APPENDIX A

Notice of Preparation and Initial Study

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SAN FRANCISCO PLANNING DEPARTMENT

Notice of Preparation of an Environmental Impact Report

Date:	January 22, 2014	CA 941
Case No.:	2013.0154E	Recepti
Project Title:	Moscone Center Expansion Project	
BPA Nos.:	Not Applicable	Fax:
Zoning:	Downtown Commercial Support C-3-S	415.55
	340-I Height and Bulk District	Plannin
Block/Lot:	Block 3723/ Lot 115; 3734/91	Informa
Lot Size:	830,000 square feet	415.5
Project Sponsor:	San Francisco Mayor's Office of Economic and Workforce Development Adam Van de Water, Adam.Vandewater@sfgov.org	
Lead Agency:	San Francisco Planning Department	
Staff Contact:	Elizabeth Purl – (415) 575-9028 elizabeth.purl@sfgov.org	

PROJECT DESCRIPTION

The Moscone Center—San Francisco's primary convention, exhibition, and meeting facility—is located on Howard Street between Third and Fourth Streets in the South of Market neighborhood of San Francisco, in an area referred to as Yerba Buena Gardens. The proposed Moscone Center Expansion Project would increase the gross square footage of the Moscone Center facility by about 20 percent, from approximately 1.2 million square feet to 1.5 million square feet. New construction would be primarily above grade both north and south of Howard Street in buildings up to approximately 95 feet tall. At completion, the expanded Moscone North structure would be approximately 54 feet in height and the Moscone South structure would be approximately 95 feet in height. Additional space would be created by excavating in two locations under Howard Street and expanding the existing below-grade exhibition halls that connect the Moscone North and South buildings. The proposed project would create a total of approximately 580,000 square feet of contiguous exhibition space below ground. The proposed project would also reconfigure the existing adjacent bus pick-up and drop off facilities and create two pedestrian bridges spanning Howard Street, which would connect Moscone North and South expansions at the second level above grade. The project does not include changes to the existing Moscone West building.

The project would require Planning Commission approval of a Downtown Project Authorization under Planning Code Section 309, among other approvals. The Downtown Project Authorization would be the project approval action under Chapter 31 of the San Francisco Administrative Code.

FINDING

This project may have a significant effect on the environment and an Environmental Impact Report (EIR) is required. This determination is based upon the criteria of the State CEQA Guidelines, Sections 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of

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

Reception: 415.558.6378

ax: 115.558.6409

Planning Information: 415.558.6377 Significance), and for the reasons documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

PUBLIC SCOPING PROCESS

Public comments will be accepted until 5:00 p.m. on February 21, 2014. Written comments should be sent to Sarah B. Jones, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103, or *sarah.b.jones@sfgov.org*.

If you work for a responsible State agency, we need to know the views of your agency regarding the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR when considering a permit or other approval for this project. Please include the name of a contact person in your agency.

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

<u>January</u> 11, 1014 Date

ter Ktonya Wisc Sarah B. Environmental Review Officer

for John Rahaim Director of Planning

INITIAL STUDY

Moscone Center Expansion Project Planning Department Case No. 2013.0154E

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INITIAL STUDY

Moscone Center Expansion Project Planning Department Case No. 2013.0154E

A. PROJECT DESCRIPTION

Project Background and Overview

The Moscone Center—San Francisco's primary convention, exhibition, and meeting facility—is located on Howard Street between Third and Fourth Streets in the South of Market neighborhood of San Francisco, in an area referred to as Yerba Buena Gardens. The project site spans portions of two separate blocks: Assessor's Block 3723, Lot 115, and Assessor's Block 3734, Lot 91 (see **Figure 1**). The Moscone Center, which is owned by the City and County of San Francisco and privately managed, is made up of three main halls: Moscone North and Moscone South, which are located across Howard Street from each other between Third and Fourth Streets, and the Moscone West exhibition hall, located across Fourth Street, north of Howard Street.¹ This Project Description is focused primarily on Moscone North and South because no changes are proposed at Moscone West. Moscone North and South currently encompass a total of approximately 440,000 square feet of exhibition space (180,000 square feet at Moscone North and 260,000 square feet at Moscone South). All of the functional space at Moscone North and South is under ground, with the exception of the street-level North and South lobbies and the Esplanade Ballroom, located at grade along the Third Street frontage of Moscone South.

The proposed Moscone Center Expansion Project (the "proposed project") would increase the gross square footage of the Moscone North and South combined facility by about 20 percent, from 1.2 million square feet to 1.5 million square feet. Through this expansion, as well as through renovation and repurposing of the existing facility, the project would result in an approximately 42 percent increase in functional space, to about 888,300 square feet from 625,600 square feet, as well as reconfigured support space.² New construction would be primarily above grade both north and south of Howard Street in buildings up to approximately 95 feet tall. Additional space would be created by excavating and expanding the existing below-grade exhibition halls that connect the Moscone North and South buildings under Howard Street. This excavation and expansion would occur in two currently unexcavated areas or "plugs" inside the existing lower-level building footprint; excavation would not result in an outward expansion beyond that footprint (see the section entitled "Moscone Below-Grade: North and South Exhibition Hall" for further discussion on the location and size of the excavation area). The project would also expand the existing above-grade Moscone North and South buildings. At completion, the expanded Moscone North

¹ Howard Street is oriented in a northeast-southwest direction, but will be referred to as an east-west street in this report. Third and Fourth Streets are oriented in a northwest-southeast direction, but will be referred to as north-south streets in this report. This convention will be used to describe the locations of other buildings and uses in relation to the project site.

² "Functional" space is defined as the square footage directly used by facility patrons. It includes exhibition, lobby, prefunction, circulation, meeting, ballroom, and multipurpose areas, as well a portion of the proposed outdoor roof terrace areas. "Functional space" does not include "support space," which is defined as square footage that is not directly used by facility patrons. "Gross square footage" includes support space, as well as other spaces not directly used by facility patrons. "Functional space" figures are used in the remainder of this Project Description, unless otherwise noted.



SOURCE: ESA

Figure 1 Project Site Location Map structure would be approximately 54 feet in height, and the Moscone South structure would be approximately 95 feet in height.

The proposed project would also reconfigure the existing adjacent bus pick-up and drop-off facilities and create two pedestrian bridges spanning Howard Street, which would connect Moscone North and South expansions at the second level above grade. As noted above, the proposed project would not affect the existing Moscone West building located at the northwest corner of the intersection of Howard Street and Fourth Street. Project implementation would occur using a coordinated, phased construction schedule that would maintain Moscone's convention operations during the construction period.

Project Sponsor's Objectives

The Moscone Center Expansion Project is being undertaken jointly between the Moscone Expansion District (MED), managed by the San Francisco Tourism Improvement District (SFTID) Management Corporation, and the City and County of San Francisco's Convention Facilities Department. The objectives for the proposed project include the following:

- Maximizing economic impact by attracting new clients and maintain existing clients by creating contiguous exhibition space of up to approximately 580,000 square feet and increasing the quantity of flexible meeting and ballroom spaces.
- Increasing the amount of efficient, contiguous exhibition space and providing more functional, flexible meeting space.
- Maintaining continuous operations and revenue during improvement and expansion.
- Capitalizing on Moscone Center's unique location in the city by improving its connections and relationship to the city's fabric, by:
 - 1. Improving Moscone's civic presence on Howard Street by creating an iconic and architecturally significant arrival experience.
 - 2. Enhancing pedestrian circulation and interest by reintroducing lost mid-block passageways and reducing the length of uninterrupted frontages.
 - 3. Activating streets by redesigning or relocating vehicular and service functions to create uninterrupted pedestrian-favored sidewalks fronted by active uses wherever possible.
 - 4. Reinforcing and improving connections among existing public open spaces in the MED.

It is intended that, following project implementation, Moscone Center could more efficiently hold two or more events simultaneously, and the time required to set up or break down events would be reduced.

Project Location

As noted above, the project site consists of portions of parcels on both sides of Howard Street, between Third and Fourth Streets. In combination, the total footprint of the project site is approximately 827,500 square feet below grade, and approximately 131,400 square feet above grade.³ The project site is

³ Existing and proposed bridges at level 2 are not included in this footprint total.

bordered by Third Street to the east; Folsom Street to the south; the Metreon (a commercial retail center housing shops, restaurants, and a movie theater), Children's Creativity Museum and Fourth Street to the west; and Yerba Buena Gardens and Mission Street to the north.⁴

In addition to Moscone North, the project block north of Howard Street shares Lot 115 with other buildings and uses above grade, including the large Yerba Buena Garden (a public park that contains the Sister Cities Garden, the Martin Luther King, Jr. Memorial, and various art installations), the Yerba Buena Center for the Arts Galleries and Forum building, and the Yerba Buena Center for the Arts Theater. In addition to the Moscone Center, the project block south of Howard Street shares Lot 91 with a variety of other buildings and uses, including the Yerba Buena Bowling and Ice Skating Center, the Children's Creativity Museum, the Child Development Center, the Children's Garden, and the restored 1905 Carousel. The project site is generally flat along Howard Street. However, other than the Moscone South Lobby building and Esplanade Ballroom entries on Howard Street, the majority of developed buildings and public open spaces sit atop the roof of the below-grade Moscone South Exhibition Halls A, B and C. That roof is approximately 12 feet above Howard Street. A pedestrian bridge over Howard Street connects the two blocks, sitting on top of part of the Moscone Center.

Market Street, a major east-west roadway in downtown San Francisco, is located two blocks north of the project site. Union Square is located approximately three-quarters of a mile to the north, and the Civic Center is located about 1 mile to the west (north of Market Street).

Existing Uses on the Project Site

Existing Operations

Moscone Center—including Moscone North, South, and West—is the largest convention, exhibition, and meeting facility in San Francisco, hosting about 90 to 100 events during a typical year. It is owned by the City and County of San Francisco, and it is managed by SMG LLP. Some of the large events that have taken place at Moscone Center include Oracle OpenWorld, the American Bar Association's annual meeting, the Game Developers Conference, the Apple Worldwide Developers Conference, Google I/O, and JavaOne. Moscone Center also hosted the Democratic National Convention in 1984. Most events take place over two to five days and attract an average of 6,426 attendees per event-day. The largest convention/tradeshows typically held at the Moscone Center are Oracle's Open World and Salesforce's Dreamforce conferences with approximately up to 113,000 and 60,000 attendees, respectively; the largest consumer show is the San Francisco International Auto Show with up to 285,000 attendees.

Moscone North

Moscone North encompasses approximately 180,000 square feet of exhibition space, as well as associated support functions such as loading, meeting rooms, storage and mechanical spaces, all located below grade (see **Figure 2**). The ceiling height in the below-grade exhibit spaces (Halls D and E) ranges between

⁴ The Yerba Buena Gardens were created as part of the development that occurred under the Yerba Buena Redevelopment Plan. The Yerba Buena Redevelopment Plan expired in 2010.





SOURCE: Skidmore, Owings & Merrill, LLP / Mark Cavagnero Associates Architects

Moscone Center Expansion Project 2013.0154E Figure 2 Existing Conditions 24 and 28 feet. Areas below grade are accessed by visitors from the street level via the existing Moscone North lobby, which is approximately 15,500 square feet in size. Two restaurants, Samovar and B, exist above the Moscone North Lobby; they face the Sister Cities Garden and Martin Luther King, Jr. Memorial and Fountain to the north.

Moscone South and Esplanade⁵

Moscone South includes approximately 260,000 square feet of exhibition space (Halls A, B, and C) with associated support functions such as loading, meeting rooms, storage, and mechanical spaces, all located below grade. At its highest point, the column-free exhibit hall is 37 feet in height. Below grade, Moscone South also contains the Gateway Ballroom, a multi-purpose space of almost 25,000 square feet. At the street level, Moscone South consists of the Moscone South and Esplanade lobbies and circulation areas, totaling 21,800 square feet in size. At the mezzanine level are the Esplanade Ballroom, 42,000 square feet in size, as well as 7,300 square feet of space for meeting rooms, lobby, and prefunction⁶ space.

Table 1, below, provides an overview of the number of events held at the Moscone Center, excluding Moscone West, over the past three years, along with associated total annual attendance at the Moscone Center during those event seasons. Moscone Center employs 317 full-time equivalent (FTE) employees.

Year	Total Number of Events	Total Annual Attendance
2011-2012	51	525,010
2010-2011	64	567,617
2009-2010	53	655,343

TABLE 1 NUMBER OF EVENTS AND TOTAL ANNUAL ATTENDANCE AT MOSCONE CENTER (EXCLUDING MOSCONE WEST) DURING THE LAST THREE YEARS

SOURCE: SF Department of Public Works, 2013.

Existing Circulation and Pedestrian Access

Howard Street, which separates Moscone North from Moscone South, is a major east-west roadway in downtown San Francisco running from The Embarcadero through the South of Market area to South Van Ness Avenue. At the project site, it operates as a one-way arterial with four westbound travel lanes. The San Francisco General Plan identifies Howard Street as a Major Arterial⁷ in the Congestion Management Program network.

⁵ The southern block of the project site contains both Moscone South and the Esplanade buildings, which are currently separate. Upon completion of the proposed project, these buildings would become a single building. Therefore, for the purpose of this environmental analysis, they are described as one building, unless otherwise noted.

⁶ For convention spaces, a "prefunction" area is typically adjacent to the main event location and often used for receptions prior to a meal or coffee breaks during an event.

⁷ Major Arterials are defined by the Congestion Management Program and the San Francisco General Plan as cross-town thoroughfares whose primary function is to link districts within the city and to distribute traffic from and to the freeways; these are routes generally of citywide significance; of varying capacity depending on the travel demand for the specific direction and adjacent land uses.

Currently, two bus loading plazas front the south side of Moscone North and the north side of Moscone South on Howard Street, creating a separation of approximately 250 feet between the two lobby door entries. The Moscone North bus loading plaza is approximately 180 feet in length, three lanes wide, and is able to accommodate up to five buses. The Moscone South bus loading plaza is approximately 275 feet in length, three lanes wide, and is able to accommodate up to seven buses. According to the Project Sponsor, buses typically park parallel to the north and south sidewalks, loading and unloading in lanes one and three and using lane two as a by-pass lane. A signalized, mid-block pedestrian crosswalk 30 feet in width exists between the two bus loading plazas.

Truck access to the project site is provided via a one-way ramp located along Third Street mid-way between Howard and Folsom Streets. Eighteen loading spaces are located at the lower level – three are on the east side of Moscone South, five are on the west side of Moscone South, and ten are along the north side of Moscone North. Trucks exit the project site via a one-way ramp located along Fourth Street mid-way between Howard and Folsom Streets.

Parking

Currently no public parking is provided at the Moscone Center. Public parking is available at nearby garages, including the Fifth and Mission Garage and the Moscone Garage on Third Street across from Moscone South.

Project Characteristics

Proposed Structural Changes

The project would add approximately 306,000 gross square feet to the existing 1.2-million-gross-squarefoot facility. Functional space for exhibitions, meetings, conventions, and trade shows would increase by about 42 percent, from 625,600 square feet to 888,300 square feet. Through more efficient allocation of building spaces, the proposed project would result in a net decrease in support space (food preparation, office, storage, and other "back of house" space) of about 1 percent, from approximately 570,300 square feet to approximately 563,000 square feet. **Figure 3** illustrates the proposed site plan and **Table 2** details the existing and proposed uses and total square footages at each level.

Moscone Below-Grade: North and South Exhibition Hall

On the lower level (see **Figure 4**), the proposed project would combine the exhibition area of Moscone South (Halls A, B, and C) with the existing Moscone South Gateway Ballroom, and expand this area to the north beneath Howard Street to create a better connection with the exhibition area of Moscone North (Halls D and E). The project would also combine Halls D and E, eliminate the existing kitchen and east loading dock (with three usable truck spaces) in the Moscone South lower level, and convert existing meeting space within Moscone North into a kitchen/support area, with a two-space loading dock constructed adjacent to the kitchen. At completion, the lower level would span a total area of 827,500 gross square feet.





SOURCE: Skidmore, Owings & Merrill, LLP / Mark Cavagnero Associates Architects

Moscone Center Expansion Project 2013.0154E Figure 3 Proposed Site Plan

NORTH

	Existing Conditions		Existing Conditions Proposed Project		
Level	Functional Uses ¹	Square Feet	Functional Uses ¹	Square Feet	
Lower Lovel	Exhibition	440,000	Exhibition	580,000	
Lower Lever	Meeting, Concourse, Ballroom	80,000	-	-	
North Lower Mezz.	-	-	-	-	
South Lower Mezz.	Meeting	19,000	Meeting	7,000	
North Level 1	Lobby	15,500	Lobby	24,700	
South Level 1 ²	Lobby, Circulation	21,800	Lobby, Circulation, Multipurpose	51,900	
South Mezz. ²	Lobby, Prefunction, Ballroom	49,300	Lobby, Prefunction, Ballroom, Meeting	69,700	
North Level 2	-	-	Prefunction	8,900	
South Level 2 ^{2,3}	-	-	Prefunction, Ballroom, Meeting	76,000	
South Level 3 ²	-	-	Prefunction, Meeting, Terrace	70,084	
Support/Other Space		585,200		628,391	
Total	-	1,210,800	-	1,516,675	

 TABLE 2

 EXISTING AND PROPOSED FUNCTIONAL SPACES BY BUILDING AND LEVEL

¹ All levels include also support space, which are not included in the Functional Space totals.

² Includes both Moscone South and Esplanade Spaces

³ Includes pedestrian bridges

SOURCE: SOM, 2013

The Moscone North and South exhibition facilities would have the ability to function as one continuous space at the lower level. Exhibition space would be expanded by about 32 percent (140,000 square feet), to 580,000 square feet. This expansion would be partly accomplished by repurposing most meeting, concourse, and ballroom spaces. Expansion and reconfiguration of the lower level would require the excavation of two existing unexcavated areas contained by concrete walls under Howard Street, which are approximately 60 feet by 185 feet and 65 feet by 190 feet in size.⁸

Moscone North, Above Grade

Above grade, the functional space in the Moscone North portion of the project would expand by 117 percent, from 15,500 square feet to 33,600 square feet over two levels. The proposed Moscone North building would be approximately 54 feet in height above Howard Street. At level 1, the Moscone North lobby would extend south from its current location and would contain circulation space with registration and back of house support areas (see **Figure 5**). The building would be located between the north side of Howard Street and the south side of the two existing restaurants which face the existing Martin Luther King, Jr. Memorial and Fountain and the Sister Cities Garden. The Moscone North building, at

⁸ The east unexcavated area is located approximately 60 feet west from the center of the Howard and Third Street intersection. The west unexcavated area is located approximately 330 feet east of the center of the Howard and Fourth Street intersection.



SOURCE: Skidmore, Owings & Merrill, LLP / Mark Cavagnero Associates Architects



NORTH

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approximately 54 feet above Howard Street, would be about 10 feet taller than the restaurants above the existing Moscone North lobby. The two restaurants, Samovar and B, as well as the Martin Luther King, Jr. Memorial and Fountains, and the Sister Cities Gardens would remain and would not be altered. At level 2, the proposed Moscone North building would contain additional multi-purpose space.

Moscone South and Esplanade, Above Grade

The proposed above-grade Moscone South would consist of two elements: the Moscone Esplanade Expansion and the Moscone South Expansion. These two elements would be built in successive construction phases, and upon project completion, they would exist as one connected building. In the description below, they are described as one building.

Above grade, Moscone South and the Esplanade functional space would expand by a combined 277 percent, from 71,100 square feet to 267,700 square feet. The completed building would be approximately 95 feet in height above Howard Street. At level 1 (street level), the lobby, with an approximately 25-foot clear ceiling height, would contain a mix of registration space, offices, circulation space, retail space, back-of-house space, and multi-purpose space (flexible space to be used based on the needs of certain events).

The lobbies of the South Expansion and Esplanade Expansion would be aligned to each other at the same street-level elevation, and their connection could be opened to create one large space, or separated, depending on the needs of client groups. Refer to Figure 5 for the plan and Table 2 for a detailed accounting of specific functional areas.

From the lobby level, a mezzanine level would elevate approximately 12 feet, occupying space across the southern portion of the lobby. The mezzanine primarily would contain circulation space, with office and support space located along its southern edges. This mezzanine level would connect south to the existing Esplanade Ballroom Building, whose ballroom would remain (and would not be altered by the proposed project). Escalators would connect from the mezzanine level up to levels 2 and 3 (see **Figure 6**).

At level 2, the south building would include a new column-free ballroom with a 27-foot clear ceiling height. This ballroom would allow for the flexibility to be used as several smaller meeting rooms or other multi-purpose functions. A circulation area would run along the edges of the ballroom. Support space would occupy the remainder of the floor (see **Figure 7**).

Also on level 2, two pedestrian bridges would span Howard Street, connecting the two proposed expansions between Moscone North and Moscone South and framing the main public arrival space at grade between the two new buildings (discussed further below). The eastern bridge would be fully enclosed to provide enhanced circulation for Moscone convention attendees while the western bridge would contain an uncovered public walkway intended for use by pedestrians moving between the Yerba Buena blocks. This public walkway would replace the existing pedestrian bridge located north of the Carousel (see Figures 2-7).

Level 3 would primarily comprise meeting rooms, prefunction space, and a roof terrace. About 13,700 square feet of support space would also occupy this level (see **Figure 8**).



NORTH





Figure 9 presents a cross-section of the proposed project showing all building levels.

Proposed Foundation and Excavation

The proposed project site is almost entirely within the existing building footprints, with the exceptions of the two areas to be excavated beneath Howard Street. Thus, excavation activities would be limited to an area beneath Howard Street, between Moscone North and Moscone South, and at the location of proposed building footings and foundations. Excavation of approximately 45,000 cubic yards of soil would be required to accommodate the proposed project, as described below:

- Beneath Howard Street: approximately 35 feet in depth, requiring removal of approximately 30,400 cubic yards of soil.
- Moscone North Lobby Footings and Foundation: approximately 5 feet in depth, requiring removal of up to approximately 3,700 cubic yards of soil.
- Storm and ground water storage tanks: approximately 10 feet in depth, requiring removal of approximately 1,600 cubic yards of soil.
- Moscone South/Esplanade Lobby Footings and Foundation: approximately 5 feet in depth, requiring removal of approximately 11,000 cubic yards of soil.

Following excavation, building foundations would be installed at Moscone South and Moscone North and would consist of mat foundations,⁹ similar to existing building foundations, with thickened footings at new column locations and at the edges of the Howard Street expansion.

Landscaping

The proposed project would not remove any street trees, and no "significant trees" would be affected.¹⁰ A significant tree is one that is either on property under the jurisdiction of the DPW or on privately owned land within 10 feet of the public-right-of-way, that is greater than 20 feet in height or which meets other criteria. The project site contains no landmark trees. The proposed project would also include the planting of street trees in accordance with *Planning Code* requirements. New trees would be planted along both the north and south sides of Howard Street. In addition, the proposed project would include several seating areas throughout the project site, including on the south side of Howard Street, just west of the pedestrian plaza, and on both the north and south sides of Howard Street (see **Figure 10**).

⁹ A type of shallow foundation made by pouring concrete over a mat of reinforcing material, usually rebar.

¹⁰ City and County of San Francisco, Department of Public Works, 2013. Significant and Landmark Trees website. Available online at: http://www.sfdpw.org/index.aspx?page=663, accessed June 2, 2013. City and County of San Francisco, Department of the Environment, 2013. Map of San Francisco's Landmark Trees website. Available online at: http://www.sfenvironment.org/article/landmark-tree-program/map-of-san-francisco%E2%80%9A%27s-landmark-trees, accessed June 2, 2013.



