 710 (General Office Building):
   Daily: T = 11.1*(X)
   AM Peak Hour: T = 1.56*(X) (88% in, 12% out)
   PM Peak Hour: T = 1.49*(X) (17% in, 83% out)
8. ITE Trip Generation (9th Edition) land use category 820 (Shopping Center):
   Daily: T = 42.7*(X)
   AM Peak Hour: T = 0.96*(X) (62% in, 38% out)
   PM Peak Hour: T = 3.71*(X) (48% in, 52% out)
9. The 46.9% reduction is based on the City of Oakland's *Transportation Impact Review Guidelines* for development in an urban environment less than a 0.5 mile from a BART Station.
10. PM peak hour pass-by rates based on ITE Trip Generation Handbook (3rd Edition). The weekday PM peak hour average pass-by rate for land use category 932 is 43%. Half (21%) is assumed for the daily trips and 0% is assumed for the AM peak hour.
11. PM peak hour pass-by rates based on ITE Trip Generation Handbook (3rd Edition). The weekday PM peak hour average pass-by rate for land use category 820 is 34%. Half (17%) is assumed for the daily trips and 0% is assumed for the AM peak hour.
12. Based on information from the applicant, the Calvin Simmons Theatre has a maximum capacity of 2,400 attendees. Typical event at the Theatre is expected about four times per week at 85 percent seated occupancy (1,275 attendees), and sold-out event (2,400 attendees) is expected three times per year. The trip generation assumes that 46.9% of trips would be by non-auto modes, and an average automobile occupancy of 2.8 based on observations of similar event types. The trip generation conservatively assumes all attendees would arrive during the PM peak hour.

Source: Fehr & Peers, 2018.

TABLE B1: BICYCLE PARKING REQUIREMENTS

Land Use	Size[1]	Long-Term		Short-Term	
		Spaces per Unit[2]	Spaces	Spaces per Unit[2]	Spaces
Assembly Space[3]	64.5 KSF	N/A	N/A	N/A	N/A
Restaurants	11.0 KSF	Min.	2	1:2 KSF	6
Artisan/Custom Goods Production	3.0 KSF	Min.	2	0	0
Music/Arts Practice Rooms	14.0 KSF	Min.	2	Min.	2
Storage	18.0 KSF	Min.	2	0	0
Office	59.0 KSF	1:10 KSF	6	1:20 KSF	3
Retail	27.0 KSF	1:12 KSF	2	1:5 KSF	6
Total Required Bicycle Spaces			**16**		**17**

1. KSF = 1,000 square feet
2. Based on Oakland Municipal Code Sections 17.117.100 thru 17.117.120
3. The Code does not provide bicycle parking requirements for assembly space and requires the Director of Planning to determine the appropriate bicycle parking supply.

Source: Fehr & Peers, 2019