Moscone Center Expansion Project 2013.0154E

SOURCE: Skidmore, Owings & Merrill, LLP / Mark Cavagnero Associates Architects



NORTH

SOURCE: Skidmore, Owings & Merrill, LLP / Mark Cavagnero Associates Architects

Proposed Access

Visitor Pedestrian Access

On level 1, at street level (see Figure 5), the proposed project would extend the Moscone North and South lobbies toward Howard Street, decreasing the existing separation between the two lobby doors from the current distance of 250 feet to approximately 135 feet. Primary visitor access to Moscone North and Moscone South would be from Howard Street, similar to existing conditions (see **Figure 11**). The main point of arrival for visitors and convention attendees to both Moscone North and Moscone South would be the proposed "pedestrian-friendly zone" between the two entry lobbies. The pedestrian-friendly zone would consist of a 100-foot-wide, signalized, mid-block crosswalk with distinctive paving and streetscape elements for this segment of Howard Street. At either side of this crosswalk, the surface of Howard Street would be raised to create a curb-less transition from sidewalk to street. Pedestrian safety features, consisting of tactile paving and bollards, would be installed at the edges of Howard Street. These improvements are intended to create an enhanced sense of arrival to the Moscone Center while providing a more pedestrian-friendly environment along Howard Street.

On the Moscone South block, mid-block pedestrian passages would be constructed within the Moscone Center property to provide pedestrian connections to existing open spaces. This would include an atgrade mid-block pedestrian passage along the southern edge of the Esplanade Expansion portion of the building. This open-air passage would connect Third Street to the existing Children's Garden via a proposed stairway to be located south of the Moscone South lobby. These passages could be either left open to the public or closed to achieve the desired level of security during some events. Employee pedestrian access into the Moscone Center would continue as currently exists near the corner of Howard and Fourth Street.

Passenger Vehicle Loading

Currently there are two bus loading plazas fronting the Moscone North and Moscone South entrances on Howard Street, creating a separation of approximately 250 feet between the two lobby door entries. The proposed project would occupy a portion of the existing bus loading plazas on both sides of Howard Street, decreasing the separation of the two buildings to approximately 135 feet between lobby door entries. Proposed convention bus drop-off would occur along Howard Street in a traditional sidewalk drop-off configuration. On the north side, there would be a new lane for five buses north of the existing bike lane, dropping off riders on the right side of the bus directly onto the expanded sidewalk in front of the Moscone North lobby. On the south side, the existing bus drop off would be reconfigured from three lanes to two lanes. The first would be a bus lane located south of a dedicated bus loading and unloading island that would occupy the existing southern-most lane of Howard Street (currently a passenger loading lane and taxi stand). The second lane, closer to the Moscone South lobby, is proposed to be a bus by-pass lane that could also be used as a taxi lane. This second lane would prevent buses from blocking one another while entering, loading or unloading passengers, and exiting the bus loading zone. The south bus drop-off would accommodate seven buses. Overall, the re-configuration would provide up to 12 bus loading spaces, the same bus count as the existing configuration (see Figure 11).





SOURCE: Skidmore, Owings & Merrill, LLP / Mark Cavagnero Associates Architects

Truck Loading

Truck loading access would continue to occur along Third Street between Howard and Folsom Streets. The existing Third Street truck ramp would be relocated approximately 185 feet farther south to accommodate the proposed Esplanade Expansion (see Figure 3). No excavation would be required to move the truck ramp. The project would remove the three loading spaces located beneath the proposed Esplanade Ballroom expansion. Two new loading spaces would be constructed beneath Howard Street, just west of Third Street (see Figure 4). The new truck ramp would allow level queuing space for three trucks before they reach the new above-mentioned loading spaces, relieving the occasional truck queue over-flow on Third Street. Trucks would continue to exit onto Fourth Street by way of the existing below-grade truck loop.

Parking

Visitors and employees would continue to park at nearby garages, including the Fifth and Mission Street Garage and the Moscone Garage at Third and Folsom Streets, and no parking would be added under the proposed project. The project would provide 18 Class 1 bike parking spaces and a changing room with two showers for employees.

Utilities

The project sponsor does not anticipate any improvements to the existing utilities beneath Howard Street. The project would connect to existing utility lines for water, sewer, and street lights.

Because of the relatively shallow depth to groundwater on site, foundation dewatering is required under existing conditions and would continue to be required with the proposed project. For dewatering purposes, Moscone has four sump pits located below grade along Folsom Street. These sump pits are fed by collection channels beneath utility tunnels in the lower level of Moscone. Groundwater is pumped from the sumps through a pipeline that travels through the Moscone facility prior to connection to the sewer. Two sumps discharge water directly to the City's combined sewer along Third Street; two sumps discharge water to the sewer along Fourth Street through an intermediate collection sump. Moscone annually pumps between 12 and 18 million gallons of groundwater produced during dewatering to the combined sewer, and the annual average discharge volume is 15.1 million gallons. The project would include reuse of groundwater that is currently discharged into the sewer system. Groundwater could be reused for irrigation, toilet flushing, street sweeping, and firefighting. Reuse of this ground water would require treatment, additional piping infrastructure, and storage by the below-grade water tank mentioned previously in the "Proposed Foundation and Excavation" section.

During construction of the proposed project, if water were to accumulate in an open excavation area as a result of groundwater seepage or precipitation, dewatering could be required to maintain a somewhat dry working environment so that construction activities could proceed. Dewatering typically involves pumping water out of the excavated area and, following appropriate on-site treatment, discharging the water over land or into a nearby sewer drain or open channel. Discharge from construction dewatering to the San Francisco combined sewer system would require a permit from the San Francisco Public Utilities Commission (SFPUC) Wastewater Enterprise. If construction requires discharge to an open channel or over

land, it must be performed in accordance with municipal stormwater permits and the requirements of the Statewide General Construction Permit for Stormwater Discharges Associated with Construction Activity issued by the State Water Resources Control Board. During construction of the proposed project, any dewatering that occurs would be discharged into the City sewer system.

Proposed Green Building Features

Sustainability is one of the core principles of the Moscone Convention Center expansion. Although the specific building components and systems have not yet been developed, opportunities include but are not limited to: LEED certification, access to daylight; indoor air quality; and energy and water efficiency. The facility currently meets biodiesel fuel requirements established by City Code (Executive Directive 06-02), and would meet the City's green building requirements and Tier 2 pollution control requirements for construction vehicles, as required by Administrative Code Section 6.25 governing use of clean construction equipment for City-sponsored projects. The new facility would achieve a minimum 15 percent energy use reduction as compared to the 2008 California Energy Standards, as well as meet the requirement of a 30 percent reduction in indoor potable water use. The project would incorporate groundwater and stormwater retention and reuse. Construction materials would use low-emitting adhesives, paints, and finishes per Green Building requirements for City Buildings: Low Emitting Materials (San Francisco Environment Code, Chapter 7). (Further detail is provided in the Greenhouse Gas analysis; see Section E.)

Pursuant to the Stormwater Management Ordinance, the project sponsor would incorporate low-impact design (LID) techniques into the design and would implement stormwater best management practices (BMPs) to reduce the flow rate and volume of stormwater entering the combined sewer system. The project would reduce the existing stormwater runoff rate and volume by 25 percent by inclusion of a rainwater collection system that would collect and treat 32,000 gallons annually, based on initial calculations. Additionally, Moscone pumps between 12 and 18 million gallons of water per year into the City's sewer system as part of its dewatering system. The project would include a dewatering treatment system with a 42,500-gallon dewatering storage tank. The foundation dewatering water would be treated to non-potable water standards primarily by UV treatment, with secondary chlorine treatment. The rainwater and groundwater would be reused for non-potable uses—such as indoor toilet flushing and irrigation within the project and surrounding green spaces like Yerba Buena Gardens, and to supplement city-scale uses like street sweeping, fire-water, and other citywide opportunities. In the future, water could be exported to the Central South of Market (SoMa) Eco-District.¹¹ Stub-outs (capped connection points) would be provided by the proposed project to facilitate a future connection to the Eco-District system.

Height, Massing, and Design

The proposed project would include extensions of Moscone North and South building facades toward Howard Street, as well as vertical extensions of all three building components (North, South and the Esplanade). The Moscone North expansion would add approximately one level above a renovated and

¹¹ Eco-Districts are neighborhood scale public-private partnerships that aim to reduce greenhouse gas emissions and achieve the City's goals to reduce water consumption, reduce waste, and capture efficiencies in sharing community-scale energy resources. An Eco-District proposed in the Moscone neighborhood would require further development and would be subject to its own environmental review once proposed.

expanded lobby along Howard Street, for a total height of approximately 54 feet. This building would be approximately 10 feet taller than the existing Moscone North lobby and restaurant structure.

The Moscone South Expansion would add two levels above a renovated and expanded lobby along Howard Street, for a total height of approximately 95 feet. The top level of the South Expansion would be set back approximately 35 feet from its southern edge for a roof terrace. The Esplanade Expansion would add an enlarged lobby / multi-purpose space, a mezzanine level, and two full stories, for a total height of approximately 95 feet. The top level of the Esplanade Expansion would be set back approximately 35 feet from its northern edge along Howard Street, also for a roof terrace. As noted previously, at project completion, the South Expansion and Esplanade Expansion would function and appear as one building. In addition, at project completion, the second stories of both North and South facades would extend over the ground level lobbies by approximately 15 feet in the North building and 15 feet in the South building, creating overhangs above the pedestrian space below (see Figure 9).

The ground level areas facing Howard and Third Streets, which would include the two lobbies and retail uses, are anticipated to be enclosed with a glass curtain wall. The levels above would be clad in a mixture of metal panels, glass curtain wall, and stone panels. In general, the architectural style would be of a contemporary design intended to coordinate with the existing aesthetic of the surrounding structures, as described above and shown in **Figure 12** through **Figure 16**, below. All glazing would be consistent with the City's Bird-Safe Building Ordinance (Section 139 of the *Planning Code*).

Figure 12 presents a map of viewpoints that are presented in this Project Description. **Figures 13–16** present a series of photographs from vantage points surrounding and near the project site, showing the existing Moscone Convention Center and surrounding buildings. Each figure includes a second image depicting a photomontage of the proposed project within the surrounding built environment.¹² These photosimulations were prepared by Square One Productions and reviewed by the San Francisco Planning Department, the environmental consultant (ESA), the project sponsor, and the project architect (SOM).

Proposed Operational Changes

At project completion, the Moscone Center would be able to accommodate a greater number of exhibits and greater annual attendance is anticipated due to the increased event capacity. The proposed project would increase employment during events at the project site by 28 FTE, and it could increase total daily event attendance by 4,200.¹³ This is a conservative assumption because although the proposed increase in exhibit floor space would likely increase the total number of exhibitors and their staff, it would not necessarily result in an increase in the number of event visitors.

¹² The proposed project is subject to Public Resources Code Section 21099(d), which eliminates aesthetics as an impact in determining the significance of physical environmental effects under the California Environmental Quality Act for projects meeting certain criteria, as further described in Section E, in the section entitled 'Evaluation of Environmental Effects.' Accordingly, this Initial Study does not contain a separate discussion of the topic of aesthetics. Photosimulations of the proposed project are provided for informational purposes only.

¹³ Adavant Consulting, Memorandum RE: Moscone Center Expansion Project – Estimation of Travel Demand January 9, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E.



Moscone Center Expansion Project 2013.0154E Figure 12 Photosimulation Locations Map



Existing Conditions



With Proposed Project

SOURCE: Square One, 2013

Moscone Center Expansion Project 2013.0154E Figure 13 View from Yerba Buena Esplanade, Looking Southeast



Existing Conditions



With Proposed Project

SOURCE: Square One, 2013

Moscone Center Expansion Project 2013.0154E Figure 14 View from Third Street at SFMOMA, Looking South



Existing Conditions



With Proposed Project

Moscone Center Expansion Project 2013.0154E Figure 15 View from Children's Garden, Looking North

SOURCE: Square One, 2013



Existing Conditions



With Proposed Project

SOURCE: Square One, 2013

Moscone Center Expansion Project 2013.0154E Figure 16 View from Howard Street at Third Street, Looking Southwest

Proposed Construction Schedule

Construction of the Moscone Center Expansion Project is anticipated to begin in November 2014 and be completed in approximately 44 months (see **Figure 17**). In order to achieve maximum contiguous exhibition space within the existing Moscone below-grade footprint, the project would be carried out on a phased construction schedule coordinated with the present Moscone Center event calendar by executing the steps outlined below, divided among three major phases, as shown in **Table 3**. No pile driving is anticipated. The estimated cost for constructing the proposed project is approximately \$350 million.

TABLE 3CONSTRUCTION DETAILS

	Construction Steps	Construction Equipment/ Depth and Quantity of Excavation
<i>Ph</i> 1. 2. 3.	ase 1: Site Preparation (13 months) Construct a temporary, above-grade connection from the back of the existing south lobby building to the existing Esplanade Ballroom. Relocate the main below-grade switchgear room to an area located under the existing Yerba Buena Theater and relocate/re-route all mechanical, electrical and plumbing systems (as required) to support the proposed project. Convert existing meeting rooms under the existing Yerba Buena Theater to a new kitchen facility with new mechanical systems as required. Excavate two existing unexcavated areas under Howard Street and excavate further as needed (temporary closure of Howard Street between Third and Fourth Streets required).	<i>Excavation:</i> Beneath Howard Street of approximately 35 feet in depth, requiring removal of approximately 30,400 cubic yards of soil. 2 drill rigs, 1 120 ton crane, 20 trucks 1,500 truck trips (15 to 20 days, 75 to 100 trips per day)
<i>Ph</i> 5.	ase 2: Esplanade Building (15 months) Demolish the existing kitchen facility, east loading dock and other support spaces under the existing Esplanade Ballroom lobby, allowing for construction of foundations and structure of a new building above. Convert area below to new exhibition space. Construct new loading docks, demolish old ramp sections, and connect the truck loop. Demolish the existing Esplanade Ballroom support building to make way for the new Esplanade Expansion building.	<i>Demolition</i> : 5 excavators, 2 cranes 1,400 truck trips (28 days, 25 trucks per day) <i>Structure</i> : 3 excavators, and 1 crane 2,000 truck trips
Ph	ase 3: South Lobby, North Lobby and Bridges (16 months)	Demolition: 3 excavators, 1 crane
7.	Reconfigure the Gateway Ballroom (below the existing Moscone South lobby) into exhibition space.	1,920 truck trips (48 days, 20 trucks per day) <i>Structure:</i> 5 excavators, 2 cranes
8.	Demolish the remainder of the existing South Lobby building above grade and expand the Moscone South building, connecting its floors to the Esplanade Expansion building.	2,450 truck trips
9.	Reconfigure Hall E (below the existing Moscone North lobby) into exhibition space.	
10.	Expand the Moscone North lobby and construct the two proposed pedestrian bridges across Howard Street. Remove the existing pedestrian bridge located north of the Carousel.	


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Applicable Zoning Regulations

Both portions of the Moscone Center Expansion project site (Moscone North and Moscone South) are within the C-3-S (Downtown Support) zoning district. The C-3-S district "encompasses Yerba Buena Gardens, which includes San Francisco's Convention Center, hotels, museums and cultural facilities, housing, retail, and offices arranged around public gardens and plazas. The district continues to accommodate important supporting functions such as wholesaling, printing, building services, and secondary office space. It also contains unique housing resources."¹⁴ The proposed project, which would include convention, office, and retail facilities as primary uses, would be principally permitted within the C-3-S zoning district.

Both portions of the Moscone Center Expansion Project site are also within a 340-I height and bulk district (limiting height to 340 feet, and requiring that towers above 150 feet in height maintain a maximum of 170 feet in length and 200 feet in diagonal dimension). The proposed project would not exceed the height and bulk limits set forth by the *Planning Code* for this district.

The proposed project would be required to obtain authorization through a *General Plan* referral to allow the construction of the elevated pedestrian bridges across Howard Street.

Approvals Required

Implementation of the Moscone Center Expansion Project would require the following approvals and other actions (with acting bodies shown in *italics*), with approval of a Planning Code Section 309 Downtown Project Authorization identified as the Approval Action for the project.

- Adoption of CEQA findings (*Planning Commission*).
- Approval of a Planning Code Section 309 Downtown Project Authorization (*Planning Commission*), including an exception to allow a Reduction of Ground-Level Wind Currents in C-3 Districts (Planning Code Section 148).
- Adoption of a General Plan Referral concerning the construction of pedestrian bridges over Howard Street, improvements to City-owned property, and changes to sidewalks and street widths (*Planning Commission*).
- Variance from the *Zoning Administrator* for deviation from bicycle parking requirements (Planning Code Section 155.2), and Street Frontages in Commercial District requirements (Planning Code Section 145.1).
- Remedial Action Agreement per Article 22 of the Health Code with the *San Francisco Department of Public Health (SFDPH),* if contamination is identified.
- Approval of exterior design of structures on City property by San Francisco Arts Commission, Civic Design Review Committee.
- Approval of any necessary construction permits for work within roadways by *San Francisco Department of Public Works.*

¹⁴ *Planning Code*, Section 210.3.

- Approval of any necessary construction permits for work within roadways by *San Francisco Department of Parking and Traffic.*
- Review of any construction-related changes to transit service or facilities by the San Francisco Municipal Transit Agency (SFMTA), MUNI Street Operations Division.
- Review and approval of a monitoring plan by *SFPUC* for construction activities near susceptible utilities.
- Erosion and Sediment Control Plan Approval by *SFPUC* in accordance with Article 4.1 of the San Francisco Public Works Code for construction activities.
- Batch Wastewater Discharge Permit Approval by *SFPUC* in accordance with Article 4.1 of the San Francisco Public Works Code for discharges of groundwater during dewatering.
- Approval of the Non-Potable Project Water Budget Application by *SFPUC* and associated Non-Potable Engineering Report by *SFDPH* for on-site reuse of groundwater and stormwater for non-potable purposes.
- Approval of Stormwater Control Plan by *SFPUC* demonstrating compliance with San Francisco's Stormwater Design Guidelines.
- Revision of Certificate of Registration from *SFDPH* and Hazardous Materials Business Plan for the storage and use of hazardous materials.
- Demolition and building permits from *Department of Building Inspection and Planning Department*.
- Approval for new water, sewer, and street light utility connections by *SFPUC*.
- Approval for any proposed curb or street modifications by SFMTA Sustainable Streets Division.
- Approval by the Board of Supervisors of changes to streets and sidewalk widths (*Board of Supervisors*).

B. PROJECT SETTING

The existing setting surrounding the project site is depicted in the "before" images in Figures 13 through 16 of Section A, Project Description, under the heading "Height, Massing, and Design." As noted above, the project site consists of portions of parcels on both sides of Howard Street, between Third and Fourth Streets. The project site is bordered by Third Street to the east; Folsom Street to the south; the Metreon, Children's Creativity Museum and Fourth Street to the west; and Yerba Buena Gardens and Mission Street to the north. In addition to Moscone North, the project block north of Howard Street shares Lot 115 with other buildings and uses above grade, including the large Yerba Buena Garden (a public park that contains the Sister Cities Garden, the Martin Luther King, Jr. Memorial, and various art installations), the Yerba Buena Center for the Arts Galleries and Forum building, and the Yerba Buena Center for the Arts Theater. In addition to the Moscone Center, the project block south of Howard Street shares Lot 91 with a variety of other buildings and uses, including the Yerba Buena Bowling and Ice Skating Center, the Children's Creativity Museum, the Child Development Center, the Children's Garden, and the restored 1905 Carousel. The project site is located in a 340-I Height and Bulk District, with a maximum allowed building height of 340 feet.

The project site is generally flat along Howard Street. The Metreon—a retail center housing shops, restaurants, and movie theater—is adjacent to the site to the northwest. The San Francisco Museum of Modern Art (SFMOMA) is directly across Third Street, between Howard Street and Mission Street. Market Street, a major east-west roadway in downtown San Francisco, is located two blocks north of the project site. Union Square is located approximately three-quarters of a mile to the north, and the Civic Center is located about 1 mile to the west (north of Market Street).

C. COMPATIBILITY WITH EXISTING ZONING AND PLANS



State, or Federal Agencies.

San Francisco Planning Code

The San Francisco *Planning Code* (*Planning Code*), which incorporates the San Francisco Zoning Maps, governs permitted uses, densities, and configuration of buildings within San Francisco. Permits to construct new buildings (or to alter or demolish existing ones) may not be issued unless the proposed project either conforms to the *Planning Code* or is granted an exception pursuant to provisions of the *Planning Code*.

Use District

The project site is in the C-3-S Downtown Commercial Support use district. *Planning Code* Section 210.3 states that the district "encompasses Yerba Buena Gardens, which includes San Francisco's Convention Center, hotels, museums and cultural facilities, housing, retail, and offices arranged around public gardens and plazas. The district continues to accommodate important supporting functions such as wholesaling, printing, building services, and secondary office space. It also contains unique housing resources. The district is within walking distance of rapid transit on Market Street, and is served by transit lines on Third, Fourth, Mission and Folsom streets." According to *Planning Code* Sections 213 through 227, a wide range of uses are permitted in the C-3-S use district, including dwellings, institutions, retail sales, laundry, assembly, entertainment, wholesale, distribution, and automotive uses. The proposed project use includes various forms of assembly use, including exhibition, meeting, concourse, ballroom, pre-function, and lobby spaces. The project would be consistent with the C-3-S use district.

Height and Bulk District

The project site is located in a 340-I Height and Bulk District, with maximum allowed building height of 340 feet. The portion of a building taller than 150 feet is allowed a 200-foot maximum diagonal and 170-foot maximum length (*Planning Code* Section 270). The proposed Moscone North expansion would rise 54 feet

above Howard Street, and the proposed Moscone South expansion would rise 95 feet above Howard Street. Thus, the proposed project would comply with the height limit, and the buildings would not exceed the bulk limit.

Parking

Convention uses in the C-3 Districts are not required to provide parking (*Planning Code* Section 151.1). Currently no public parking is provided at the Moscone Center, and no parking would be provided under the proposed project.

Loading

Planning Code Section 152.1 provides loading space requirements in C-3 districts based on proposed uses. The proposed loading spaces would meet these requirements. The Project Description explains the facility's proposed below-grade freight loading and at-grade bus passenger loading.

Plans and Policies

San Francisco Plans and Policies

San Francisco General Plan

The *San Francisco General Plan* (General Plan) provides general policies and objectives to guide land use decisions. The General Plan contains 10 elements (Commerce and Industry, Recreation and Open Space, Housing, Community Facilities, Urban Design, Environmental Protection, Transportation, Air Quality, Community Safety, and Arts) that set forth goals, policies, and objectives for the physical development of the City. The proposed project would not obviously or substantially conflict with any General Plan goals, policies, or objectives. The compatibility of the proposed project with the General Plan goals, policies, and objectives that do not relate to physical and environmental issues will be considered by decision-makers as part of their assessment whether to approve or disapprove the proposed project. Any potential conflicts identified as part of that process would not alter the physical environmental effects of the project.

Downtown Area Plan. The project is located in the Downtown Area Plan (Area Plan) and is designated for Mixed Use. The Plan states that Downtown San Francisco should encompass a compact mix of activities, historical values, and distinctive architecture and urban forms that engender a special excitement reflective of a world city. It calls for obtaining a diverse base of support commercial activity in and near downtown, and it specifically mentions the Moscone Convention Center as a node of activity around which the planning of other projects should be considered. The Downtown Area Plan also contains a transportation component, including a call for improved pedestrian circulation in the Downtown Area (Objective 22), including sufficient space for pedestrian movement, minimizing sidewalk obstructions, ensuring safe and convenient street crossings, and improving the Downtown pedestrian network. While many enhancements have been made to the Downtown pedestrian network since the Downtown Area Plan and accompanying Streetscape Plan (discussed below) were adopted, additional improvements are currently planned in the project vicinity under the auspices of the Central

SoMa Plan, discussed below under 'Approach to Cumulative Analysis.' The proposed project would not be inconsistent with the Downtown Area Plan, either with respect to land use or circulation.

The Downtown Streetscape Plan was adopted by the Planning Commission in 1995 to implement the Downtown Pedestrian Network that is called for in Objective 22 of the Downtown Area Plan. The Downtown Streetscape Plan has three goals: to provide a coordinated, comprehensive design vision for the Downtown Pedestrian Network; to provide standards and guidelines for the placement of streetscape elements by both the public and private sectors; and to provide a framework for future capital projects funded by dedicated sales tax revenue and privately funded to meet downtown open space requirements, as well as for projects funded by public-private partnerships. The proposed project would not be inconsistent with the Downtown Streetscape Plan, in that it would enhance pedestrian connections through and around Moscone Center.

Commerce and Industry Element. According to the General Plan, "the Commerce and Industry Element sets forth objectives and policies that address the broad range of economic activities, facilities and support systems that constitute San Francisco's employment and service base." Objective 8 states that the City should enhance San Francisco's position as a national center for conventions and visitor trade, given that their spending is important and provides input of new dollars to the local economy. Policy 3.1 notes that tourist- and service-related industries, such as hotels and restaurants serving convention-goers, typically hire a number of unskilled or semi-skilled labor, thereby providing entry-level jobs to a wider range of workers. The proposed Moscone Center Expansion project would further these policies. The proposed project would not be inconsistent with the Commerce and Industry Element.

Urban Design Element. As described in the *General Plan*, the Urban Design Element relates to the physical character and order of the city, and the relationship between people and their environment. The element specifically calls for centers of activity to be made more prominent through design of street features and other means (Policy 1.6). The proposed project's expansion toward Howard Street, as well as the pedestrian bridges, would enhance the entry to this activity center.

Although the Urban Design Element states that the City shall maintain a strong presumption against giving up street areas for construction of public buildings (policy 2.8), Policy 3.4 states that the City shall "promote building forms that will respect and improve the integrity of open spaces and other public areas." This policy's explanation specifically states that large buildings and developments should provide open space on their sites and consider separation of pedestrian and vehicular circulation levels where possible. Policy 4.4 states that walkways should be designed to minimize danger to pedestrians, as well as that pedestrian walkways be set apart where possible to provide a separate circulation system. Policy 2.9 states that streets should not be given up if doing so would result in obstruction of views, emergency access, or elimination of open space. Streets may be given up if doing so benefits a public assembly, such as the proposed convention center renovation. The proposed project's two pedestrian bridges would be consistent with these policies. The proposed project would not be inconsistent with the Urban Design Element.

Recreation and Open Space Element. The Recreation and Open Space Element (ROSE) indicates that downtown San Francisco, including the project site vicinity, has special problems and opportunities for

open space to provide visual relief for the surrounding intense development. Policy 2.12 calls on the City to ensure that downtown open spaces are accessible, usable, and activated. In addition, Policy 2.2 states that the City should preserve existing public open space, and Policy 4.2 states that City departments' own land and facilities have become important citywide and neighborhood recreational resources.

The project block north of Howard Street includes Yerba Buena Garden, the Yerba Buena Center for the Arts Galleries and Forum building, and the Yerba Buena Center for the Arts Theater. The project block south of Howard Street shares Lot 91 with a variety of other buildings and uses, including the Yerba Buena Bowling and Ice Skating Center, the Children's Creativity Museum, the Child Development Center, the Children's Garden, and the restored 1905 Carousel. These recreational uses would be maintained upon completion of the proposed project. In addition, the expansion of the Moscone South building would include private terraces, which would provide a passive outdoor recreational area for convention attendees. The proposed project would not be inconsistent with the Recreation and Open Space Element.

The Accountable Planning Initiative

In November 1986, the voters of San Francisco approved Proposition M, the *Accountable Planning Initiative*, which added Section 101.1 to the *Planning Code* to establish the following eight priority policies:

- Preservation and enhancement of neighborhood-serving retail uses;
- Protection of neighborhood character (see Section E.1, Land Use and Land Use Planning, Question 1c);
- Preservation and enhancement of affordable housing (see Section E.2, Population and Housing, Question 3b, with regard to housing supply and displacement issues);
- Discouragement of commuter automobiles (see Section E.4, Transportation and Circulation, Questions 5a, 5b, and 5f);
- Protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership (see Section E.1, Land Use and Land Use Planning, Question 1c);
- Maximization of earthquake preparedness (see Section E.13, Geology and Soils, Questions 14a through 14d);
- Landmark and historic building preservation (see Section E.3, Cultural and Paleontological Resources, Question 4a); and
- Protection of open space (see Section E.8, Wind and Shadow, Questions 8a and 8b; and Question 9, Recreation, Questions 9a and 9c).

Prior to issuing a permit for any project that requires an Initial Study under the California Environmental Quality Act (CEQA), or issuing a permit for any demolition, conversion, or change of use, and prior to taking any action that requires a finding of consistency with the General Plan, the City is required to find that the proposed project would be consistent with these priority policies. Consistency with policies applicable to the proposed project is discussed in Section E (specific subsections are noted in parentheses

in the priority policies listed above). The proposed project would not be inconsistent with the Accountable Planning Initiative.

Regional Plans and Policies

The recently adopted *Plan Bay Area*, which includes the region's Sustainable Communities Strategy, is a collaboration led by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC), in partnership with the Bay Area Air Quality Management District (BAAQMD) and the San Francisco Bay Conservation and Development Commission (BCDC). *Plan Bay Area*, adopted by ABAG and MTC in July 2013, is the region's first integrated land use and transportation plan, combining elements of ABAG's former *Projections* series of housing and employment growth forecasts and MTC's former stand-alone *Regional Transportation Plan*. The Plan calls for concentrating housing and job growth around transit corridors, particularly within areas identified by local jurisdictions as Priority Development Areas (PDAs). *Plan Bay Area* also specifies strategies and investments to maintain, manage, and improve the region's multi-modal transportation network and proposes transportation projects and programs to be implemented with reasonably anticipated revenue. The Plan will be updated every four years. The project site, like much of eastern San Francisco, is within a PDA, where growth is anticipated and planned for in proximity to transit (see also the discussion on Population and Housing, below (Section E.2)). The proposed project would not conflict with any projects in the regional transportation plan. Therefore, the proposed project would be consistent with *Plan Bay Area*.

Other regional plans include:

- BAAQMD's 2010 Clean Air Plan (2010 CAP), which is a road map that demonstrates how the San Francisco Bay Area will reduce emissions and decrease ambient concentration of harmful pollutants, achieve compliance with the state ozone standards and reduce the transport of ozone and ozone precursors to neighboring air basins. As described further in Section E.6, Air Quality, the proposed project includes applicable transportation and energy and climate control measures to reduce automobile trips and associated emissions and would not conflict with the 2010 CAP.
- BCDC's *San Francisco Bay Plan*, which guides the protection and use of the Bay and its shoreline and provides policy direction for BCDC's permit authority regarding various activities within its jurisdiction. The proposed project is not located within BCDC's jurisdiction and therefore would not conflict with the Bay Plan.
- The San Francisco Regional Water Quality Control Board's (RWQCB) San Francisco Basin Plan guides planning of the water basin. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. As described further in Section E.14, Hydrology and Water Quality, the proposed project would not result in substantial water quality effects; thus the project would not conflict with the Basin Plan.

The project would not obviously or substantially conflict with any environmental plan or policy adopted for the purpose of avoiding an environmental effect.

Required Approvals by Other Agencies

See pages 31 to 32 for a list of required approvals.

D. SUMMARY OF ENVIRONMENTAL EFFECTS

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



E. EVALUATION OF ENVIRONMENTAL EFFECTS

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

Senate Bill 743 and Public Resources Code Section 21099

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743, which became effective on January 1, 2014.¹⁵ Among other provision, SB 743 amends the California Environmental Quality Act (CEQA) by adding Public Resources Code Section 21099 regarding analysis of aesthetics and parking impacts for urban infill projects.

Aesthetics and Parking Analysis

Public Resources Code Section 21099(d), effective January 1, 2014, provides that, "aesthetics and parking impacts of a residential, mixed- use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment."¹⁶ Accordingly, aesthetics and parking are no longer to be considered in determining if a project has the potential to result in significant environmental effects for projects that meet all of the following three criteria:

¹⁵ SB 743 can be found on-line at: http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB743.

¹⁶ See Public Resources Code Section 21099(d).

- a) The project is in a transit priority area;¹⁷ and
- b) The project is on an infill site;¹⁸ and
- c) The project is residential, mixed-use residential, or an employment center.¹⁹

The proposed project meets each of the above three criteria because it (1) is located within close proximity to several transit routes, (2) is located on an infill site that is already developed with commercial uses and is surrounded by other similar urban development, and (3) would be an expansion of existing commercial support uses, located within close proximity to several transit routes, and in an urban area on a site already developed and zoned for commercial uses with a FAR greater than 0.75.²⁰ Thus, this Initial Study and the EIR do not consider aesthetics and the adequacy of parking in determining the significance of project impacts under CEQA.

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

The Planning Department recognizes that the public and decision makers nonetheless may be interested in information pertaining to the aesthetic effects of a proposed project and may desire that such information be provided as part of the environmental review process. Therefore, some of the information that would have otherwise been provided in an aesthetics section of this Initial Study (such as "before" and "after" visual simulations) has been included in Section A, Project Description. However, this information is provided solely for informational purposes and is not used to determine the significance of the environmental impacts of the project, pursuant to CEQA.

Similarly, the Planning Department acknowledges that parking conditions may be of interest to the public and the decision makers. Therefore, the EIR will present a parking demand analysis for informational purposes and will consider any secondary physical impacts associated with constrained supply (e.g., queuing by drivers waiting for scarce onsite parking spaces that affects the public right-of-way) as applicable in the transportation analysis.

¹⁷ Public Resources Code Section 21099(a) defines a "transit priority area" as an area within one-half mile of an existing or planned major transit stop. A "major transit stop" is defined in Section 21064.3 of the California Public Resources Code 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.

¹⁸ Public Resources Code Section 21099(a) defines an "infill site" as a lot located within an urban area that has been previously developed, or a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses.

¹⁹ Public Resources Code Section 21099(a) defines an "employment center" as a project located on property zoned for commercial uses with a floor area ratio of no less than 0.75 and located within a transit priority area.

²⁰ San Francisco Planning Department, Transit-oriented Infill Project Eligibility Checklist, January 10, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E.

Approach to Cumulative Impact Analysis

Two approaches to a cumulative impact analysis are provided in CEQA Guidelines Section 15130(b)(1): (a) the analysis can be based on a list of past, present, and reasonably foreseeable probable future projects producing closely related impacts that could combine with those of a proposed project, or (b) a summary of projections contained in a general plan or related planning document can be used to determine cumulative impacts. The analyses in this Initial Study employ both the list-based approach and a projections approach, depending on which approach best suits the individual resource topic being analyzed. For instance, the Land Use analysis considers the degree to which the proposed project in combination with several large individual projects that are anticipated in the project site vicinity may alter the land use character, while at the same time incorporating assumptions regarding other development patterns that are likely to occur as part of normal long-range growth. By comparison, the Transportation and Circulation analysis will rely on a citywide growth project site vicinity, which is the typical methodology the San Francisco Planning Department applies to analysis of transportation impacts. The projections model includes the individual projects described below and applies a quantitative growth factor to account for other growth that may occur in the area.

The following factors were used to determine an appropriate level for cumulative analysis in this Initial Study:

- Similar Environmental Impacts. A relevant project contributes to effects on resources that are also affected by the proposed project. A relevant future project is defined as one that is "reasonably foreseeable," such as a proposed project for which an application has been filed with the approving agency or has approved funding.
- **Geographic Scope and Location.** A relevant project is located within the geographic area within which effects could combine. The geographic scope varies on a resource-by-resource basis. For example, the geographic scope for evaluating cumulative effects to air quality consists of the affected air basin.
- **Timing and Duration of Implementation.** Effects associated with activities for a relevant project (e.g., short-term construction or demolition, or long-term operations) would likely coincide in timing with the related effects of the proposed project.

Based on the above, the following plans and projects in the project vicinity are examples of the types of projects considered in the cumulative impact analysis. This list is representative and may not include all of the projects considered in the cumulative analysis of each resource topic.

• Central SoMa Plan. The San Francisco Planning Department is in the process of developing an integrated community vision for the southern portion of the Central Subway rail corridor along Fourth Street. This area is located generally between Market Street on the north and Townsend Street on the south, and between Second Street on the east and Sixth Street on the west. The Moscone Center is within the Plan area. The plan's goal is to integrate transportation and land uses by implementing changes to the allowed land uses and building heights. The plan also includes a strategy for improving the pedestrian experience in this area. These changes are based on a synthesis of community input, past and current land use efforts, and analysis of long-range regional, citywide, and neighborhood needs. This plan is funded by a Transportation Planning Grant from Caltrans. An application has been filed for this project and it is currently undergoing environmental review (Case No. 2011.1356E).

- **5M Project**. A large project, various addresses, 925-971 Mission Street, colloquially "5M" or the "Chronicle site") is proposed on an approximately 4-acre site located on several parcels at the southwest corner of Fifth and Mission streets in the southern Financial District and SoMa neighborhoods. The proposal is to demolish several surface parking lots and buildings and rehabilitate two buildings, including the San Francisco Chronicle building at Fifth and Mission streets, resulting in seven mixed-use buildings totaling up to 1.8 million gross square feet of new and renovated space. Additionally, the project calls for the relocation of the Mary Street Alley between Minna and Natoma streets. This project is currently undergoing environmental review (Case No. 2011.0409E).
- **706 Mission Street:** The 706 Mission project consists of the construction of a new 47-story, 550-foot-tall tower, adjacent to and physically connected to the Aronson Building, which would be restored and rehabilitated. The new tower would contain up to 43 floors of residential space and 4 floors of museum space. The Aronson Building's existing retail and office uses would be reconfigured. The Mexican Museum would occupy the ground through fourth floors of the proposed tower and the second and third floors and possibly some of the ground floor of the Aronson Building. Certification of the project's environmental review was upheld by the Board of Supervisors (Case No. 2008.1084E).²¹
- Harrison Gardens (725 Harrison Street): A large project, various addresses, 725 to 765 Harrison Street, 120 and 130 Perry Street, and 425 Fourth Street, colloquially "Harrison Gardens") is proposed on an approximately 2.3-acre site on the block bounded by Harrison, Fourth, Perry and Third streets. The proposed project includes demolition of existing light industrial/commercial buildings and construction of over 730,000 square feet of office and commercial uses split among an approximately 240-foot-tall tower and 95-foot-tall mid-rise building that would be connected by a continuous podium base at the ground level (Case No. 2005.0759E).
- **250 Fourth Street:** The 250 Fourth Street project would demolish an existing three-story office and educational building and construct a hotel building with 215 guest bedrooms that would have an area of 93,460 square feet and be 119 feet (11 stories) tall. The new building would include restaurant/bar and/or retail space on the ground floor. It would include no off-street parking. The 10,400-square-foot project site is on the northwest corner of Fourth Street and Clementina Street. Building permits have been approved. The project was reviewed under Planning Department Case No. 2011.0038E.
- **900 Folsom Street:** This project, currently under construction, will develop a nine-story, 85-foottall building comprising up to 269 dwelling units, approximately 4,146 square feet of ground floor commercial space along Fifth Street, and up to 221 offstreet parking spaces. Eight units on the ground floor fronting Folsom Street are designed to be "flexible occupancy" units that may contain certain commercial uses on the ground floor, as limited in the conditions of approval, while the remainder of the unit is residential. Open space will include a new publicly accessible mid-block pedestrian pathway connecting Folsom and Clementina Streets. The project was reviewed under Planning Department Case No. 2007.0689E.
- **260 Fifth Street:** The project, currently under construction, will be a nine-story, 85-foot-tall building with a basement level parking garage, creating up to 179 dwelling units, approximately 5,281 square feet of ground floor commercial space along Fifth Street, and up to 102 off-street parking spaces. The project was reviewed under Planning Department Case No. 2007.0690E.

²¹ The EIR for 706 Mission Street is currently the subject of litigation in Sacramento County Superior Court.

- **206 Fifth Street/909-921 Howard Street:** The Tenderloin Neighborhood Development Corporation is proposing a 190,000-square-foot mixed-use building comprising nine stories, 178 dwelling units, and 8,000 square feet of commercial space between Tehama Street and Howard Street on the west side of Fifth Street. The site currently is developed with two low-rise commercial buildings and a public parking lot. The project is under review at the Planning Department as part of Case File No. 2012.1047E.
- **923 Folsom Street:** This proposed project would include development of two new buildings, one approximately four stories and 44 feet tall and a second nine stories and 85 feet tall. The proposed project would include approximately 118,115 square feet of residential use (for up to 114 dwelling units), approximately 1,800 square feet of ground-floor retail space, and 87 below-grade residential off-street parking spaces. The project is under review as part of Planning Department Case. No. 2012.1333E.
- **942 Mission Street:** The 942 Mission Street project would include the demolition of a vacant two-story-over-basement, 30-foot-tall, approximately 25,000-square-foot office and commercial building, and construction of a 15-story, 152-foot-tall, approximately 79,265-square-foot hotel. The proposed building would include 3,240 square feet of ground-floor retail space. Building permits have been approved, and the project is currently under construction. The project was reviewed under Planning Department Case No. 2008.0197E.
- SF Museum of Modern Art Expansion: The project includes a 230,000-square-foot expansion of the existing SFMOMA, located at 151 Third Street (between Howard and Mission Streets; demolition of two structures to the south of the current museum; and relocation of the San Francisco Fire Department Station No. 1 from 676 Howard Street to 935 Folsom Street. The existing building at 935 Folsom Street would be demolished, and both the new fires station and a residential building containing 13 multi-family units would be constructed (Case Nos. 2009.0291E and 2010.0275E). This project is under construction.

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

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

The analysis considers whether the project would contribute to the physical division of an established community by constructing physical barriers or obstacles to circulation that would restrict existing

patterns of movement between the project site and the adjacent neighborhoods. The project's contributions to the continuity of the existing land uses and circulation patterns are also considered in this analysis. This analysis does not consider the aesthetic or visual effect of new buildings on aesthetic or visual character, which is not required to be addressed as an environmental topic for this project, pursuant to SB 743 as discussed in Section E. Environmental Evaluation.

As discussed in the Project Description, above, the project site is located on Howard Street between Third and Fourth Streets in the South of Market neighborhood of San Francisco, in an area referred to as Yerba Buena Gardens. The project site is currently occupied by the existing Moscone Center, which, for purposes of this environmental review, is considered to be Moscone North and South and excludes Moscone West because no improvements are proposed at Moscone West. All of the function space at Moscone North and South is underground, with the exception of the street-level North and South lobbies and the Esplanade Ballroom, located at grade along the Third Street frontage of Moscone South. The site is generally flat.

The proposed project would increase the gross square footage of the Moscone Center facility by about 20 percent, from approximately 1.2 million square feet to 1.5 million square feet. The new construction would be largely above grade and would involve both Moscone North and Moscone South. The project would expand the existing above-grade Moscone North and South buildings, including the Esplanade portion of Moscone South, to enhance their public connection and presence on Howard Street and make the Moscone Center more pedestrian-oriented. In addition, the project would also involve some excavation beneath the project site in order to expand the existing below-grade exhibition halls that connect the Moscone North and South buildings under Howard Street. The proposed project would also reconfigure the existing adjacent bus pick-up and drop off facilities and create two pedestrian bridges spanning across Howard Street, which would connect Moscone North and South expansions at the second level above grade. All development would take place within the existing footprint and would not create or exacerbate barriers to access to or through the site.

The proposed project would be incorporated within the established street plan and would not create an impediment to the passage of persons or vehicles. The addition of mid-block pedestrian walkways and reorientation of access to public facilities to the south of Moscone South would increase connectivity across the site. Accordingly, the proposed project would not disrupt or divide the physical arrangement of the neighborhood. Because the proposed project would constitute a continuation of the same types of uses that currently exist on the site and because the proposed physical changes would not be out of scale with what already exists in the neighborhood, the project would not be anticipated to divide an established community. The impact would be *less than significant*.

Mitigation: None required.

Impact LU-2: The proposed project would not conflict with any applicable land use plans, policies or regulations of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. (Less than Significant)

Land use impacts are also considered to be significant if the proposed project would conflict with any plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Environmental plans and policies are those, like the BAAQMD *2010 Clean Air Plan*, which directly address environmental issues and/or contain targets or standards, which must be met in order to preserve or improve characteristics of the City's physical environment.

As described above Section C, Compatibility with Existing Zoning and Plans, the proposed project would not obviously or substantially conflict with the General Plan or applicable regional plans, policies, and regulations such that an adverse physical change would result. In addition, the proposed project would not obviously or substantially conflict with any such adopted environmental plan or policy including the 2010 CAP, the Greenhouse Gas Reduction Strategy, and the City's local tree ordinance, as discussed in Section E.6, Air Quality, Section E.7, Greenhouse Gases, and Section E.12 Biological Resources. Therefore, the proposed project would have a *less-than-significant* impact with regard to conflicts with land use plans, policies, or regulations.

Mitigation: None required.

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

The analysis of the project's effects on existing land use character includes consideration of the character of the proposed development relative to the existing land use context. An adverse effect could occur if a new use were placed next to an incompatible existing use, such that the basic function of either the existing use or the new use would be substantially impaired. For example, if a residential use were located next to a factory with toxic air emissions, either or both uses would be unable to function as intended.

Both portions of the Moscone Center Expansion project site (Moscone North and Moscone South) are within the C-3-S (Downtown Support) zoning district. The C-3-S district "encompasses Yerba Buena Gardens, which includes San Francisco's Convention Center, hotels, museums and cultural facilities, housing, retail, and offices arranged around public gardens and plazas."²² The area's mixed-use character includes a variety of commercial, office, retail, residential, and institutional uses as well as a number of very large structures. Implementation of the proposed project would not be considered a significant impact because the proposed uses are principally permitted, already exist on site, and would be compatible with existing uses on adjacent and surrounding properties.

²² San Francisco Planning Code, §201.3.

The proposed project is conservatively estimated to increase employment during events at the project site by 28 FTE, and it could increase total daily event attendance by 4,200 for larger events.²³ These increases in visitor attendance or employee numbers would not be substantial enough to result in fundamental changes in the way the project site is used. The facility would remain a convention space, with all convention uses taking place indoors, within the same project footprint. Although these uses would intensify as compared to existing conditions, they would not alter the overall land use of the site. Existing land uses surrounding the project site would continue to function as intended. The potential effects of increased attendance on the surrounding transportation network will be addressed in the EIR.

Nearby buildings range in height from a few stories to 40 stories, which presents a range of land use intensities. Across Mission Street to the north are the Contemporary Jewish Museum and St. Patrick's Church, both of which are only a few stories tall. That block also includes the 39-story (436 feet) Marriott Marquis Hotel and the 40-story (398 feet) Four Seasons Hotel and Residences, which together provide a dense concentration of hotel and residential uses. Buildings between 5 and 20 stories front Market Street. On the Moscone North block itself, the Metreon is a 4-story, 115-foot-tall building, and the Yerba Buena Center for the Arts comprises low-rise buildings arranged around the Yerba Buena Gardens Esplanade.

To the east of Moscone North, across Third Street, is the 42-story (484 feet) St. Regis Hotel and Residences, the 5-story SFMOMA and 8-story SFMOMA parking garage, the 29-story (315 feet) W hotel, and the 26-story (435 feet) Pacific Telephone and Telegraph Building. Farther south, on Third Street between Howard and Folsom Streets, is Convention Plaza, which comprises a 12-story office building and the 4-story Moscone garage.

South of the project site, across Folsom Street, are a 9-story senior housing building (which includes an adult day health center), a 12-story residential building, and an 8-story senior housing building in the interior of the block, all of which are relatively dense residential uses. Also south of the project site is a 5-story commercial building. The project block south of Howard Street contains low-rise buildings housing uses, including the Yerba Buena Bowling and Ice Skating Center, the Children's Creativity Museum, the Child Development Center, the Children's Garden, and the restored 1905 Carousel.

To the west of Moscone South are an 8-story senior housing building and 2-story commercial building. Farther north, on Fourth Street between Howard and Mission Streets, is the 3-story (110 feet) Moscone West building, as well as the 5-story SFMTA 5th and Mission Parking Garage.

The project would not introduce a new or incompatible land use to the area. Moreover, the project would not constitute a change in land use patterns and would be compatible with the overall character of the South of Market neighborhood (and with the character of the more immediate Yerba Buena Gardens area).

²³ Adavant Consulting, Memorandum RE: Moscone Center Expansion Project – Estimation of Travel Demand, January 9, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E. This is a conservative assumption since although the proposed increase in exhibit floor space will likely increase the total number of exhibitors and their staff; it does not necessarily imply an increase in the number of event visitors.

The proposed project building heights would be in the range of heights already present in the area. At completion, the expanded Moscone North structure would be approximately 54 feet in height, the Moscone South structure would be approximately 95 feet in height, and the Esplanade portion of Moscone South would be approximately 95 feet in height (the Esplanade would replace the existing approximately 65-foot-tall Esplanade Ballroom support building with a new structure).

The proposed project would intensify the use of the project site. However, at heights of 54 to 95 feet, the project would be well within the range of heights that already exist in the project area. Specifically, because the project area is within the City's commercial core, it contains some of the tallest structures in the City, some rising 300 feet or more. The project also would not alter the general land use pattern of the immediate area, since the Moscone Center regularly hosts large-scale events and conventions under existing conditions and would continue to do so after the project is implemented. Moreover, the reconfiguration of the existing bus pick-up and drop-off facilities and the construction of two pedestrian bridges across Howard Street are intended to allow the project site to function more effectively as a convention and event center. Thus, the proposed project would not substantially or adversely impact the character of this neighborhood.

Impacts of the proposed project would be considered significant if the project would have a substantial impact upon the existing land use character of the vicinity. The continuation, and intensification, of existing land uses on the project site would continue to be generally consistent with the surrounding uses, as well as the intent of the C-3-S Use District. Therefore, the proposed project's impact on the existing character of the project's vicinity would be *less than significant*.

Mitigation: None required.

Impact C-LU: The proposed project would not make a considerable contribution to any cumulative significant land use impacts. (Less than Significant)

Cumulative land use impacts are evaluated in the context of existing, and reasonably foreseeable future development in the project site vicinity, as well as applicable land use policies that guide future development in the project site vicinity. The cumulative land use analysis is geographically based on specific projects in the vicinity that would affect the overall land use character of the Downtown and Central SoMa neighborhoods (generally between Market Street on the north and Townsend Street on the south, and between Second Street on the east and Sixth Street on the west), within a few blocks in each direction of the project site.

As discussed in the "Approach to Cumulative Impacts Analysis" section above, a number of projects are proposed in the vicinity of the proposed Moscone Expansion project. For example, as described above, the Central SoMa Plan would implement changes to allowed land uses and building heights to promote a greater mix of uses while also emphasizing office uses in the central portion of the plan area. The Central SoMa Plan and other projects would be required to undergo separate environmental review, as necessary. They would generally result in a continuation of existing mixed uses in the Downtown and Central SoMa areas of the City, or infill development of similar uses, that would intensify overall development patterns with taller buildings. Although these changes would result in a more dense urban fabric, they would not

alter the overall mix of residential, commercial, visitor-serving, retail, and institutional uses in the Downtown and Central SoMa areas, and they would not result in physical division of the established community. Some projects would require modifications, variances, or exceptions to *Planning Code* requirements or *General Plan* land use designations.

Given that the proposed project and uses would occur within the boundaries of the existing lot lines, no physical barriers to movement through the community would occur, and that the project would continue and intensify an existing use and be consistent with the *General Plan* and *Planning Code* land use designations for the project site, the project would not contribute considerably to any cumulative land use impacts, and the proposed project's contribution to cumulative land use impacts would be *less than significant*.

Mitigation: None required.

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

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

In general, a project would be considered growth-inducing if its implementation would result in substantial population increases and/or new development that might not occur if the project is not implemented. Currently there are no residential units on the project site and none are proposed.

As of 2012, San Francisco's employment is approximately 570,000 persons and projected to grow to approximately 766,500 by 2040, an increase of nearly 35 percent, according to Planning Department forecasts.²⁴ The project is estimated to generate approximately 28 net new employees.²⁵ Therefore, project-

²⁴ San Francisco Planning Department, *San Francisco Land Use Allocation, Central SoMa (July 2013)*, December 23, 2013.

²⁵ Adavant Consulting, Memorandum RE: Moscone Center Expansion Project – Estimation of Travel Demand, January 9, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E. This is a conservative assumption since although the proposed increase in exhibit floor space will likely increase the total number of exhibitors and their staff, it does not necessarily imply an increase in the number of event visitors.

related employment growth would amount to approximately 0.01 percent of citywide employment growth anticipated between 2010 and 2040, conservatively assuming that all employees would be new to San Francisco; in actuality, some new workers at the project would be likely to have relocated from other jobs already in San Francisco. This potential increase in employment would be minimal compared to the total employment expected in San Francisco and the greater San Francisco Bay area.

The increased employment and potential population generated by the proposed project would not induce substantial population growth in the area, either directly or indirectly. Therefore, the proposed project would have a *less-than-significant* impact on population growth.

Mitigation: None required.

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

As noted above, the project site has no residential units, nor is any planned. Hence, there would be no residents displaced as a result of the project and there would be *no impact* with regard to this criterion. The increase of 28 employees could result in a slight increase in demand for additional housing, assuming that some of these new employees would be new to the region. However, the number of such employees would be very small compared to the total population and the available housing stock in San Francisco and the Bay Area, and would not necessitate the construction of new housing. This impact would be *less than significant*.

Mitigation: None required.

Impact C-PH: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the vicinity, would not make a considerable contribution to any cumulative population and housing impacts. (Less than Significant)

The geographic scope for potential cumulative population and housing impacts encompasses the people living and working within the Bay Area region. The geographic scope generally includes the San Francisco peninsula, and adjacent areas in the North Bay, East Bay and South Bay that have access to transit serving the Central SoMa area. The project vicinity provides for a wide range of residential and office buildings.

The Central SoMa Plan would change allowable heights and land uses in an effort to accommodate forecasted growth in jobs and housing demand. Most of this growth would accommodate demand rather than induce growth. The increase in jobs due to the proposed project, approximately 28 FTE jobs, would have a negligible effect on demand for housing because it represents only 0.01 percent of the projected job growth between 2010 and 2040. Therefore, the proposed project would have a less-than-considerable contribution to cumulative impacts related to population and housing. The impact would be *less than significant*.

Mitigation: None required.

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

Impact CP-1: The proposed project would not cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5 including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code. (No Impact)

CEQA Guidelines Section 15064.5 requires a lead agency to consider the effects of a proposed project on historical resources. A historical resource is defined as any building, structure, site, or object listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR), or determined by a lead agency to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California, including those resources listed in Article 10 or Article 11 of the San Francisco *Planning Code*.

The CRHR includes resources that have been listed in or formally determined eligible for listing in the National Register of Historic Places (NRHP), as well as some California State Landmarks and Points of Historical Interest. Under U.S. Department of the Interior, National Park Service guidelines, buildings, structures, and objects usually need to be more than 50 years old to be eligible for listing in the NRHP.²⁶ The California Office of Historic Preservation (OHP) guidelines for project review and planning call for the identification and evaluation of resources that are more than 45 years old to account for the passage of time between the period of project review and project completion. Resources that are less than 50 years old are generally excluded from listing in the NRHP or CRHR, unless they can be shown to be exceptionally significant.

²⁶ NPS, National Register Bulletin 15: *How to Apply the National Register Criteria for Evaluation*, 1997, online version revised 2002. Available online at: http://www.nps.gov/nr/publications/bulletins/pdfs/nrb15.pdf, accessed January 14, 2014.

Given that Moscone Convention Center (North and South) was completed between 1981 and 1992, and these buildings are 32 – 23 years old respectively as of 2013, they would not meet the minimum age criteria for listing in either the CRHR or NRHP. There is no information to indicate that Moscone Center would meet the NRHP criteria for exceptional significance, required for buildings less than 50 years of age. Although the buildings are named after George R. Moscone (Mayor of San Francisco from 1976 until 1978), as a memorial to the late Mayor, this fact alone would not qualify as an exceptionally significant event or association. As such, these structures would not be considered historic resources per CEQA Guidelines Section 15064.5. In addition, there are no resources listed in Articles 10 or 11 of the Planning Code on the project site or within the immediate vicinity, the significance of which could be affected by the proposed project. Therefore, the project would have *no impact* on historic resources.

Mitigation: None required.

Impact CP-2: The proposed project could result in a substantial adverse change in the significance of an archeological resource pursuant to CEQA Guidelines §15064.5, a significant impact. (Less than Significant with Mitigation)

CEQA considers archaeological resources as an intrinsic part of the physical environment and, thus, requires for any project subject to CEQA-review that its potential to adversely affect an archaeological resource be analyzed (Public Resources Code Section 21083.2). For a project that may have an adverse effect on a significant archeological resource, CEQA requires preparation of an environmental impact report (Public Resources Code Section 21083.2 and CEQA Guidelines Section 15065). CEQA recognizes two different categories of significant archeological resources: a "unique" archeological resource (Public Resources Code Section Sect. 21083.2) and an archeological resource that qualifies as a "historical resource" under CEQA (Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5).

Significance of Archeological Resources

An archeological resource can be significant as both or either a "unique" archeological resource and an "historical resource" but the process by which the resource is identified, under CEQA, as either one or the other is distinct (Public Resources Code 21083.2(g) and CEQA Guidelines Section 15064.5(a)(2)). An archeological resource is an "*historical resource*" under CEQA if the resource is:

- 1) listed on or determined eligible for listing on the CRHR (CEQA Guidelines Section 15064.5). This includes NRHP-listed or –eligible archeological properties.
- 2) listed in a "local register of historical resources"²⁷
- 3) listed in a "historical resource survey". (CEQA Guidelines Section 15064.5(a)(2))

Generally, an archeological resource is determined to be an "historical resource" due to its eligibility for listing to the CRHR/NRHP because of the potential scientific value of the resource, that is, "has yielded, or may be likely to yield, information important in prehistory or history" (CEQA Guidelines

A "local register of historical resources" is a list of historical or archeological properties officially adopted by ordinance or resolution by a local government. (Public Resources Code Section 5020.1 (k).

Section 15064.5 (a)(3)). An archeological resource may be CRHR-eligible under other Evaluation Criteria, such as Criterion 1, association with events that have made a significant contribution to the broad patterns of history; Criterion 2, association with the lives of historically important persons; or Criterion 3, association with the distinctive characteristics of a type, period, region, or method of construction. Appropriate treatment for archeological properties that are CRHR-eligible under Criteria other than Criterion 4 may be different than that for a resource that is significant exclusively for its scientific value.

Failure of an archeological resource to be listed in any of these historical inventories, is not sufficient to conclude that the archeological resource is not an "historical resource". When the lead agency believes there may be grounds for a determination that an archeological resource is a "historical resource", then the lead agency should evaluate the resource for eligibility for listing to the CRHR (CEQA Guidelines Section 15064.5(a)(4)).

A *"unique archeological resource"* is a category of archeological resources created by the CEQA statutes (Public Resources Code 21083.2(g)). An archeological resource is a unique archeological resource if it meets any of one of three criteria:

- 1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- 2) Has a special and particular quality such as being the oldest of its type or the best available example of its type;
- 3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Under CEQA, evaluation of an archeological resource as an "historical resource" is privileged over the evaluation of the resource as a "unique archaeological resource", in that, CEQA requires that "when a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource" (CEQA Guidelines Section 15064.5 (c)(1).

Evaluation of an Archaeological Resource as Scientifically Significant

In requiring that a potentially affected archeological resource be evaluated as an historical resource, that is as an archeological site of sufficient scientific value to be CRHR-eligible, CEQA presupposes that the published guidance of the OHP for CEQA providers is to serve as the methodological standard by which the scientific, and thus, the CRHR-eligibility, of an archeological resource is to be evaluated. As guidance for the evaluation of the scientific value of an archeological resource, the OHP has issued two guidelines: *Archaeological Resource Management Reports* (1989) and the *Guidelines for Archaeological Research Designs* (1991).

Integrity of Archeological Resource

Integrity is an essential criterion in determining that a resource, including an archeological resource, is an historical resource. In terms of CEQA "integrity" can, in part, be expressed in the requirement that an historical resource must retain "the physical characteristics that convey its historical significance" (CEQA Guidelines Section 15064.5 (b)).

For an archeological resource that is evaluated for CRHR-eligibility under Evaluation Criterion 4, "has yielded or may be likely to yield information important to prehistory or history", integrity is conceptually different than how it is usually applied to the built environment. For an historic building, possessing integrity means that the building retains the defining physical characteristics from the period of significance of the building. In archeology, an archeological deposit or feature may have undergone substantial physical change from the time of its deposition but it may yet have sufficient integrity to qualify as a historical resource. The integrity test for an archeological resource is whether the resource can yield sufficient data (in type, quantity, quality, diagnosticity) to address significant research questions. Thus, in archeology "integrity" is often closely associated with the development of a research design that identifies the types of physical characteristics ("data needs") that must be present in the archeological resource and its physical context to adequately address research questions appropriate to the archeological resource.

Significant Adverse Effect on an Archeological Resource

The determination of whether an effect on an archeological resource is significant depends on the effect of the project on those characteristics of the archeological resource that make the archeological resource significant. For an archeological resource that is an historical resource because of its prehistoric or historical information value, that is, its scientific data, a significant effect is impairment of the potential information value of the resource.

The depositional context of an archeological resource, especially soils stratigraphy can be informationally important to the resource in terms of datation and reconstructing the characteristics of the resource present at the time of deposition and interpreting the impacts of later deposition events on the resource. Thus, for an archeological resource eligible to the CRHR under Criterion 4, a significant adverse effect to its significance may not be limited to impacts on the artifactual material but may include effects on the soils matrix in which the artifactual matrix is situated.

Mitigation of Adverse Effect to an Archeological Resource

Preservation in place is the preferred treatment of an archeological resource (Public Resources Code Section 21083.2(b) and CEQA Guidelines Section 15126.4 (b)(3)(a)). When preservation in place of an archeological resource is not feasible, data recovery, in accord with a data recovery plan prepared and adopted by the lead agency prior to any soils disturbance, is the appropriate mitigation (CEQA Guidelines Section 15126.4 (b)(3)(C)). In addition to data recovery, under CEQA, the mitigation of effects to an archeological resource that is significant for its scientific value, requires curation of the recovered scientifically significant data in an appropriate curation facility (CEQA Guidelines Section15126.4(b)(3)(C), that is a curation facility compliant with the *Guidelines for the Curation of Archaeological Collections*.²⁸ Final studies reporting the interpretation, results, and analysis of data recovered from the archeological site are to be deposited in the California Historical Resources Regional Information Center (CEQA Guidelines Section 15126.4(b)(3)(C).

²⁸ California Office of Historic Preservation, Guidelines for the Curation of Archaeological Collections, May 7, 1993.

Effects to Human Remains

Under State law, human remains and associated burial items may be significant resources in two ways: they may be significant to descendant communities for patrimonial, cultural, lineage, and religious reasons and human remains may also be important to the scientific community, such as prehistorians, epidemiologists, and physical anthropologists. The specific stake of some descendant groups in ancestral burials is a matter of law for some groups, such as Native Americans (CEQA Guidelines Section 15064.5 (d), Public Resources Code Section 5097.98). In other cases, the concerns of the associated descendent group regarding appropriate treatment and disposition of discovered human burials may become known only through outreach. Beliefs concerning appropriate treatment, study, and disposition of human remains and associated burial items may be inconsistent and even conflictual between descendent and scientific communities. CEQA and other State regulations concerning Native American human remains provide the following procedural requirements to assist in avoiding potential adverse effects to human remains within the contexts of their value to both descendants communities and the scientific community:

- When an initial study identifies the existence or probable likelihood that a project would impact Native American human remains, the lead agency is to contact and work with the appropriate Native American representatives identified through the Native American Heritage Commission (NAHC) to develop an agreement for the treatment and disposal of the human remains and any associated burial items (CEQA Guidelines Section15064.5 (d), Public Resources Code Section 5097.98)
- If human remains are accidentally discovered, the county coroner must be contacted. If the county coroner determines that the human remains are Native American, the coroner must contact the NAHC within 24 hours. The NAHC must identify the most likely descendant (MLD) to provide for the opportunity to make recommendations for the treatment and disposal of the human remains and associated burial items. If the MLD fails to make recommendations within 24 hours of notification or the project applicant rejects the recommendations of the MLD, the Native American human remains and associated burial items must be reburied in a location not subject to future disturbance within the project site (Public Resources Code Section 5097.98).
- If potentially affected human remains/burial may have scientific significance, whether or not having significance to Native Americans or other descendent communities, then under CEQA, the appropriate mitigation of effect may require the recovery of the scientific information of the remains/burial through identification, evaluation, data recovery, analysis, and interpretation (CEQA Guidelines Section 15064.5(c)(2)).

Consultation with Descendant Communities

Although not a requirement derived from CEQA, the cosmopolitan nature and history of San Francisco necessitates cultural management sensitivity to archeological remains associated with local indigenous, ethnic, overseas, and religious communities. On discovery of an archeological site²⁹ associated with descendant Native Americans, the Overseas Chinese or, as appropriate any other community, Environmental Planning's Environmental Review Officer (ERO) should seek consultation with an

²⁹ By the term "archeological site" is intended here to minimally included any archeological deposit, feature, burial, or evidence of burial.

appropriate representative³⁰ of the descendant group with respect to appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. Documentary products resulting from archeological research of the descendant community associated with the site should be made available to the community.

CEQA mandates California public agencies to consider the effects of projects on historical (including archeological) resources. The ERO concluded that preparation of an Archeological Research Design and Treatment Plan (ARDTP) was required for the project, to ensure that important archeological remains that may be present are identified, evaluated, and appropriately treated. The results of the ARDTP are discussed below. For archeological consideration, the ARDTP considered a larger Area of Potential Effects (APE), but particularly focused on the two rectangles of land along Howard Street that are proposed for additional excavation.

Archeological Context

Results of a records search (File Search Number 12-1322 and 13-0149) at the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University indicate that a total of three archeological resources have been formally recorded through the NWIC within a 200-meter radius of the project area. All are prehistoric sites and only one site, identified as CA-SFR-114, falls within the project area. These three prehistoric sites are all Late Holocene (post 3800 cal BP,³¹ or circa 1850 B.C.) shell middens formed within sand dunes along the north side of Mission Bay. The full extent of these prehistoric sites is uncertain because only the portions within the relevant construction areas were studied, and additional portions may extend beyond those limits. The northern portion of the site within the project area was well-defined during data recovery investigations during the previous construction of Moscone Center North. The southern portion of the site likely extended beyond the construction area, and its current southern boundary is defined by the northern edge of Howard Street. The data recovery work revealed a thick occupation deposit, structural features, and human burials-currently it represents the most substantial prehistoric archeological site documented in this portion of the City. The three prehistoric sites within the records search area, along with four other prehistoric sites in the vicinity, have been recently determined to be eligible for the NRHP under Criteria A and D, as part of a NRHP District.³² These sites are considered to represent elements of a multi-village community network that was clustered around the shore of Mission Bay. As such, the project site vicinity is situated within a recently recognized NRHP District.

³⁰ An "appropriate representative" of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission and in the case of the Overseas Chinese, the Chinese Historical Society of America.

³¹ BP refers to a time scale that reflects radiocarbon dating, and is an acronym for "Before Present." January 1, 1950 is the considered to be the origin of the "present" time scale.

³² Criterion A of the National Register of Historic Places considers archaeological sites that are "associated with events that have made a significant contribution to the broad patterns of history." Criterion D notes the ability of a resource to yield information important in prehistory or history. Resources eligible for the National Register are also eligible for listing on the California Register of Historical Resources. Far Western Anthropological Research Group, Inc., ESA, and JRP, Archaeological Research Design and Treatment Plan for the Moscone Center Expansion, San Francisco, California, Planning Department Case No. 2013.0154E. Prepared for Randall Dean, San Francisco Planning Department, September, 2013.

Historic-era resources have been encountered during construction of a variety of projects in the study area, but were considered not substantial enough to be formally recorded as archeological sites, and no historic-era archeological sites have been recorded.³³ The NAHC was contacted to request a search of its Sacred Lands file to determine if there were known cultural sites within or near the project site. The Commission responded by stating that no Native American cultural resources were reported from the Sacred Lands file records search. The NAHC provided a list of interested Native American groups and individuals was who were contacted in request of concerns or information regarding Native American sites. No response has been received from the Native Americans contacted to date.³⁴

ARDTP and Subsurface Geoarcheological Investigations

Background research on the potential for buried prehistoric archeological sites relies heavily on existing knowledge of the various geological formations in the project vicinity. Previous geological studies include geologic mapping of the northern San Francisco Peninsula; analysis of coring in Yerba Buena Cove; and recent geological mapping of Quaternary-age deposits.³⁵ Historic-era maps provide information on the natural environment prior to major development that has obscured every natural surface in the project area.³⁶ The results of a previous geoarcheological investigation in the vicinity also provided data on the nature and timing of geological formations underlying the study area.

Geoarcheological coring examination and analysis of the deposits recovered in six continuous cores from the project area resulted in the identification of four strata within the project area: Colma Formation, Bay/Marsh, Dune Sand, and Artificial Fill. While the depth of these strata varies, they are laterally extensive and can be traced across the project area, with the exception of the Bay/Marsh deposits that appear to be localized in the westernmost part of the project area. Radiocarbon dates associated with the Colma Formation indicate that prehistoric archeological deposits ranging in age from about 2180 cal BP to at least 4850 cal BP may be associated with this former land surface. The results also confirm that part of a prehistoric site, CA-SFR-114, extends under the north part of Howard Street. Radiocarbon dates from the site are in correct stratigraphic sequence and suggest that the cultural deposit is relatively undisturbed and retains some original systemic integrity. In addition, the more deeply buried deposit of charcoal and marine shells identified at the Colma surface suggests that a previously unidentified prehistoric archeological site may be located in or near this area.

Geoarcheological coring deposits found a thick deposit of historic-era material in the upper part of each of the six cores recovered from the two areas under Howard Street. Thickness of the deposit ranged from about 2.1 to nearly 4.6 meters (7 to nearly 15 feet). These variable deposits generally consisted of loose sand and one or more layers of modern construction debris and/or historic materials. No clearly intact archeological surfaces or historic-era artifacts were identified within the fill; instead this likely represents

³³ Ibid.

³⁴ Ibid.

³⁵ Keith L. Knudsen, Janet M. Sowers, Robert C. Witter, Carl M. Wentworth, and Edward J. Helley. Preliminary *Maps of Quaternary Deposits and Liquefaction Susceptibility, Nine-County San Francisco Bay Region, California: A Digital Database.* US Geological Survey Open-File Report 2000-444, Online Version 1.1, Menlo Park, California, http://pubs.usgs.gov/of/2000/of00-444/. 2000, updated September 22, 2005, accessed June 2013.

³⁶ United States Coast Survey. City of San Francisco and its Vicinity, 1853, 1857. San Francisco Peninsula, 1869. Online versions available at www.davidrumsey.com, accessed January 14, 2014.

rubble associated with the 1906 earthquake. As the City was rebuilt, the geographical layout was mostly maintained. Although uses of specific City blocks changed, the layout of streets and alleys remained generally the same as before the earthquake. For these reasons, the historical archeological potential of the project area (within Howard Street) is considered to be low.

Based on the literature review and geoarcheological investigations of cores acquired from Howard Street it is clear that the project area has a very high sensitivity for prehistoric cultural resources. This includes both a southern extension of CA-SFR-114 and a much earlier potential archeological deposit. Because it appears that both of these deposits may be directly affected by project-related earth disturbances, archeological fieldwork and controlled excavation is needed to determine the nature and extent of the cultural deposits in order to realize their potential to contribute information important for understanding local and regional prehistory.

Ground-disturbing construction activity within the project area could adversely affect the significance of archeological resources under CRHR Criterion 4 (information potential) by impairing the ability of such resources to convey important scientific and historical information. This effect is considered a substantial adverse change in the significance of an historical resource and is considered to be a significant impact under CEQA. Implementation of **Mitigation Measure** M-**CP-2a** requires the development of an archeological testing plan, monitoring, and evaluation, and would reduce potential impacts to archeological resources to a *less-than-significant* level with respect to Criterion 4.

Mitigation Measure M-CP-2a: Archeological Testing, Monitoring, Data Recovery and Reporting

Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archaeological consultant from the Planning Department ("Department") pool of qualified archaeological consultants as provided by the Department archaeologist. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure and with the requirements of the project archeological research design and treatment plan (Archaeological Research Design/Treatment Plan for the Moscone Center Expansion Project, September, 2013), at the direction of the Environmental Review Officer (ERO). In instances of inconsistency between the requirement of the project archeological research design and treatment plan and of this archeological mitigation measure, the requirements of this archeological mitigation measure shall prevail. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5 (a)(c).

Consultation with Descendant Communities. On discovery of an archeological site³⁷ associated with descendant Native Americans, the Overseas Chinese, or other descendant group an appropriate representative³⁸ of the descendant group and the ERO shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to consult with ERO regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the Final Archaeological Resources Report shall be provided to the representative of the descendant group.

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

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

- A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or
- B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

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

• The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The

³⁷ The term "archeological site" is intended here to minimally include any archeological deposit, feature, burial, or evidence of burial.

³⁸ An "appropriate representative" of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission and in the case of the Overseas Chinese, the Chinese Historical Society of America. An appropriate representative of other descendant groups should be determined in consultation with the Department archeologist.

ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soil-disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context;

- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/construction activities and equipment until the deposit is evaluated. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

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

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures.* Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis.* Description of selected cataloguing system and artifact analysis procedures.

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

Human Remains and Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

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

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

Disturbance of archeological resources eligible for the CRHR would impact their association with historic events, as well as their data potential. Data recovery and reporting alone would be inadequate to mitigate such impacts to a less-than-significant level. That is, while data recovery can provide mitigation for Criterion 4, it does not address the association with events that are important to the past, that is, Criterion 1.

Mitigation Measure M-CP-2b would be required to reduce this impact to a *less-than-significant* level with respect to Criterion 1.

Mitigation Measure M-CP-2b: Interpretation

Mitigation Measure M-CP-2b, Interpretation, calls for a qualified archeological consultant to prepare and submit a plan for post-recovery interpretation of resources. Implementation of an approved program of interpretation under Mitigation Measure M-CP-2b would preserve and enhance the ability of the resource to convey its association with historic events under California Register of Historic Resources Criterion 1 (Events), as well as explain its importance under Criterion 4.

Level of Significance After Mitigation: With implementation of Mitigation Measures M-CP-2a and M-CP-2b, impacts to archeological resources, if present within the project area, would be reduced to a *less-than-significant* level.

Impact CP-3: The proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (No Impact)

Paleontology is a multidisciplinary science that combines elements of geology, biology, chemistry, and physics in an effort to understand the history of life on earth. Paleontological resources, or fossils, are the remains, imprints, or traces of once-living organisms preserved in rocks and sediments. The fossil yielding potential of a particular area is highly dependent on the geologic age and origin of the underlying rocks. In general, older sedimentary rocks (more than 10,000 years old) are considered most likely to yield vertebrate fossils of scientific interest.

Geoarcheological coring within the project area indicates the presence of sedimentary Colma Formation, which have yielded significant vertebrate fossils within other areas of the San Francisco Bay, such as Telegraph Hill, but generally north of Market Street. Paleontological resources could exist within the Colma Formation, although this is unlikely based on the past history of disturbance and human use. In addition, due to the limited depth of excavation proposed (refer to Table 3, Construction Details), the project is not expected to affect such resources. Therefore, the project is considered to have *no impact* on paleontological resources.

Mitigation: None required.

Impact CP-4: The proposed project could disturb any human remains, including those interred outside of formal cemeteries. (Less than Significant with Mitigation)

Results of the subsurface investigation discussed above indicate that the proposed project area has a high potential to contain buried cultural materials, including human remains. Prehistoric resources within the project area are anticipated to be associated with CA-SFR-114, which consists of midden that includes human burials. Given this, the possibility of uncovering human remains cannot be entirely discounted. California law also protects Native American burials, skeletal remains, and associated grave goods regardless

of their antiquity, and provides for the sensitive treatment and disposition of those remains (California Health and Safety Code Section 7050.5, Public Resources Code Sections 5097.94 et seq.). In the event that human remains are uncovered during ground-disturbing activity, the implementation of **Mitigation Measure M-CP-2a** requiring archeological testing, monitoring and data recovery and appropriate treatment of human remains and associated or unassociated funerary objects would reduce potential impacts to human remains to a *less-than-significant* level.

Mitigation Measure: Implementation of Mitigation Measure M-CP-2a.

Level of Significance After Mitigation: With implementation Mitigation Measure M-CP-2a, project impacts to human remains would be *less than significant*.

Impact C-CP: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in significant impacts to cultural resources. (Less than Significant with Mitigation)

The geographic scope for potential cumulative cultural resources generally includes the Central South of Market area. Cumulative projects within the project vicinity would be required to undergo separate environmental review, as necessary. As the Moscone project would have no impacts to historic architectural resources it therefore would not contribute to any such cumulative impact. The cumulative projects could have a significant impact on both recorded and unrecorded archeological resources, including human remains interred outside of formal cemeteries, given the substantial amount of construction-related ground disturbance that could occur. These impacts could have a significant cumulative projects based on each project's potential to affect archeological resources, which would reduce cumulative impacts to cultural resources to a less-than-significant level. The proposed project would be required to implement Mitigation Measures CP-2a, -2b, and 4 and would therefore not make a considerable contribution to cumulative adverse impacts to cultural resources. Impacts to cultural resources.

Mitigation Measure: Implementation of Mitigation Measures M-CP-2a and -2b identified above.

Level of Significance After Mitigation: With implementation Mitigation Measures M-CP-2a and -2b, cumulative impacts would be *less than significant*.

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

The proposed project would not result in a change of air traffic patterns, and thus would not result in substantial safety risks related to air traffic. Therefore, Topic E.4(c) is not applicable to the proposed project.

The proposed project could result in transportation- and circulation-related impacts as a result of construction and operation activities. For purposes of this Initial Study, impacts to the transportation and circulation system are identified as *potentially significant* (except for air traffic patterns). Project effects on transportation and circulation, including intersection operations, transit demand, and impacts on pedestrian and bicycle circulation, will be analyzed in the EIR, which will determine the significance of the project's impacts on the transportation and circulation system following preparation of a detailed transportation impact study.

As discussed in Section E, in the section entitled 'Evaluation of Environmental Effects', on September 27, 2013, Governor Brown signed SB 743, which became effective on January 1, 2014 and amends Public Resources Code Section 21099. Key provisions of Public Resources Code Section 21099(d) include reforming the analysis of aesthetics and parking impacts for urban infill projects pursuant to CEQA. The proposed project meets the definition of an employment center, located on an infill site in a transit

facilities?

priority area as discussed under the section entitled 'Evaluation of Environmental Effects' in Section E, above.³⁹ Accordingly, parking impacts can no longer be considered in determining the significance of the proposed project's physical environmental effects under CEQA. Although not required, the EIR will present a parking demand analysis for informational purposes. The EIR will also consider any secondary physical impacts associated with constrained supply (e.g., queuing by drivers waiting for scarce onsite parking spaces that affects the public right-of-way) as applicable in the transportation analysis.

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

The project site is not within an airport land use plan area, nor is it in the vicinity of a private airstrip. Therefore, Topics 5e and 5f are not applicable.

³⁹ San Francisco Planning Department, Transit-oriented Infill Project Eligibility Checklist, January 10, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E.

Impact NO-1: The proposed Moscone Center Expansion project would not result in a substantial permanent increase in ambient noise or vibration levels, would not expose persons to noise levels in excess of standards in the *San Francisco General Plan* and Noise Ordinance (Article 29 of the Police Code), and would not be substantially affected by existing noise levels. (Less than Significant)

The proposed project is located in an urban area where the sound of vehicular traffic (autos, trucks, buses) on local streets dominates the existing ambient noise environment. According to the San Francisco General Plan Noise Map⁴⁰ (see **Figure 18**), noise levels immediately adjacent to all streets along the site frontages (Third, Fourth, Mission, Howard, and Folsom Streets) exceed 70 dBA (L_{dn}). However, noise levels decrease to 65 to 70 dBA (L_{dn}) along the site frontages adjacent to these streets.

Operation of the proposed project could increase ambient noise levels in the project vicinity, primarily through the on-site use of stationary equipment, such as heating and ventilation systems, and off-site increases in traffic associated with the expanded Moscone Center. Since future activities in the proposed new spaces in the Moscone Center would occur inside, they would not be expected to increase exterior noise levels at the site except for the following sources:

Equipment Noise. The proposed project would likely add new mechanical equipment, such as heating and ventilation systems, which would produce operational noise. However, such equipment would be similar to that currently used at the existing Moscone Center and would not be expected to result in a substantial, if any, increase in ambient noise levels in the project vicinity. Operational noise associated with the project would be subject to Section 2909 of the Noise Ordinance, which establishes noise limits for mechanical equipment. Under Section 2909, stationary sources are not permitted to result in noise levels that exceed (by more than 10 dBA on public property and 5 dBA on residential property) the existing ambient noise level on public property (i.e., in the public right-of-way), at a distance of 25 feet or more. Since noise levels on the site perimeter range between 65 and 70 dBA (L_{dn}), any mechanical equipment located along the site perimeter would be allowed to generate noise levels of up to 80 dBA (L_{dn}). There are noise-sensitive⁴¹ residential uses located to the south, southeast, east, and west of Moscone South and northeast of Moscone North. The closest off-site noise-sensitive receptor to project-related surface construction activities is a senior residential development located at Fourth and Howard Streets, and these units are located a minimum of 250 feet from the Moscone South site. At this distance, equipment noise levels would attenuate to approximately 66 dBA (Ldn), which would not exceed ambient noise levels of over 70 dBA (Ldn) along Fourth and Howard Streets in the vicinity (see Figure 18).⁴²Compliance with the Noise Ordinance would ensure that project-related noise increases associated with stationary equipment are maintained at acceptable levels and operational noise increases associated with the Moscone Center Expansion project would be less than significant at nearby residential receptors.

⁴⁰ San Francisco General Plan, Environmental Protection Element, Map 1: Background Noise Levels – 2009, San Francisco Planning Department, 2009. This map is available online at http://www.sf-planning.org/ftp/general_plan/images/I6.environmental/ NV_Map1_Background_Noise%20Levels.pdf.

⁴¹ Sensitive noise receptors are generally considered to include hospitals, nursing homes, senior citizen centers, schools, churches, libraries, and residences.

⁴² San Francisco General Plan, Environmental Protection Element, Map 1: Background Noise Levels – 2009, San Francisco Planning Department, 2009. This map is available online at http://www.sf-planning.org/ftp/general_plan/images/I6.environmental /ENV_Map1_Background_Noise%20Levels.pdf.





SOURCE: Map 1 of the SF General Plan Environmental Protection Element

Moscone Center Expansion Project 2013.0154E Figure 18 Background Noise Levels – 2009
Traffic Noise. Increases in traffic as a result of the project would result in noise increases along local streets. In general, traffic noise increases of less than 3 dBA are barely perceptible to people, while a 5-dBA increase is readily noticeable.⁴³ Therefore, permanent increases in ambient noise levels of less than 3 dBA are typically considered to be less than significant because they are barely perceptible. Project-related traffic noise level changes were estimated for the major streets in the project vicinity, based on traffic volumes developed as part of the project's traffic impact analysis (see **Table 4**). Noise levels generated by project-related traffic would increase by less than 1 dBA, compared to existing conditions, and thus would not be perceptible. The greatest project-related traffic noise increase would be 0.4 dBA and this would occur along the section of Third Street south of Howard. Such traffic noise increases would be less than significant because in traffic noise would be less the 1 dBA and likely not perceptible to persons in the vicinity.

Groundborne Vibration and Noise. Ground-borne vibration is not a common environmental problem and even large vehicles (e.g., trucks and buses) do not generally result in perceptible vibration. Therefore, long-term vibration impacts associated with project implementation would be *less than significant*.

Compatibility of Proposed Use with Existing Noise Environment. The Environmental Protection Element of the San Francisco General Plan contains Land Use Compatibility Guidelines for Community Noise under Policy 11.1.⁴⁴ These guidelines, which are similar to State guidelines promulgated by the Governor's Office of Planning and Research, indicate maximum acceptable noise levels for various newly developed land uses. The proposed project would be a continuation of an existing use and would not constitute a new use. As under existing conditions, the proposed project would be generally compatible with the surrounding noise environment.

The proposed project is located in an urban area where the sound of vehicular traffic (autos, trucks, buses) on local streets dominates the existing ambient noise environment. According to the San Francisco Planning Department's Background Noise Levels Map⁴⁵ (see Figure 18), noise levels immediately adjacent to all streets along the site frontages (Third, Fourth, Mission, Howard, and Folsom Streets) exceed 70 dBA (Ldn).⁴⁶ However, noise levels decrease to 65 to 70 dBA (Ldn) along the site frontages adjacent to these streets. Noise levels on the remainder of the site (away from street frontages) are generally 60 dBA (Ldn) or less. Project-related traffic noise levels along roadways adjacent to the site would not substantially increase noise levels along site frontages. In areas with noise levels up to 70 dBA

⁴³ California Department of Transportation, Division of Environmental Analysis, "Technical Noise Supplement," November 2009; pp. 2-48 – 2-49. Available on the internet at: http://www.dot.ca.gov/hq/env/noise/pub/tens_complete.pdf.

⁴⁴ San Francisco General Plan, Environmental Protection Element, Policy 11.1

⁴⁵ San Francisco General Plan, Environmental Protection Element, Map 1: Background Noise Levels – 2009, San Francisco Planning Department, 2009. This map is available online at http://www.sf-planning.org/ftp/general_plan/images/I6.environmental/ ENV_Map1_Background_Noise%20Levels.pdf.

⁴⁶ Because the human ear is not equally sensitive to all sound frequencies within the entire spectrum, human response is factored into sound descriptions in a process called "A-weighting," expressed as "dBA." The A-weighted decibel, dBA, refers to a scale of noise measurement that approximates the range of sensitivity of the human ear to sounds of different frequencies. On this scale, the normal range of human hearing extends from about 0 dBA to about 140 dBA. Because community receptors are more sensitive to unwanted noise intrusion at night, state law requires that, for planning purposes, an artificial dBA increment be added to "quiet time" noise levels to form a 24-hour noise descriptor called the day-night noise level (Ldn). Ldn adds a 10-dBA penalty to all nighttime noise events between 10 p.m. and 7 a.m.

	Noise Level (CNEL) at 50 feet from centerline, in dBA						
Segment	Existing	Existing during an Event	Change from Existing	Existing + Expansion during an Event	Change from Existing	Cumulative (With Expansion during an Event)	Change from Existing
Montgomery/Post Sts. (North of Market)	67.1	67.1	0.0	67.1	0.0	67.1	0.0
Market St. (East of Montgomery/Post)	65.2	65.2	0.0	65.2	0.0	63.7	-1.5
Market St. (West of Montgomery/Post)	65.3	65.3	0.0	65.3	0.0	64.4	-0.8
Market St. (East of Third)	65.6	65.6	0.0	65.6	0.0	64.3	-1.3
Market St. (West of Third)	64.4	64.4	0.0	64.5	0.0	63.6	-0.8
Third St. (South of Market)	68.4	68.5	0.1	68.6	0.1	68.9	0.5
Market St. (East of Stockton/Ellis)	62.8	62.8	0.0	62.8	0.0	61.1	-1.7
Market St. (West of Stockton/Ellis)	64.6	64.6	0.0	64.6	0.0	63.2	-1.4
Stockton/Ellis Sts. (North of Market)	67.5	67.5	0.0	67.5	0.0	67.6	0.2
Market St. (East of Fifth)	63.8	63.8	0.0	63.8	0.0	62.0	-1.8
Market St. (West of Fifth)	62.9	62.9	0.0	62.9	0.0	61.3	-1.6
Fifth St. (North of Market)	66.7	66.8	0.1	66.8	0.1	68.5	1.8
Fifth St. (South of Market)	67.1	67.2	0.1	67.2	0.1	68.8	1.7
Mission St. (East of New Montgomery)	67.6	67.7	0.1	67.7	0.1	68.4	0.8
Mission St. (West of New Montgomery)	67.9	68.0	0.1	68.0	0.1	68.8	0.9
New Montgomery St. (North of Mission)	67.2	67.2	0.0	67.2	0.0	67.9	0.7
Mission St. (East of Third)	67.5	67.6	0.1	67.6	0.1	68.4	0.9
Mission St. (West of Third)	66.4	66.6	0.1	66.6	0.2	67.2	0.8
Third St. (South of Mission)	68.1	68.3	0.1	68.3	0.2	68.7	0.6
Mission St. (East of Fourth)	67.1	67.2	0.1	67.3	0.1	67.9	0.7
Mission St. West of Fourth)	67.8	68.1	0.2	68.1	0.3	68.3	0.5
Fourth St. (North of Mission)	68.0	68.1	0.0	68.1	0.0	68.5	0.5
Mission St. (East of Fifth)	68.0	68.1	0.1	68.1	0.1	68.3	0.3
Mission St. (West of Fifth)	67.8	67.8	0.0	67.8	0.1	68.3	0.5
Fifth St. (North of Mission)	67.1	67.2	0.1	67.2	0.1	68.8	1.7
Fifth St. (South of Mission)	67.6	67.7	0.1	67.7	0.1	69.5	1.9
Howard St. (East of New Montgomery)	66.1	66.1	0.0	66.1	0.0	66.4	0.3
New Montgomery St. (North of Howard)	66.8	66.8	0.0	66.8	0.0	67.6	0.8
Howard St. (East of Hawthorne)	69.5	69.5	0.0	69.7	0.2	69.7	0.2
Howard St. (East of Third)	69.2	69.2	0.0	69.2	0.0	69.2	-0.1
Third St. (South of Howard)	69.0	69.3	0.3	69.4	0.4	69.2	0.2
Howard St. (East of Fourth)	69.4	69.6	0.2	69.6	0.2	69.1	-0.2
Fourth St. (North of Howard)	68.1	68.4	0.3	68.4	0.3	68.4	0.3
Howard St. (East of Fifth)	68.1	68.4	0.3	68.4	0.3	69.5	1.3
Fifth St. (North of Howard)	68.3	68.3	0.0	68.3	0.1	70.1	1.8
Fifth St. (South of Howard)	67.8	67.8	0.1	67.8	0.1	69.5	1.7

 TABLE 4

 PROJECT-RELATED AND CUMULATIVE TRAFFIC NOISE INCREASES

	Noise Level (CNEL) at 50 feet from centerline, in dBA						
Segment	Existing	Existing during an Event	Change from Existing	Existing + Expansion during an Event	Change from Existing	Cumulative (With Expansion during an Event)	Change from Existing
Folsom St. (West of Hawthorne)	67.0	67.1	0.1	67.1	0.1	68.1	1.1
Hawthorne St. (North of Folsom)	64.3	64.3	0.0	64.3	0.0	66.5	2.2
Folsom St. (West of Third)	68.5	68.6	0.1	68.6	0.1	69.1	0.7
Third St. (South of Fourth)	68.4	68.4	0.0	68.4	0.0	68.8	0.4
Folsom St. (West of Fourth)	68.4	68.4	0.0	68.4	0.0	69.1	0.8
Fourth St. (North of Folsom)	68.8	69.0	0.2	69.1	0.2	67.7	-1.1
Folsom St. (West of Fourth)	68.1	68.2	0.0	68.2	0.0	68.8	0.7
Fourth St. (North of Folsom)	68.1	68.2	0.1	68.2	0.1	69.6	1.5
Fourth St. (South of Folsom)	67.8	67.9	0.1	67.9	0.1	69.6	1.8
Harrison St. (East of Hawthorne)	67.0	67.0	0.0	67.0	0.0	68.5	1.5
Harrison St. (West of Hawthorne)	68.4	68.4	0.0	68.4	0.0	69.8	1.4
Hawthorne St. (North of Harrison)	63.6	63.6	0.0	63.6	0.0	65.3	1.7
Harrison St. (East of Third)	69.0	69.0	0.0	69.0	0.0	70.1	1.1
Third St. (South of Harrison)	69.5	69.5	0.0	69.5	0.0	70.1	0.6
Harrison St. (East of Fourth)	69.2	69.2	0.0	69.2	0.0	70.1	0.9
Fourth St. (North of Harrison)	68.6	68.8	0.2	68.8	0.2	67.8	-0.8
Harrison St. (East of Fifth)	68.8	68.8	0.0	68.8	0.0	71.6	2.8
Fifth St. (North of Harrison)	68.9	69.0	0.1	69.0	0.1	69.7	0.8

TABLE 4 (Continued) PROJECT-RELATED AND CUMULATIVE TRAFFIC NOISE INCREASES

NOTES: Traffic noise modeling was completed using the Federal Highway Administration RD-77-108 model. Assumptions include: 35 mph travel speed on all streets; vehicle mix of 97.42% autos/ 1.84% medium trucks/0.74% heavy trucks; day-night split: 77.71% day (7 a.m. to 7 p.m.), 12.68% evening (7 p.m. to 10 p.m.), & 9.61% night (10 p.m. to 7 a.m.). Background noise levels due to traffic on other roadways and non-traffic related activities are not reflected in these noise levels. Noise levels in this table are intended to indicate incremental noise changes due to future growth and project development. Since they do not include background noise levels, they do not necessarily reflect actual noise levels along these roadway segments. Changes between scenarios analyzed may not show change due to rounding in the noise modeling.

Cumulative noise levels include the anticipated operating conditions of the transportation network under future year cumulative conditions with traffic associated with the proposed project and other reasonably foreseeable development projects.

CNEL = Community Noise Equivalent Level, is a 24-hour noise descriptor which adds a 5-dBA "penalty" during the evening hours (7:00 p.m. to 10:00 p.m.) and a 10-dBA penalty during the night hours (10:00 p.m. to 7:00 a.m.) because community receptors are more sensitive to unwanted noise intrusion during the evening and at night.

SOURCE: Orion Environmental Associates, 2013; Fehr and Peers, 2013

CNEL, normal conventional construction is usually sufficient to achieve acceptable interior noise levels. Since noise levels do not exceed 70 dBA (Ldn) along site frontages, additional noise insulation features, beyond conventional construction features, would not be required. It is also expected that interior noise levels for below-grade program space would be substantially lower than interior noise levels for street-level spaces. Therefore, the proposed project would be compatible with the noise environment, and this impact would be *less than significant*.

Mitigation: None required.

Impact NO-2: During construction, the proposed Moscone Center Expansion project would not result in a substantial temporary increase in ambient noise levels and vibration in the project vicinity above levels existing without the project, and would not expose persons to substantial noise levels in excess of standards established in the Noise Ordinance (Article 29 of the Police Code). (Less than Significant)

The San Francisco Noise Ordinance (Article 29 of the *San Francisco Police Code*, revised November 25, 2008) regulates construction-related noise. Section 2907 limits noise levels from individual pieces of equipment to 80 dBA at 100 feet, which is equivalent to 86 dBA at 50 feet. Impact tools such as jackhammers and pile drivers are exempt from this noise limit if they are equipped with intake and exhaust mufflers approved by the Director of Public Works. Pile driving is not anticipated to be needed for project construction. Section 2908 allows for construction work during nighttime hours (defined by the code as 8:00 p.m. to 7:00 a.m.) as long as construction-related noise does not exceed the ambient noise level by 5 dBA at the nearest property line or unless a special permit is granted by the Director of Public Works.

On-site Construction Activities. Construction hours at all project sites are proposed to occur during regular working hours, as defined by Article 29 of the Police Code (7:00 a.m. to 8:00 p.m.). While the proposed construction hours would be consistent with the San Francisco Noise Ordinance, it is possible that construction may have to occur during the nighttime hours within the facility or on weekends if unforeseen delays occur. Any required extended construction hours into the nighttime hours (8:00 p.m. to 7:00 a.m.) that creates noise outside of the facility would be required to comply with Section 2908 of the Police Code and would not be allowed to exceed the 5 dBA limit above the ambient noise level at the nearest property line. With required conformance with ordinance noise level and time limits, no conflicts with local ordinances are expected to occur during project construction. Therefore, this impact would be *less than significant*.

The types of construction equipment that would be used during construction of the proposed project are listed in Table 3 in the Project Description. The proposed equipment types (drill rigs, mobile and stationary cranes, excavators, and trucks) typically generate maximum noise levels ranging from about 74 to 84 dBA (L_{max}) at a distance of 50 feet from the source,⁴⁷ and each piece of equipment would thus normally be anticipated to comply with the equivalent daytime ordinance noise limit of 86 dBA at 50 feet.

The closest sensitive receptor is a senior residential development at Fourth and Howard Streets and it is located a minimum of 250 feet from areas where construction activities are proposed to occur. At this distance, the maximum noise level of 84 dBA would attenuate to 70 dBA. Most structures of typical construction with windows closed can attenuate noise levels by 25 dBA, resulting in interior noise levels of 45 dBA, which is an acceptable daytime interior noise level. Therefore, maximum project-related construction noise levels at these residences and more distant residential uses would be *less than significant*.

⁴⁷ U.S. Department of Transportation, Federal Highway Administration, Construction Noise Handbook, 9.0 Construction Equipment Noise Levels and Ranges, Table 9.1, RCNM Default Noise Emission Reference Levels and Usage Factors. Available online at http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm. Accessed on August 28, 2013.

Yerba Buena Gardens (YBG) park is located immediately north of proposed construction area at the Moscone North site, while the YBG Children's Garden is located immediately south of proposed construction at the Moscone South site. The YBG concert area to the north and YBG Children's Garden active play area to the south are located as close as 50 feet from proposed construction, and maximum noise levels could reach 84 dBA at this distance. Such noise levels would interfere with outdoor concerts that are held on weekdays and could, at time, discourage use of the YBG Children's Garden. Since construction would not occur on weekends, weekend concerts and weekend use of the YBG Children's Garden would not be affected. Such effects on weekdays would be temporary, affecting each park for approximately one year. Therefore, temporary noise impacts on park users is considered to be *less than significant*.

Groundborne Vibration and Noise. Some groundborne noise and vibration would be generated by project-related excavation activities under Howard Street that would be associated with foundation work, but the closest receptor would be the adjacent underground facilities at the Moscone Center. Since activities at the Moscone Center would be scheduled so as not to cause noise conflicts or vibration, the potential for such conflicts would be avoided (no impact).

This analysis applies significance thresholds related to cosmetic damage to buildings of 0.5 in/sec PPV for transient or intermittent vibration⁴⁸ and 0.4 in/sec PPV for continuous vibration.⁴⁹ For buried utilities, the analysis uses a higher threshold of 4.0 in/sec PPV.⁵⁰ Typical vibration levels associated with the operation of various types of construction equipment at 25 feet, some of which are similar to those proposed to be used for this project, are listed in Table 5.

	Peak Particle Velocity (PPV) (in/sec)				
Equipment	At 25 Feet ¹				
Caisson Drilling, Large Bulldozer	0.089				
Loaded Trucks	0.076				
Jackhammer	0.035				
¹ Vibration amplitudes for construction equipment assume normal propagation conditions.					
 SOURCE: FTA, 2006. Transit Noise and Vibration Impact Assessment, DTA-VA-90-1003-06. May 2006. U.S. Department of Transportation. Available on http://www.fta.dot.gov/documents/FTA_Noise_and 					

TABLE 5 VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Vibration Manual.pdf (accessed February 1, 2012).

⁴⁸ American Association of State Highway and Transportation Officials (AASHTO), Evaluation of Transportation- Related Earthborne Vibrations, R 8- 96, 2004. Transient vibration is typically less than 20 seconds in duration per occurrence (occurring infrequently), while intermittent vibration is typically 20 seconds or less per occurrence (occurring several times per hour on regular basis). The transient vibration standard applies to impact pile driving methods, while the continuous vibration standard applies to vibratory methods such as a vibratory compactor or vibratory pile driver.

⁴⁹ Wilson Ihrig & Associates, Inc. (WIA), Final Technical Memo, Crystal Springs Pipeline No. 2, Noise and Vibration Study, Impacts and Mitigation, September 24, 2009. The AASHTO guidelines include a discussion regarding the potential fatigue and damage caused by sources of continuous vibration, such as vibratory compactors and vibratory pile drivers, and they indicate that that such vibration could be limited to a level of 0.4 in/sec PPV to avoid threshold damage.

⁵⁰ Vibration under the ground surface is lower than that measured at the ground surface. A threshold of 4.0 in/sec PPV is commonly used for underground optical-fiber cables. Underground or restrained concrete structures can withstand vibration of 10.0 in/sec PPV before threshold cracks appear. Thus, underground utilities are less sensitive than surface structures (WIA, 2009). The 4.0 in/sec PPV threshold is consistent with thresholds recommended by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

As indicated in Table 5, project-related construction activities would generate vibration levels well below the 0.5-in/sec PPV and 0.4-in/sec PPV vibration thresholds for buildings and 4.0-in/sec PPV vibration threshold for buried utilities, respectively, even if two pieces of equipment (e.g., drill rig and truck or two trucks) were both operating 25 feet from a structure. Since all structures adjacent to Moscone North and South are located more than 25 feet from project construction activities, construction-related vibration levels would be less than those listed in Table 5. Therefore, vibration effects on adjacent or nearby buildings or structures would be *less than significant*.

However, proposed construction activities could occur closer than 25 feet from existing buried utilities, and therefore, these utilities could be subject to higher levels of construction- generated vibration. For buried pipelines located more than approximately 2 feet from construction activities, vibration levels are not expected to exceed the 4.0 in/sec PPV damage threshold for buried pipelines. However, the 4.0 in/sec PPV threshold could be exceeded for the utilities that cross the alignment or are located closer than 2 feet from construction equipment. Therefore, existing utilities located in such proximity to project-related construction work would be required to be supported, protected, and monitored by SFPUC (see Section A, Project Description, under the heading "Approvals Required"). Further, protection of existing utilities by the contractor is required by the standard DPW contractor specifications, which state, "104.02 GOVERNMENTAL FACILITIES. The Contractor shall satisfactorily support, work around, and protect, as approved by the Engineer, all facilities, whether shown on the plans or not, which exist within any excavation and which are owned or controlled, and maintained, by a City department or other authority in the exercise of a governmental function."⁵¹ Therefore, impacts on buried utilities would be *less than significant*.

Mitigation: None required.

Impact C-NO: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in cumulative noise impacts. (Less than Significant)

The geographic scope of potential cumulative noise impacts encompasses the Moscone North and South site, its immediate vicinity, and areas adjacent to routes providing access to the Moscone site. Identified cumulative projects in the site vicinity would be required to comply with Article 29 of the Police Code for new stationary noise sources (i.e. HVAC, etc.) and construction-related noise limits and hours. Thus, there would be less-than-significant cumulative construction-related and operational noise impacts in areas adjacent to or near the site.

However, cumulative traffic increases and associated traffic noise increases would occur as a result of the proposed project in combination with cumulative projects because traffic from these projects, along with the proposed project, would be distributed along the local roadway network. Cumulative traffic noise increases have been estimated and are presented in Table 4. As shown in this table, the greatest cumulative incremental peak-hour noise increases would occur along Fifth, Fourth, Hawthorne, and

⁵¹ Order No. 167, 707, Regulations for Excavating and Restoring Streets in San Francisco, http://www.sfdpw.org/ftp/ uploadedfiles/sfdpw/boe/manager/DPW_Order_176-707.pdf., accessed November 12, 2013.

Harrison, Streets, with the largest incremental increase occurring on the section of Harrison Street east of Fifth Street. These increases would range between 1.7 and 2.8 dBA, which would be imperceptible to the human ear. Therefore, there would be a *less-than-significant* cumulative noise impact.

Mitigation: None required.

Торі	cs:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
6.	AIR QUALITY—Would the project:					
a)	Conflict with or obstruct implementation of the applicable air quality plan?			\boxtimes		
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		\boxtimes			
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?					
d)	Expose sensitive receptors to substantial pollutant concentrations?		\boxtimes			
e)	Create objectionable odors affecting a substantial number of people?			\boxtimes		

The BAAQMD is the regional agency with jurisdiction over the nine-county San Francisco Bay Area Air Basin (SFBAAB), which includes San Francisco, Alameda, Contra Costa, Marin, San Mateo, Santa Clara, and Napa Counties and portions of Sonoma and Solano Counties. The BAAQMD is responsible for attaining and maintaining air quality in the SFBAAB within federal and state air quality standards, as established by the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA), respectively. Specifically, the BAAQMD has the responsibility to monitor ambient air pollutant levels throughout the SFBAAB and to develop and implement strategies to attain the applicable federal and state standards. The CAA and the CCAA require plans to be developed for areas that do not meet air quality standards, generally. The most recent air quality plan, the 2010 Clean Air Plan, was adopted by the BAAQMD on September 15, 2010. The 2010 Clean Air Plan updates the Bay Area 2005 Ozone Strategy in accordance with the requirements of the CCAA to implement all feasible measures to reduce ozone; provide a control strategy to reduce ozone, particulate matter, air toxics, and greenhouse gases in a single, integrated plan; and establish emission control measures to be adopted or implemented. The 2010 Clean Air Plan contains the following primary goals:

- Attain air quality standards;
- Reduce population exposure and protect public health in the San Francisco Bay Area; and
- Reduce greenhouse gas emissions and protect the climate.

The 2010 Clean Air Plan represents the most current applicable air quality plan for the SFBAAB. Consistency with this plan is the basis for determining whether the proposed project would conflict with or obstruct implementation of air quality plans.

Criteria Air Pollutants

In accordance with the state and federal CAAs, air pollutant standards are identified for the following six criteria air pollutants: ozone, carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead. These air pollutants are termed criteria air pollutants because they are regulated by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. In general, the SFBAAB experiences low concentrations of most pollutants when compared to federal or state standards. The SFBAAB is designated as either in attainment⁵² or unclassified for most criteria pollutants with the exception of ozone, PM_{2.5}, and PM₁₀, for which these pollutants are designated as non-attainment for either the state or federal standards. By its very nature, regional air pollution is largely a cumulative impact in that no single project is sufficient in size to, by itself, result in non-attainment of air quality standards. Instead, a project's individual emissions contribute to existing cumulative air quality impacts. If a project's contribution to cumulative air quality impacts is considerable, then the project's impact on air quality would be considered significant.⁵³

Land use projects may contribute to regional criteria air pollutants during the construction and operational phases of a project. **Table 6** identifies air quality significance thresholds followed by a discussion of each threshold. Projects that would result in criteria air pollutant emissions below these significance thresholds would not violate an air quality standard, contribute substantially to an air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants within the SFBAAB.

	Construction Thresholds	Operationa	al Thresholds	
Pollutant	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Maximum Annual Emissions (tons/year)	
ROG	54	54	10	
NOx	54	54	10	
PM_{10}	82 (exhaust)	82	15	
PM2.5	54 (exhaust)	54	10	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable		

 TABLE 6

 CRITERIA AIR POLLUTANT SIGNIFICANCE THRESHOLDS

⁵² "Attainment" status refers to those regions that are meeting federal and/or state standards for a specified criteria pollutant. "Non-attainment" refers to regions that do not meet federal and/or state standards for a specified criteria pollutant. "Unclassified" refers to regions where there is not enough data to determine the region's attainment status.

 ⁵³ pollutant. "Unclassified" refers to regions where there is not enough data to determine the region's attainment status.
 ⁵³ Bay Area Air Quality Management District (BAAQMD), *California Environmental Quality Act Air Quality Guidelines*, May 2011, page 2-1.

Ozone Precursors. As discussed previously, the SFBAAB is currently designated as non-attainment for ozone and particulate matter. Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and oxides of nitrogen (NO_x). The potential for a project to result in a cumulatively considerable net increase in criteria air pollutants, which may contribute to an existing or projected air quality violation, are based on the state and federal Clean Air Acts emissions limits for stationary sources. To ensure that new stationary sources do not cause or contribute to a violation of an air quality standard, BAAQMD Regulation 2, Rule 2 requires that any new source that emits criteria air pollutants above a specified emissions limit must offset those emissions. For ozone precursors ROG and NO_x, the offset emissions level is an annual average of 10 tons per year (or 54 pounds (lbs.) per day).⁵⁴ These levels represent emissions by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants.

Particulate Matter (PM₁₀ and PM_{2.5}).⁵⁵ The federal New Source Review (NSR) program was created by the federal CAA to ensure that stationary sources of air pollution are constructed in a manner that is consistent with attainment of federal health based ambient air quality standards. For PM₁₀ and PM_{2.5}, the emissions limit under NSR is 15 tons per year (82 lbs. per day) and 10 tons per year (54 lbs. per day), respectively. These emissions limits represent levels at which a source is not expected to have an impact on air quality.⁵⁶

Although the regulations specified above apply to new or modified stationary sources, land use development projects result in ROG, NO_x, PM₁₀ and PM_{2.5} emissions as a result of increases in vehicle trips, architectural coating and construction activities. Therefore, the above thresholds can be applied to the construction and operational phases of land use projects and those projects that result in emissions below these thresholds would not be considered to contribute to an existing or projected air quality violation or result in a considerable net increase in ozone precursors or particulate matter. Due to the temporary nature of construction activities, only the average daily thresholds are applicable to construction phase emissions.

Fugitive Dust. Fugitive dust emissions are typically generated during construction phases. Studies have shown that the application of best management practices (BMPs) at construction sites significantly control fugitive dust.⁵⁷ Individual measures have been shown to reduce fugitive dust by anywhere from 30 to 90 percent.⁵⁸ The BAAQMD has identified a number of BMPs to control fugitive dust emissions from construction activities,⁵⁹ and the City's Construction Dust Control Ordinance (Ordinance 176-08, effective

⁵⁴ BAAQMD, Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance, October 2009, page 17.

 ⁵⁵ PM₁₀ is often termed "coarse" particulate matter and is made of particulates that are 10 microns in diameter or smaller.
 PM₂₅, termed "fine" particulate matter, is composed of particles that are 2.5 microns or less in diameter.

⁵⁶ BAAQMD, Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance, October 2009, page 16.

⁵⁷ Western Regional Air Partnership. 2006. WRAP Fugitive Dust Handbook. September 7, 2006. This document is available online at http://www.wrapair.org/forums/dejf/fdh/content/FDHandbook_Rev_06.pdf, accessed February 16, 2012.

⁵⁸ BAAQMD, Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance, October 2009, page 27.

⁵⁹ BAAQMD, CEQĂ Air Quality Guidelines, May 2011.

July 30, 2008) requires fugitive dust control measures to ensure that construction projects do not result in visible dust. The BMPs employed in compliance with the City's Construction Dust Control Ordinance is an effective strategy for controlling construction-related fugitive dust.

Local Health Risks and Hazards

In addition to criteria air pollutants, individual projects may emit toxic air contaminants (TACs). TACs collectively refer to a diverse group of air pollutants that are capable of causing chronic (i.e., of longduration) and acute (i.e., severe but of short-term) adverse effects to human health, including carcinogenic effects. Human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

Unlike criteria air pollutants, TACs do not have ambient air quality standards but are regulated by the BAAQMD using a risk-based approach. This approach uses a health risk assessment to determine which sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated, and considered together with information regarding the toxic potency of the substances, to provide quantitative estimates of health risks.⁶⁰

Air pollution does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects than others. Land uses such as residences, schools, children's day care centers, hospitals, and nursing and convalescent homes are considered to be the most sensitive to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress or, as in the case of residential receptors, their exposure time is greater than for other land uses. Therefore, these groups are referred to as sensitive receptors. Exposure assessment guidance typically assumes that residences would be exposed to air pollution 24 hours per day, 350 days per year, for 70 years. Therefore, assessments of air pollutant exposure to residents typically result in the greatest adverse health outcomes of all population groups.

Exposures to fine particulate matter (PM_{2.5}) are strongly associated with mortality, respiratory diseases, and lung development in children, and other endpoints such as hospitalization for cardiopulmonary disease.⁶¹ In addition to PM_{2.5}, diesel particulate matter (DPM) is also of concern. The California Air Resources Board (ARB) identified DPM as a TAC in 1998, primarily based on evidence demonstrating

⁶⁰ In general, a health risk assessment is required if the BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggest a potential public health risk. The applicant is then subject to a health risk assessment for the source in question. Such an assessment generally evaluates chronic, long-term effects, estimating the increased risk of cancer as a result of exposure to one or more TACs.

⁶¹ SFDPH, Assessment and Mitigation of Air Pollutant Health Effects from Intra-Urban Roadways: Guidance for Land Use Planning and Environmental Review, May 2008.

cancer effects in humans.⁶² The estimated cancer risk from exposure to diesel exhaust is much higher than the risk associated with any other TAC routinely measured in the region.

In an effort to identify areas of San Francisco most adversely affected by sources of TACs, San Francisco partnered with the BAAQMD to inventory and assess air pollution and exposures from mobile, stationary, and area sources within San Francisco. Areas with poor air quality, termed "Air Pollutant Exposure Zones," were identified based on two health-protective criteria: (1) excess cancer risk from the contribution of emissions from all modeled sources greater than 100 per one million population, and/or (2) cumulative PM_{2.5} concentrations greater than 10 micrograms per cubic meter (µg/m³).

Excess Cancer Risk. The above 100 per one million persons (100 excess cancer risk) criteria is based on United State Environmental Protection Agency (USEPA) guidance for conducting air toxic analyses and making risk management decisions at the facility and community-scale level.⁶³ As described by the BAAQMD, the USEPA considers a cancer risk of 100 per million to be within the "acceptable" range of cancer risk. Furthermore, in the 1989 preamble to the benzene National Emissions Standards for Hazardous Air Pollutants (NESHAP) rulemaking,⁶⁴ the USEPA states that it "…strives to provide maximum feasible protection against risks to health from hazardous air pollutants by (1) protecting the greatest number of persons possible to an individual lifetime risk level no higher than approximately one in one million and (2) limiting to no higher than approximately one in ten thousand [100 in one million] the estimated risk that a person living near a plant would have if he or she were exposed to the maximum pollutant concentrations for 70 years." The 100 per one million excess cancer cases is also consistent with the ambient cancer risk in the most pristine portions of the Bay Area based on BAAQMD regional modeling.⁶⁵

Fine Particulate Matter. In April 2011, the USEPA published *Policy Assessment for the Particulate Matter Review of the National Ambient Air Quality Standards*, "Particulate Matter Policy Assessment." In this document, USEPA staff concludes that the then-current federal annual PM_{2.5} standard of 15 μ g/m³ should be revised to a level within the range of 13 to 11 μ g/m³, with evidence strongly supporting a standard within the range of 12 to 11 μ g/m³. Air Pollutant Exposure Zones for San Francisco are based on the health protective PM_{2.5} standard of 11 μ g/m³, as supported by the USEPA's Particulate Matter Policy Assessment, although lowered to 10 μ g/m³ to account for uncertainty in accurately predicting air pollutant concentrations using emissions modeling programs.

Land use projects within these Air Pollutant Exposure Zones require special consideration to determine whether the project's activities would expose sensitive receptors to substantial air pollutant concentrations or add emissions to areas already adversely affected by poor air quality.

⁶² California Air Resources Board (ARB), Fact Sheet, "The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines," October 1998.

⁶³ BAAQMD, Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance, October 2009, page 67.

⁶⁴ 54 Federal Register 38044, September 14, 1989.

⁶⁵ BAAQMD, Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance, October 2009, page 67.

Construction Air Quality Impacts

Project-related air quality impacts fall into two categories: short-term impacts from construction and long-term impacts from project operation. The following addresses construction-related air quality impacts resulting from the proposed project.

Impact AQ-1: The proposed project's construction activities would generate fugitive dust and criteria air pollutants that would contribute substantially to an existing or projected air quality violation and would result in a cumulatively considerable net increase in criteria air pollutants. (Less than Significant with Mitigation)

Construction activities (short-term) typically result in emissions of ozone precursors and particulate matter in the form of dust (fugitive dust) and exhaust (e.g., vehicle tailpipe emissions). Emissions of ozone precursors and particulate matter are primarily a result of the combustion of fuel from on-road and off-road vehicles. However, ROGs are also emitted from activities that involve painting, other types of architectural coatings, or asphalt paving. The proposed project includes demolition of the Esplanade Support Building, excavation beneath Howard Street, and approximately 306,000 gross square feet of new construction. During the project's approximately 44-month construction period, construction activities would have the potential to result in emissions of fugitive dust, ozone precursors, and particulate matter, as discussed below.

Fugitive Dust

Project-related demolition, excavation, grading, and other construction activities may cause wind-blown dust that could contribute particulate matter into the local atmosphere. Although there are federal standards for air pollutants and implementation of state and regional air quality control plans, air pollutants continue to have impacts on human health throughout the country. California has found that particulate matter exposure can cause health effects at lower levels than national standards. The current health burden of particulate matter demands that, where possible, public agencies take feasible available actions to reduce sources of particulate matter exposure. According to the ARB, reducing PM_{2.5} to state and federal standards of 12 μ g/m³ in the SFBAAB would prevent between 210 and 1,300 premature deaths.⁶⁶

Dust can be an irritant causing watering eyes or irritation to the lungs, nose, and throat. Demolition, excavation, grading, and other construction activities can cause wind-blown dust that adds particulate matter to the local atmosphere. Depending on exposure, adverse health effects can occur due to this particulate matter in general and also due to specific contaminants such as lead or asbestos that may be constituents of soil.

The San Francisco Health Code Article 22B and San Francisco Building Code § 106A.3.2.6 collectively constitute the City's Construction Dust Control Ordinance (adopted in July 2008). The Construction Dust

⁶⁶ ARB, Methodology for Estimating Premature Deaths Associated with Long-term Exposure to Fine Airborne Particulate Matter in California Draft Staff Report, Table 4d, December 7, 2009, page 36.

Control Ordinance requires that all site preparation work, demolition, or other construction activities within the City that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specific dust control measures whether or not the activity requires a permit from the Department of Building Inspection (DBI).

The Construction Dust Control Ordinance requires project sponsors and contractors responsible for construction activities to control construction dust on the site or implement other practices that result in equivalent dust control that are acceptable to the Director of Public Health. Dust suppression activities, referred to as best management practices (BMPs), may include watering all active construction areas sufficiently to prevent dust from becoming airborne; increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water must be used if required by Article 21, § 1100 et seq. of the San Francisco Public Works Code. The Construction Dust Control Ordinance has a mandate for "no visible dust." Section 1247 of Article 22B of the Public Health Code requires that all City Agencies that authorize construction or other improvements on City property adopt rules and regulations to ensure that the dust control requirements identified in Article 22B are followed.

As discussed above, studies have shown that the application of BMPs at construction sites substantially control fugitive dust,⁶⁷ and individual measures have been shown to reduce fugitive dust by anywhere from 30 percent to 90 percent.⁶⁸ The BAAQMD has identified a number of BMPs to control fugitive dust emissions from construction activities and the City's Construction Dust Control Ordinance requires many of these measures, as well as others, to be implemented during construction. The BMPs employed in compliance with the City's Construction Dust Control Ordinance provide an effective strategy for controlling fugitive dust.

For projects over one half-acre, such as the proposed project, the Dust Control Ordinance requires that the project sponsor submit a Dust Control Plan for approval by the San Francisco Department of Public Health. DBI will not issue a building permit without written notification from the Director of Public Health that the applicant has a site-specific Dust Control Plan, unless the Director waives the requirement. Interior-only tenant improvement projects that are over one-half acre in size that will not produce exterior visible dust are exempt from the site-specific Dust Control Plan requirement.

The site-specific Dust Control Plan would require the project sponsor to: submit of a map to the Director of Public Health showing all sensitive receptors within 1,000 feet of the site; wet down areas of soil at least three times per day; provide an analysis of wind direction and install upwind and downwind particulate dust monitors; record particulate monitoring results; hire an independent, third-party to conduct inspections and keep a record of those inspections; establish shut-down conditions based on wind, soil migration, etc.; establish a hotline for surrounding community members who may be potentially affected by project-related dust; limit the area subject to construction activities at any one

⁶⁷ Western Regional Air Partnership, Fugitive Dust Handbook, September 7, 2006, p. 3-16. Available online at: http://www.wrapair.org/forums/dejf/fdh/content/FDHandbook_Rev_06.pdf. Accessed December 5, 2013.

⁶⁸ BAAQMD, Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance, October 2009, p. 27. Available online at: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/ CEQA/Revised%20Draft%20CEQA%20Thresholds%20%20Justification%20Report%20Oct%202009.ashx?la=en. Accessed December 4, 2013.

time; install dust curtains and windbreaks on the property lines, as necessary; limit the amount of soil in hauling trucks to the size of the truck bed and securing with a tarpaulin; enforce a 15 mph speed limit for vehicles entering and exiting construction areas; sweep affected streets with water sweepers at the end of the day; install and utilize wheel washers to clean truck tires; terminate construction activities when winds exceed 25 miles per hour; apply soil stabilizers to inactive areas; and sweep off adjacent streets to reduce particulate emissions. The project sponsor would be required to designate an individual to monitor compliance with these dust control requirements.

Compliance with the regulations and procedures set forth by the San Francisco Dust Control Ordinance would ensure that potential dust-related air quality impacts would be reduced to a *less than significant* level.

Criteria Air Pollutants

On-road vehicle trips include emissions from haul trucks for delivering construction material and removing debris and excavation spoils, and on-road emissions also include worker commutes that may occur locally or elsewhere in the region.

Section 6.25 of Chapter 6 of the San Francisco Administrative Code (Clean Construction Ordinance) requires clean construction practices for all City projects that require 20 or more cumulative days of construction. The ordinance requires that off-road equipment and engines with 25 horsepower or greater: 1) be fueled by biodiesel fuel grade B20 or higher; and 2) if used more than 20 hours, either meet or exceed Tier 2 emissions standards⁶⁹ for off-road engines or operate with the most effective verified diesel emission control technology. Portable or stationary generators (engines) do not have to meet this requirement.

A detailed quantification of construction-related criteria air pollutant emissions was conducted for the proposed Moscone Center Expansion project.⁷⁰ Project construction-related emissions were estimated using CalEEMod emissions estimator model (version 2013.2.2). This version of the CalEEMod model was released in October 2013 and uses emission factors from the OFFROAD2007 model and the 2011 Inventory Model for the In-use Off-road Equipment Rule of the ARB. Construction worker and vendor truck emissions were also calculated using CalEEMod, which uses EMFAC2011 emission factors and estimated daily trips based on the square feet of expanded space. Default haul trip estimates in CalEEMod for removal of demolition and excavated materials were adjusted to reflect the truck trips identified in Table 3 of the Project Description.

For the purpose of this analysis, CalEEMod default construction phase durations were adjusted to reflect the construction phasing of the proposed project which is assumed to begin in November 2014 and be completed in approximately 44 months. An equipment mix and staging provided by the project sponsor in the Project Description in Table 3 were used as adjusted inputs into CalEEMod and assume Tier 2 engines in

⁶⁹ Federal emission standards (Tier 1 through 4) for off-road diesel engines, including construction equipment, are based on the engine horsepower and year manufactured.

⁷⁰ ESA, Moscone Center Expansion Project Air Quality Technical Report, prepared for San Francisco Planning Department, December 2013. This document is available for review as part of Case File No. 2013.0154E at the SF Planning Department, 1650 Mission Street, Suite 400, San Francisco, California, 94103.

all mobile equipment, consistent with the Clean Construction Ordinance. It was assumed that the project would result in excavation of up to approximately 46,700 cubic yards of soil, requiring the truck trips identified in Table 3 of the Project Description. Following excavation, building foundations would be installed at Moscone South and Moscone North, followed by construction of the Moscone South-Esplanade Expansion, and then both the Moscone North and South lobbies and the pedestrian bridges.

Construction equipment, construction-related vehicle trips, worker vehicle trips, and ground disturbing activities would generate direct emissions of toxic air contaminants (addressed in Impact AQ-2), criteria air pollutants (*e.g.*, ROG, NOx, PM₁₀, and PM₂₅), and fugitive dust emissions. **Table 7** summarizes uncontrolled results. In the final three calendar years of construction, NOx emissions would exceed the 54 lbs/day threshold identified in Table 6 for construction-related criteria air pollutants, and the project would have a *significant* impact related to construction criteria air pollutant emissions.

	ROG	NOx	PM 10	PM2.5
2014	1.37	23.65	0.49	0.48
2015	1.82	31.83	0.70	0.69
2016	2.98	57.76	1.58	1.58
2017	10.87	65.52	1.72	1.71
2018	11.76	59.78	1.60	1.59

 TABLE 7

 UNCONTROLLED AVERAGE DAILY CONSTRUCTION-RELATED EMISSIONS

Implementation of **Mitigation Measure M-AQ-1** would require the use of Tier 3 diesel engines for construction equipment. A mitigated construction scenario was calculated using CalEEMod assuming all construction equipment operated using Tier 3 engines. The requirement for equipment with Tier 3 engines would reduce emissions to the levels presented in **Table 8**. As shown in Table 8, controlled emissions of criteria NOx during construction of the proposed project would be reduced by 37 to 42 percent with implementation of **Mitigation Measure M-AQ-1**, thereby reducing the project's construction criteria air pollutant impact to a *less than significant* level.

 TABLE 8

 CONTROLLED AVERAGE DAILY CONSTRUCTION-RELATED EMISSIONS

	Ave	age Daily Construc	tion Emissions (lbs./	/day)
_	ROG	NOx	PM 10	PM2.5
2014	1.38	14.55	0.49	0.49
2015	1.73	19.94	0.68	0.67
2016	2.31	33.42	1.43	1.43
2017	10.16	40.11	1.56	1.55
2018	11.10	36.00	1.45	1.43

Mitigation Measure M-AQ-1: Construction Emissions Minimization

- A. *Construction Emissions Minimization Plan.* Prior to issuance of a construction permit, the project sponsor shall submit a Construction Emissions Minimization Plan (Plan) to the Environmental Review Officer (ERO) for review and approval by an Environmental Planning Air Quality Specialist. The Plan shall detail project compliance with the following requirements:
 - 1. All off-road equipment greater than 25 hp and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements:
 - a) Where access to alternative sources of power is available, portable diesel engines shall be prohibited;
 - b) All off-road equipment shall have:
 - i. Engines that meet or exceed either U.S. Environmental Protection Agency (USEPA) or California Air Resources Board (ARB) Tier 3 off-road emission standards, *and*
 - Engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS).⁷¹
 - c) Exceptions:
 - i. Exceptions to A(1)(a) *may* be granted if the project sponsor has submitted information providing evidence to the satisfaction of the ERO that an alternative source of power is limited or infeasible at the project site and that the requirements of this exception provision apply. Under this circumstance, the sponsor shall submit documentation of compliance with A(1)(b) for onsite power generation.
 - ii. Exceptions to A(1)(b)(ii) *may* be granted if the project sponsor has submitted information providing evidence to the satisfaction of the ERO that a particular piece of off-road equipment with an ARB Level 3 VDECS is: (1) technically not feasible, (2) would not produce desired emissions reductions due to expected operating modes, (3) installing the control device would create a safety hazard or impaired visibility for the operator, or (4) there is a compelling emergency need to use off-road equipment that are not retrofitted with an ARB Level 3 VDECS and the sponsor has submitted documentation to the ERO that the requirements of this exception provision apply. If granted an exception to A(1)(b)(ii), the project sponsor must comply with the requirements of A(1)(c)(iii).
 - iii. If an exception is granted pursuant to A(1)(c)(ii), the project sponsor shall provide the next cleanest piece of off-road equipment as provided by the step down schedule in Table 9.
 - 2. The project sponsor shall require the idling time for off-road and on-road equipment be limited to no more than two minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment. Legible and visible signs shall be posted in multiple languages (English, Spanish, Chinese) in designated queuing areas and at the construction site to remind operators of the two minute idling limit.

⁷¹ Equipment with engines meeting Tier 4 Interim or Tier 4 Final emission standards automatically meet this requirement, therefore a VDECS would not be required.

Compliance Alternative	Engine Emission Standard	Emissions Control
1	Tier 3	ARB Level 2 VDECS
2	Tier 3	ARB Level 1 VDECS
3	Tier 3	Alternative Fuel*

TABLE 9 OFF-ROAD EQUIPMENT COMPLIANCE STEP-DOWN SCHEDULE

How to use the table: If the requirements of (A)(1)(b) cannot be met, then the project sponsor would need to meet Compliance Alternative 1. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 1, then Compliance Alternative 2 would need to be met. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 2, then Compliance Alternative 3 would need to be met.

* Alternative fuels are not a VDECS.

- 3. The project sponsor shall require that construction operators properly maintain and tune equipment in accordance with manufacturer specifications.
- 4. The Plan shall include estimates of the construction timeline by phase with a description of each piece of off-road equipment required for every construction phase. Off-road equipment descriptions and information may include, but is not limited to: equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. For VDECS installed: technology type, serial number, make, model, manufacturer, ARB verification number level, and installation date and hour meter reading on installation date. For off-road equipment using alternative fuels, reporting shall indicate the type of alternative fuel being used.
- 5. The Plan shall be kept on-site and available for review by any persons requesting it and a legible sign shall be posted at the perimeter of the construction site indicating to the public the basic requirements of the Plan and a way to request a copy of the Plan. The project sponsor shall provide copies of the Plan to members of the public as requested.
- B. *Reporting.* Quarterly reports shall be submitted to the ERO indicating the construction phase and off-road equipment information used during each phase including the information required in A(4). In addition, for off-road equipment using alternative fuels, reporting shall include the actual amount of alternative fuel used.

Within six months of the completion of construction activities, the project sponsor shall submit to the ERO a final report summarizing construction activities. The final report shall indicate the start and end dates and duration of each construction phase. For each phase, the report shall include detailed information required in A(4). In addition, for off-road equipment using alternative fuels, reporting shall include the actual amount of alternative fuel used.

C. *Certification Statement and On-site Requirements.* Prior to the commencement of construction activities, the project sponsor must certify (1) compliance with the Plan, and (2) all applicable requirements of the Plan have been incorporated into contract specifications.

Level of Significance After Mitigation: With implementation of Mitigation Measure M-AQ-1, impacts related to emission of criteria air pollutants during construction, would be reduced to a *less-than-significant* level.

Impact AQ-2: The proposed project's construction activities would generate toxic air contaminants, including diesel particulate matter that would expose sensitive receptors to substantial pollutant concentrations. (Less than Significant with Mitigation)

As discussed above, San Francisco, in partnership with BAAQMD, has modeled and assessed air pollutant impacts from mobile, stationary and area sources within the City. This assessment has resulted in the identification of Air Pollutant Exposure Zones, based on significance thresholds for PM_{25} and excess cancer risk, or areas within the City that deserve special attention when siting uses that either emit TACs or uses that are considered sensitive to air pollution. The project site is located within an Air Pollutant Exposure Zone, meaning that existing excess cancer risk exceeds 100 per one million and/or ambient PM_{25} concentrations exceed 10 µg/m3. Sensitive land uses exist on the project block south of Howard Street. The project shares Lot 91 with a variety of other buildings and uses, including the Child Development Center. In addition, upper story condominiums exist at the southwest corner of Howard and Fourth Streets across from Moscone Center South and Moscone Center West. These uses are considered sensitive for purposes of this evaluation. The Moscone Center itself, under both existing and proposed conditions, is not a sensitive land use.

Off-road equipment (which includes construction-related equipment) is a large contributor to DPM emissions in California, although since 2007, the ARB has found the emissions to be substantially lower than previously expected.⁷² Newer and more refined emission inventories have substantially lowered the estimates of DPM emissions from off-road equipment such that off-road equipment is now considered the sixth largest source of DPM emissions in California.⁷³ For example, revised estimates of PM emissions (of which DPM is a major component) for the SFBAAB for the year 2010 have decreased by 83 percent from 2010 emissions estimates.⁷⁴ Approximately half of the reduction in emissions can be attributed to the economic recession and half to updated methodologies used to better assess construction emissions.⁷⁵

Additionally, a number of federal and state regulations are requiring cleaner off-road equipment. Specifically, both the USEPA and California have set emissions standards for new off-road equipment engines, ranging from Tier 1 to Tier 4. Tier 1 emission standards were phased in between 1996 and 2000 and Tier 4 Interim and Final emission standards for all new engines would be phased in between 2008 and 2015. To meet the Tier 4 emission standards, engine manufacturers will be required to produce new engines with advanced emission-control technologies. Although the full benefits of these regulations will not be realized for several years, the USEPA estimates that by implementing the federal Tier 4 standards, NO_x and PM emissions will be reduced by more than 90 percent.⁷⁶ Furthermore, California regulations

ARB, Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments to the Regulation for In-Use Off-Road Diesel-Fueled Fleets and the Off-Road Large Spark-Ignition Fleet Requirements, p.1 and p. 13 (Figure 4), October 2010.

 ⁷³ ARB, Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments to the Regulation for In-Use Off-Road Diesel-Fueled Fleets and the Off-Road Large Spark-Ignition Fleet Requirements, October 2010.

⁷⁴ ARB, "In-Use Off-Road Equipment, 2011 Inventory Model," Query accessed online, April 2, 2012, http://www.arb.ca.gov/ _____msei/categories.htm#inuse_or_category.

⁷⁵ ARB, Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments to the Regulation for In-Use Off-Road Diesel-Fueled Fleets and the Off-Road Large Spark-Ignition Fleet Requirements, October 2010.

⁷⁶ USEPA, "Clean Air Nonroad Diesel Rule: Fact Sheet," May 2004.

limit maximum idling times to five minutes, which further reduces public exposure to NO_x and PM emissions.⁷⁷

In addition, construction activities do not lend themselves to analysis of long-term health risks because of their temporary and variable nature. As explained in the BAAQMD's *CEQA Air Quality Guidelines*:

"Due to the variable nature of construction activity, the generation of TAC emissions in most cases would be temporary, especially considering the short amount of time such equipment is typically within an influential distance that would result in the exposure of sensitive receptors to substantial concentrations. Concentrations of mobile-source diesel PM emissions are typically reduced by 70 percent at a distance of approximately 500 feet (ARB 2005). In addition, current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. This results in difficulties with producing accurate estimates of health risk."⁷⁸

Therefore, project-level analyses of construction activities have a tendency to produce overestimated assessments of long-term health risks. However, within Air Pollutant Exposure Zones, as discussed above, additional construction activity may adversely affect populations that are already at a higher risk for adverse long-term health effects from existing sources of air pollution.

The proposed project would require construction activities for the approximate 44-month construction period. Project construction activities would result in short-term emissions of DPM and other TACs. The project site is located in an area that already experiences poor air quality, and project construction activities would generate additional air pollution, affecting nearby sensitive receptors.

Compliance with the fuel and emissions standards of the Clean Construction Ordinance would reduce these effects, but the ordinance does not specifically identify the best available control technologies in an already impacted area. Therefore, project construction would result in a significant impact. Implementation of Mitigation Measure M-AQ-1 would reduce this impact to a *less-than-significant* level.

Mitigation Measure: Implementation of Mitigation Measure M-AQ-1.

Level of Significance After Mitigation: While emissions reductions from limiting idling, educating workers and the public and properly maintaining equipment are difficult to quantify, other measures, specifically the requirement for equipment with Tier 3 engines and Level 3 Verified Diesel Emission Control Strategy (VDECS) can be quantified and would reduce construction emissions by 89 to 94 percent compared to equipment with engines meeting no emission standards and without a VDECS. Emissions reductions from the combination of Tier 3 equipment with level 3 VDECS is almost equivalent to requiring only equipment with Tier 4 Final engines, which is not yet readily available for engine sizes subject to the mitigation. Therefore, compliance with Mitigation Measure M-AQ-1 would reduce the impact of construction-related TAC emissions, including DPM, on nearby sensitive receptors to a *less-than-significant* level.

⁷⁷ California Code of Regulations, Title 13, Division 3, § 2485.

⁷⁸ BAAQMD, CEQA Air Quality Guidelines, May 2011, page 8-6.

Operational Air Quality Impacts

Land use projects typically result in emissions of criteria air pollutants and toxic air contaminants primarily from an increase in motor vehicle trips. However, land use projects may also result in criteria air pollutants and toxic air contaminants from combustion of natural gas, landscape maintenance, use of consumer products, and architectural coating. The following addresses air quality impacts resulting from operation of the proposed project.

Impact AQ-3: During project operations, the proposed project would result in emissions of criteria air pollutants, but not at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (Less than Significant)

The emissions increases attributable to operation of the proposed project would be from the total of the increase in operational vehicle trips generated by increased use and occupation of the proposed project, and area sources such as use of natural gas for heating and cooking. The project would intensify the existing convention center development within walking distance of major transit hubs. As such, the project would generate a relatively low number of new motor vehicle trips compared to development in a non-urban or suburban setting.

Project operational criteria pollutant emissions were also estimated using the CalEEMod model for all sources except operational truck, bus, and forklift emissions, which were calculated using EMFAC2011 emission factors for trucks and buses and the OFFROAD model for forklifts. The CalEEMod model was refined to reflect the project-specific trip generation determined in the Travel Demand Memorandum prepared for the proposed project, which considered the availability of transit systems within the area.⁷⁹ Vehicle trip lengths from CalEEMod, which were developed with input from the BAAQMD, were used to determine the increase in vehicle miles travelled from the proposed project, as project-specific trip lengths were not estimated in the Travel Demand Memorandum. CalEEMod default emission factors for motor vehicle trips are based on EMFAC2011 emission factors. Estimated emissions of ROG from maintenance applications of architectural coatings reflect volatile organic compound (VOC) content limits of Regulation 8, Rule 3 of the BAAQMD.

Forklift emissions were calculated assuming one-half hour of forklift operations are associated with each additional truck trip based on consultation with personnel at Moscone Center loading docks during a site visit. Forklift emissions assume operation of 50 horsepower compressed natural gas engines which is consistent with the fleet observed on-site. Forklifts are operated by union employees and are not used to unload food and beverage trucks, which are unloaded by hand truck or using the truck driver's dolly.

⁷⁹ Adavant Consulting, "Moscone Center Expansion Project – Estimation of Travel Demand," January 9, 2014. This document is available for review as part of Case File No. 2013.0154E at the SF Planning Department, 1650 Mission Street, Suite 400, San Francisco, California, 94103.

Three operational scenarios were assumed to correlate with different intensity of truck trips associated with each scenario:

- 1. **Move-in day:** Loaded trucks arrive to unload decorating equipment and exhibit freight.
- 2. **Event Day:** Attendee passenger car trips and shuttle bus trips. A lesser amount of freight truck activity occurs.
- 3. **Breakdown day:** Trucks return to offhaul equipment and freight. This day has the highest number of truck trips.

According to the Travel Demand Memorandum, the proposed expansion would result in an average increase of 42 daily truck trips on move-in days, 34 daily truck trips on event days and 160 truck trips on break-down days. Overlapping of events can occur at Moscone north and Moscone south such that there would be an average of 177 move-in days, 654 event days, and 118 breakdown days per year. These data were used with the EMFAC2011 emission factors for medium-duty heavy trucks (T6) to determine the maximum annual emission increase as well as average daily emission increases. Because of uncertainties with regard to overlapping events and varying size of events, annual emission were estimated using the estimated increase in the average number of truck trips. These annual emissions were then averaged by the number of event, break down and move-in days, respectively, to determine average daily emissions.

Emissions from expansion-related increases in shuttle bus operations were also calculated using EMFAC2011 emission factors and bus trip generation based on the transportation analysis. Specifically, the transportation analysis estimates the increase in bus trips for the peak day but also provides the relative percentages of bus levels of service between heavy, medium, light, and none. Fifty-three percent of all events have no bus service, 27 percent of events have light bus service, 11 percent of events have medium bus service and 9 percent have heavy or peak bus service. These percentages were applied to the 654 annual event days to determine the annual number of bus trips based on the peak day estimate of the Travel Demand Memorandum. All of the above assumptions are detailed in the project-specific Air Quality Technical Report.⁸⁰

Criteria pollutant emissions from the anticipated project-related operational sources are quantified in **Tables 10** and **11**. As shown, operation of the Moscone Center Expansion project would not exceed significance thresholds for criteria air pollutants, and the project would result in a *less-than-significant* impact.

Mitigation: None required.

⁸⁰ Environmental Science Associates, Moscone Center Expansion Project, San Francisco, California Air Quality Technical Report, December 2013. This document is available for review as part of Case File No. 2013.0154E at the SF Planning Department, 1650 Mission Street, Suite 400, San Francisco, California, 94103.

 TABLE 10

 AVERAGE DAILY OPERATIONAL EMISSIONS OF THE PROPOSED PROJECT

Source	ROG	NOx	PM ₁₀	PM2.5			
Average Daily Emissions (pounds/day)							
Area Source	6.37	< 0.01	< 0.01	< 0.01			
Energy	0.20	1.81	0.14	0.14			
Mobile – Passenger Vehicles	2.86	5.43	3.00	0.86			
Mobile – Freight Trucks	0.86	38.42	4.01	0.45			
Mobile – Shuttle Buses	0.16	3.24	0.24	0.07			
Fork Lifts	0.05	2.27	0.04	0.04			
Total	10.50	51.17	7.43	1.56			
SOURCE: ESA, 2013	SOURCE: ESA, 2013						

 TABLE 11

 MAXIMUM ANNUAL OPERATIONAL EMISSIONS OF THE PROPOSED PROJECT

Source	ROG	NOx	PM 10	PM2.5			
Maximum Annual Emissions (tons/year)							
Area Source	1.16	< 0.01	< 0.01	< 0.01			
Energy	0.04	0.33	0.03	0.03			
Mobile – Passenger Vehicles	0.48	0.95	0.52	0.15			
Mobile – Freight Trucks	0.16	7.02	0.73	0.08			
Mobile – Shuttle Buses	0.03	0.59	0.04	0.01			
Fork Lifts	0.01	0.41	0.01	0.01			
Total	1.88	9.29	1.33	0.28			
SOURCE: ESA, 2013							

Impact AQ-4: During project operations, the proposed project would result in emissions of carbon monoxide, but not at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (Less than Significant)

Emissions from traffic at congested intersections can, under certain circumstances, cause a localized build-up of CO concentrations. Regional ambient air quality monitoring data demonstrate that CO concentrations are well below the applicable standards, despite long-term upward trends in vehicle miles traveled. This confirms that the potential for localized increases in CO concentrations from increased traffic has been greatly reduced in recent years. Improvements in motor vehicle exhaust controls since the early 1990s and the use of oxygenated fuels have substantially reduced CO emissions from motor vehicles.

Elevated concentrations of localized CO from congested traffic would not have the potential to cause a violation of ambient air quality standards because the following three criteria would be met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans. The proposed project would be consistent with these regional plans, which include the Congestion Management Program adopted by the San Francisco County Transportation Authority in December 2011 and the Plan Bay Area adopted by the Metropolitan Transportation Commission on July 18, 2013. The project would be consistent with these plans by providing shuttle buses and increasing density in an area proximate to multiple transit options.
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour. The study intersections with the highest volumes would experience fewer than 10,000 vehicles per peak hour under existing plus project and cumulative scenarios.⁸¹
- The project traffic would not increase traffic volumes at affected intersections where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

Because each of the three criteria would be met, elevated concentrations of localized CO from congested traffic would not cause a violation of ambient air quality standards.

The proposed expansion would also result in an increase of forklift operations inside the Moscone Center. It is not anticipated that additional forklifts would be acquired and it is expected that the existing fleet of forklifts would operate with increased frequency. Forklifts are propane powered and result in exhaust emissions within Moscone Center. These emissions include carbon monoxide, which could accumulate within the building. A Phase 1 Site Assessment conducted in March 2013 indicated that records at the SFDPH contain several letters from organizations representing Moscone Center employees, raising concerns about potential indoor air quality issues related to vehicle exhaust, former underground storage tanks (USTs), and ventilation systems at the facility.⁸² After reviewing documentation for the ventilation systems operation, interviewing on-site workers, and performing a site visit to evaluate working conditions, the California Department of Health Service, Occupational Health Branch (Cal-OSHA) issued a letter dated September 11, 1996, recommending more limited use of propane forklifts at the site, installation of carbon monoxide monitors in work areas, and a formal engineering review to evaluate the air flow in the loading docks and truckway areas. Moscone Center has responded to this issue by developing an Air Quality Program that is now part of the Sustainable Programs at Moscone Center.⁸³ The Air Quality Program includes the following elements:

- Indoor air quality monitoring of the exhibit floor is now conducted on move-in and breakdown days.
- Trucks may not idle at loading docks.

⁸¹ Moscone Center Expansion Project Cumulative Traffic Forecasts, Fehr and Peers, 2013. This document is available for review as part of Case File No. 2013.0154E at the SF Planning Department, 1650 Mission Street, Suite 400, San Francisco, California, 94103.

⁸² Northgate Environmental Management, *Phase 1 Environmental Site Assessment, Moscone Center North and South, 747 and* 750 Howard Street, San Francisco, CA, March 21, 2013.

⁸³ Moscone Center's Exhibitor Green Guide, Revised August, 2012.

- Forklifts and carts have been retrofitted with emission reduction equipment. Any forklifts in violation of the standard are removed from the floor. A full time air quality technician regularly monitors and tests conditions.
- Capital renovations completed in 2012 upgraded all air handling systems.

These measures would continue to be implemented under the proposed project. Therefore, because the Moscone Convention center has implemented the above measures, increased forklift operations within the Moscone Center under the proposed project would not be expected to result in localized concentrations of CO at unhealthful levels and CO impacts would be *less than significant*.

Mitigation: None required.

Impact AQ-5: During project operations, the proposed project would generate toxic air contaminants, including diesel particulate matter, but would not expose sensitive receptors to substantial air pollutant concentrations. (Less than Significant)

As discussed above in the section entitled 'Local Health Risks and Hazards', San Francisco, in partnership with BAAQMD, has modeled and assessed air pollutant impacts from mobile, stationary and area sources within the City. This assessment has resulted in the identification of Air Pollutant Exposure Zones, or areas within the City that deserve special attention when siting uses that either emit TACs or uses that are considered sensitive to air pollution. Sensitive land uses exist on the project block south of Howard Street, which shares Lot 91 with a variety of other buildings and uses, including the Child Development Center. Upper story condominiums exist at the southwest corner of Howard and Fourth Streets across from Moscone Center South and Moscone Center West.

Individual projects result in emissions of toxic air contaminants primarily as a result of an increase in vehicle trips. The BAAQMD considers roads with less than 10,000 vehicles per day to be "minor, low-impact" sources that do not pose a significant health impact even in combination with other nearby sources and recommends that these sources be excluded from the environmental analysis. The proposed project's 696 net new daily vehicle trips and the 160 net new worst case day truck trips would be well below this level, and would be distributed among the local roadway network. Therefore, an assessment of project-generated TACs resulting from vehicle trips is not required. The proposed project does not include any other sources of TACs and thus, would not generate a substantial amount of TAC emissions that could affect nearby sensitive receptors.

The proposed project would expand an existing exhibition land use and would not result in siting of new sensitive receptors and would therefore have no impacts with regard to exposing new sensitive receptors to risks and hazards.

The proposed project would result in a *less-than-significant* impact with respect to exposing sensitive receptors to substantial levels of air pollution.

Mitigation: None required.

Impact AQ-6: The proposed project would not conflict with, or obstruct implementation of the 2010 *Clean Air Plan*. (Less than Significant)

The most recently adopted air quality plan for the SFBAAB is the 2010 Clean Air Plan. The 2010 Clean Air Plan is a road map that demonstrates how the San Francisco Bay Area will achieve compliance with the state ozone standards as expeditiously as practicable and how the region will reduce the transport of ozone and ozone precursors to neighboring air basins. In determining consistency with the 2010 Clean Air Plan (CAP), this analysis considers whether the project would: (1) support the primary goals of the CAP, (2) include applicable control measures from the CAP, and (3) avoid disrupting or hindering implementation of control measures identified in the CAP.

The primary goals of the CAP are to: (1) Reduce emissions and decrease ambient concentration of harmful pollutants; (2) Safeguard the public health by reducing exposure to air pollutants that pose the greatest risk; and (3) Reduce greenhouse gas emissions. To meet the primary goals, the CAP recommends specific control measures and actions. These control measures are grouped into various categories and include stationary and area source measures, mobile source measures, transportation control measures, land use measures, and energy and climate measures. The CAP recognizes that to a great extent, community design dictates individual travel mode, and that a key long-term control strategy to reduce emissions of criteria pollutants, air toxics, and greenhouse gases from motor vehicles is to channel future Bay Area growth into vibrant urban communities where goods and services are close at hand, and people have a range of viable transportation options. To this end, the *2010 Clean Air Plan* includes 55 control measures aimed at reducing air pollution in the SFBAAB.

The measures most applicable to the proposed project are transportation control measures and energy and climate control measures. The proposed project's impact with respect to GHGs are discussed in Section E.7, Greenhouse Gas Emissions, which demonstrates that the proposed project would comply with the applicable provisions of the City's Greenhouse Gas Reduction Strategy. The project would exceed California Building Code Title 24 standards, as well as provide at least 1 percent of the facility's energy with on-site renewables,⁸⁴ resulting in reduced energy consumption as compared with traditional development.

Regarding transportation control measures, the proposed project includes expansion of an existing exhibition space within the existing facility's footprint, thereby increasing the intensity of convention use at the project site. The site is served by numerous viable transportation options, including Muni bus lines, regional rail (BART) lines, and the Moscone Convention Center's own shuttle buses. The project's improvements to Howard Street, as well as the project site's location in proximity to a concentration of hotels in Downtown San Francisco, ensure that convention attendees can walk and ride shuttle buses or other transit services to and from the project site instead of taking trips via private automobile. Employees currently receive pre-tax commuter checks upon request, and, the project would include

⁸⁴ Per City of San Francisco Environment Code Chapter &, Sections 705(b) and 706 (a), this requirement applies to all municipal construction projects. The ordinance defines "Construction Project" as any building, planning or construction activity, including demolition, new construction, major alteration, or building additions by a City department at a Cityowned Facility or City Leasehold.

bicycle parking spaces for employees. These features all help to reduce growth in automobile trips and vehicle miles traveled. The proposed project would be generally consistent with the *San Francisco General Plan*, as discussed in Section C. Transportation control measures that are identified in the CAP are implemented by the *San Francisco General Plan* and the Planning Code, for example, through the City's Transit First Policy. By complying with these applicable requirements, the project would include relevant transportation control measures specified by the CAP. Therefore, the proposed project includes applicable control measures identified in the CAP to meet the primary goals of the Plan.

Examples of a project that could cause the disruption or delay of CAP control measures are projects that would preclude the extension of a transit line or bike path, or projects that propose excessive parking beyond parking requirements. The proposed project would add approximately 306,000 gross square feet of convention and exhibition land uses to a dense, walkable urban area near a concentration of regional and local transit service. It would not preclude the extension of a transit line or a bike path or any other transit improvement, and thus would not disrupt or hinder implementation of control measures identified in the CAP.

For the reasons described above, the proposed project would not interfere with implementation of the 2010 Clean Air Plan, and because the proposed project would be consistent with the applicable air quality plan that demonstrates how the region will improve ambient air quality and achieve the state and federal ambient air quality standards, this impact would be *less than significant*.

Mitigation: None required.

Impact AQ-7: The proposed project would not create objectionable odors that would affect a substantial number of people. (Less than Significant)

Observation indicates that the project site is not substantially affected by sources of odors.⁸⁵ Typical odor sources of concern include wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing facilities, fiberglass manufacturing facilities, auto body shops, rendering plants, and coffee roasting facilities. The proposed expansion of an existing convention center would not create a significant source of new odors. During construction, diesel exhaust from construction equipment would generate some odors. However, construction-related odors would be temporary and would not persist upon project completion. Therefore, odor impacts would be *less than significant*.

Mitigation: None required.

⁸⁵ Environmental Science Associates staff visited the site on November 24, 2013. No odors were detected.

Impact C-AQ-1: The proposed project, in combination with past, present, and reasonably foreseeable future development in the project area would contribute to cumulative air quality impacts. (Less than Significant with Mitigation)

As discussed above, regional air pollution is by its very nature largely a cumulative impact. Emissions from past, present, and future projects contribute to the region's adverse air quality on a cumulative basis. No single project by itself would be sufficient in size to result in regional nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative adverse air quality impacts.⁸⁶ The project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants. Therefore, because the proposed project's construction (Impact AQ-1) emissions would exceed the project-level thresholds for criteria air pollutants, the proposed project would be considered to result in a cumulatively considerable contribution to regional air quality impacts during construction. Additionally, construction activities would temporarily add new sources of TACs (including DPM) to areas of the City that are already adversely affected by poor air quality. The proposed project, however, would be subject to Mitigation Measure M-AQ-1, which would reduce construction period emissions of criteria air pollutants to below the thresholds shown in Table 6 and would substantially reduce emissions of TACs, including DPM.

Compliance with this mitigation measure would ensure that the proposed project would not result in a considerable contribution to cumulative construction-related air quality impacts and impacts would be reduced to *less than significant with mitigation*.

Upon completion of construction activities, the proposed project would not have the potential to result in cumulative air quality impacts. As shown in Tables 10 and 11, the proposed project's operational emissions would not increase emissions above stated thresholds (the levels at which a project is considered to contribute significantly to cumulative air quality impacts). Furthermore, the proposed project would not result in sources of TACs or DPM emissions that would contribute considerably to local health risks. Therefore, upon completion of construction activities, the proposed project's contribution to cumulative regional and localized air quality impacts would be *less than significant*.

Mitigation Measure: Implementation of Mitigation Measure M-AQ-1.

Level of Significance After Mitigation: With implementation Mitigation Measure M-AQ-1, cumulative impacts to air quality would be *less than significant*.

⁸⁶ BAAQMD, CEQA Air Quality Guidelines, May 2011, page 2-1.

Тор	ics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
7.	GREENHOUSE GAS EMISSIONS— Would the project:					
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			\boxtimes		
b)	Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			\boxtimes		

Environmental Setting

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs has been implicated as the driving force for global climate change. The primary GHGs are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), ozone, and water vapor.

Individual projects emit GHGs during demolition, construction, and operational phases. While the presence of the primary GHGs in the atmosphere is naturally occurring, CO2, CH4, and N2O are largely emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of CO2 are largely byproducts of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural activities and landfills. Black carbon has recently emerged as a major contributor to global climate change, possibly second only to CO2. Black carbon results from incomplete combustion of fossil fuels, biofuels, and biomass.⁸⁷ N2O is emitted from agricultural activities, fossil fuel combustion, wastewater management, and industrial processes, such as the production of nitric acid, which is used to make synthetic commercial fertilizer.⁸⁸ Other GHGs generated in industrial processes include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Greenhouse gases are typically reported in "carbon dioxide-equivalent" measures (CO2E).⁸⁹

There is international scientific consensus that human-caused increases in GHGs have contributed and will continue to contribute to global warming. Many impacts resulting from climate change, including increased fires, floods, severe storms and heat waves, occur already and will only become more frequent and more costly.⁹⁰ Secondary effects of climate change are likely to include a global rise in sea levels; impacts to agriculture, the state's electricity system, and native freshwater fish ecosystems; an increase in

⁸⁷ Center for Climate and Energy Solutions. *What is Black Carbon?*, April 2010. Available online at: http://www.c2es.org/ docUploads/what-is-black-carbon.pdf. Accessed November 12, 2013.

⁸⁸ U.S. Environmental Protection Agency. *Overview of Greenhouse Gases, Climate Change,* September 9, 2013. Available online at: http://epa.gov/climatechange/ghgemissions/gases/n20.html. Accessed November 12, 2013.

⁸⁹ Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalents," a weighted average based on each gas's heat absorption (or "global warming") potential.

⁹⁰ California Climate Change Portal. Available online at: http://www.climatechange.ca.gov. Accessed November 12, 2013.

the vulnerability of levees in the Sacramento-San Joaquin Delta; changes in disease vectors; and changes in habitat and biodiversity.^{91,92}

The ARB estimated that in 2010, California produced approximately 451 million gross metric tons of CO2E (MMTCO2E) emissions.⁹³ ARB determined that transportation is the source of 38 percent of the State's GHG emissions, followed by electricity generation (both in-state and out-of-state) at 21 percent and industrial sources at 19 percent. Commercial and residential fuel use (primarily for heating) accounted for approximately 10 percent of CO2E emissions.⁹⁴ In the Bay Area, the transportation (on-road motor vehicles, off-highway mobile sources, and aircraft) and the industrial and commercial sector were the two largest sources of GHG emissions, each accounting for approximately 36 percent of the Bay Area's 95.8 MMTCO2E emitted in 2007.⁹⁵ Electricity generation accounts for approximately 16 percent of the Bay Area's GHG emissions, followed by residential fuel usage (e.g., home water heaters, furnaces, etc.) at 7 percent, off-road equipment at 3 percent, and agriculture at 1 percent.⁹⁶

Regulatory Setting

In 2005, in recognition of California's vulnerability to the effects of climate change, former Governor Arnold Schwarzenegger established Executive Order -05, which set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced:

- By 2010: reduce GHG emissions to 2000 levels (approximately 457 MMTCO2E);
- By 2020: reduce emissions to 1990 levels (estimated at 427 MMTCO2E); and
- By 2050: reduce state-wide GHG emissions to 80 percent below 1990 levels (about 85 MMTCO2E).

In response, in 2006, the California legislature passed Assembly Bill No. 32 (AB 32; California HSC Division 25.5, Section 38500, et seq.) also known as the Global Warming Solutions Act. AB 32 requires ARB to design and implement emission limits, regulations, and other measures to reduce GHG emissions to 1990 levels by the year 2020.⁹⁷

Pursuant to AB 32, ARB adopted the Climate Change Scoping Plan (Scoping Plan) in December 2008, as the state's overarching plan for addressing climate change. The Scoping Plan outlines measures to meet the required GHG reductions by 2020 and sets out an implementation timeline for GHG reduction strategies. In order to meet the goals of AB 32, California must reduce its GHG emissions by 30 percent below projected

⁹¹ Ibid.

⁹² California Energy Commission. California Climate Change Center. *Our Changing Climate 2012*. Available online at: http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf. Accessed November 12, 2013.

⁹³ California Air Resources Board. California Greenhouse Gas Inventory for 2000-2010— by Category as Defined in the Scoping Plan. Available online at: http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_00-11_2013-08-01.pdf. Accessed December 30, 2013.

⁹⁴ Ibid.

⁹⁵ Bay Area Air Quality Management District, Source Inventory of Bay Area Greenhouse Gas Emissions: Base Year 2007, updated February 2010. Available online at: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/ Emission%20Inventory/regionalinventory2007_2_10.ashx. Accessed November 12, 2013.

⁹⁶ Ibid.

⁹⁷ Governor's Office of Planning and Research. Technical Advisory- CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review, June 19, 2008. Available online at: http://opr.ca.gov/docs/ june08-ceqa.pdf. Accessed November 13, 2013.

2020 business as usual emissions levels, or about 15 percent from 2008 levels.⁹⁸ The Scoping Plan estimates a reduction of 174 million MMTCO2E (about 191 million U.S. tons) from the transportation, energy, agriculture, forestry, and high global warming potential sectors, as summarized in **Table 12**.⁹⁹

Sector	GHG Reductions (MMTCO2E)
Transportation Sector	62.3
Electricity and Natural Gas	49.7
Industry	1.4
Landfill Methane Control Measure (Discrete Early Action)	1
Forestry	5
High Global Warming Potential GHGs	20.2
Additional Reductions Needed to Achieve the GHG Cap	34.4
Total	174
Other Sectors/Recommended Measures	
Government Operations	1-2
Agriculture - Methane Capture at Large Dairies	1
Water	4.8
Green Buildings	26
High Recycling/ Zero Waste	
Commercial Recycling	
Composting	0
Anaerobic Digestion	2
Extended Producer Responsibility	
Environmentally Preferable Purchasing	
Total	41.8 - 42.8

 TABLE 12

 GREENHOUSE GAS REDUCTIONS BY SECTOR FROM THE AB32 SCOPING PLAN

The AB 32 Scoping Plan recommendations are intended to curb projected business-as-usual growth in GHG emissions and reduce those emissions to 1990 levels. Meeting the reduction goals of the Scoping Plan would result in an overall annual net decrease in GHGs relative to current levels, accounting for projected increases in emissions resulting from anticipated growth.¹⁰⁰

In addition, Senate Bill 375 (SB 375) was implemented to reduce carbon emission by aligning local land use and transportation planning to further achieve the state's GHG reduction goals. SB 375 requires Metropolitan Planning Organizations to incorporate a "sustainable communities strategy" in regional

⁹⁸ California Air Resources Board. *California's Climate Plan: Fact Sheet,* September 25, 2010. Available online at: http://www.arb.ca.gov/cc/cleanenergy/clean_fs2.pdf. Accessed November 13, 2013.

⁹⁹ California Air Resources Board. *Assembly Bill 32: Global Warming Solutions Act.* Available online at: http://www.arb.ca.gov/cc/ab32/ab32.htm/. Accessed November 13, 2013.

¹⁰⁰ The AB 32 Scoping Plan is currently undergoing a 5-year update, as required by the legislation. A discussion draft was released on October 1, 2013. ARB plans to release the draft plan in January 2014 and will hold a hearing in spring 2014 to consider adoption of the final plan.

transportation plans (RTPs) to achieve GHG emission reduction targets set by ARB. The Bay Area MTC's 2013 RTP, Plan Bay Area, Strategy for a Sustainable Region, was adopted on July 18, 2013, and is the first plan subject to SB 375.¹⁰¹

In conformance with AB 32, ARB has identified a GHG reduction target of 15 percent from current levels for local governments, noting that successful implementation of the Scoping Plan relies on local governments' land use planning and urban growth decisions because local governments have the primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions.¹⁰² The BAAQMD conducted an analysis of the actions outlined in the Scoping Plan and determined that in order for the Bay Area to meet the GHG reduction goals, the region would need to achieve an additional 2.3 percent reduction in GHG emissions from the land use sector.¹⁰³

The BAAQMD is the primary agency responsible for air quality in the nine-county San Francisco Bay Area air basin. The BAAQMD recommends that local agencies adopt a Greenhouse Gas Reduction Strategy consistent with the goals of AB 32 and that significance of GHG emissions from a project be based on the degree to which that project complies with a Greenhouse Gas Reduction Strategy. As described below, this recommendation is consistent with the approach to analyzing GHG emissions outlined in the CEQA Guidelines.

At a local level, the City of San Francisco has developed a number of plans and programs to reduce the City's contribution to global climate change. San Francisco's 2008 Greenhouse Gas Reduction ordinance requires that by 2008, the City determine its GHG emissions for the year 1990, the baseline level with reference to which target reductions are set; by 2017, reduce GHG emissions by 25 percent below 1990 levels; by 2025, reduce GHG emissions by 40 percent below 1990 levels; and finally by 2050, reduce GHG emissions by 80 percent below 1990 levels. San Francisco's Strategies to Address Greenhouse Gas Emissions (Greenhouse Gas Reduction Strategy) documents the City's actions to pursue cleaner energy, energy conservation, alternative transportation, and solid waste reduction. As identified in the Greenhouse Gas Reduction Strategy, the City has implemented a number of mandatory requirements and incentives that have measurably reduced GHG emissions including, but not limited to, increasing the energy efficiency of new and existing buildings, installation of solar panels on building roofs, implementation of a green building strategy, adoption of a zero waste strategy, a construction and demolition debris recovery ordinance, a solar energy generation subsidy, incorporation of alternative fuel vehicles in the City's transportation fleet (including buses), and a mandatory recycling and composting ordinance. The strategy also identifies 42 specific regulations for new development that would reduce a project's GHG emissions.

¹⁰¹ ABAG and MTC, Draft Bay Area Plan, Strategy for a Sustainable Region. March 2013. Available online at: http://www.mtc.ca.gov/planning/plan_bay_area/. Accessed November 13, 2013.

¹⁰² CARB. Climate Change Scoping Plan, December 2008.

¹⁰³ BAAQMD. California Environmental Quality Act, Proposed Thresholds of Significance, December 7, 2009. Available online at: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/Draft%20BAAQMD%20CEQA%20 Guidelines_Dec%207%202009.ashx?la=en. Accessed November 13, 2013.

San Francisco's policies and programs have resulted in a reduction in GHG emissions below 1990 levels of approximately 6.15 MMTCO2E. A recent third-party verification of the City's 2010 community-wide and municipal emissions inventory confirmed that San Francisco reduced its GHG emissions to 5.26 MMTCO2E, representing a 14.5 percent reduction in GHG emissions below 1990 levels, which exceeds the statewide AB 32 GHG reduction goals.¹⁰⁴

Approach to Analysis

The potential for a project to result in significant GHG emissions that contribute to the cumulative effects of global climate change is determined by an assessment of the project's compliance with local and state plans, policies and regulations adopted for the purpose of reducing the cumulative effects of climate change. GHG emissions are analyzed in the context of their contribution to the cumulative effects of climate change because a single land use project could not generate enough GHG emissions to noticeably change the global average temperature. Sections 15064.4 and 15183.5 of the CEQA Guidelines address the analysis and determination of significant impacts from a proposed project's GHG emissions.

Section 15183.5 of the CEQA Guidelines allows public agencies to analyze and mitigate GHG emissions as part of a larger plan for the reduction of greenhouse gases and describes the required contents of such a plan. As discussed above, San Francisco has prepared its own Greenhouse Gas Reduction Strategy and reduced community-wide GHG emissions to below 1990 levels, meeting GHG reduction goals outlined in AB 32. The City is also well on its way to meeting the long-term GHG reduction goal of reducing emissions 80 percent below 1990 levels by 2050. Chapter 1 of the Greenhouse Gas Reduction Strategy describes how the strategy meets the requirements of CEQA Guidelines Section 15183.5. The BAAQMD has reviewed San Francisco's Greenhouse Gas Reduction Strategy, concluding that "[a]ggressive GHG reduction targets and comprehensive strategies like San Francisco's help the Bay Area move toward reaching the state's AB 32 goals, and also serve as a model from which other communities can learn."

Factors to be considered in making a significance determination in accordance with CEQA Guidelines Section 15064.4(b), include: 1) the extent to which GHG emissions would increase or decrease as a result of the proposed project; 2) whether or not a proposed project exceeds a threshold that the lead agency determines applies to the project; and finally 3) demonstrating compliance with plans and regulations adopted for the purpose of reducing or mitigating GHG emissions.

The GHG analysis provided below includes a qualitative assessment of GHG emissions that would result from the proposed project, including emissions from an increase in vehicle trips, natural gas combustion, and/or electricity use among other things. Consistent with the CEQA Guidelines and BAAQMD recommendations for analyzing GHG emissions, the significance of GHG emissions generated during project construction and operation is based on whether the project complies with the City's Greenhouse Gas Reduction Strategy, and associated policies, programs and regulations, including specific regulations that address the reduction of GHG emissions. Projects that comply with the Greenhouse Gas Reduction

¹⁰⁴ San Francisco Department of the Environment, Community Greenhouse Gas Inventory 3rd Party Verification Memo, http://www.sfenvironment.org/download/community-greenhouse-gas-inventory-3rd-party-verification-memo, accessed December 27, 2013.

Strategy would not result in a substantial increase in GHGs, since the City has shown that overall community-wide GHGs have decreased and the City has met AB 32 GHG reduction targets. Consequently, such projects would not be considered to result in a significant cumulative impact from GHG emissions. Individual project compliance with the City's Greenhouse Gas Reduction Strategy is demonstrated by completion of the *Compliance Checklist for Greenhouse Gas Analysis*.¹⁰⁵

In summary, the two applicable greenhouse gas reduction plans, the AB 32 Scoping Plan and the Greenhouse Gas Reduction Strategy, are intended to reduce GHG emissions below current levels. Given that the City's local greenhouse gas reduction targets are more aggressive than the state's 2020 GHG reduction targets and consistent with the long-term 2050 reduction targets, the City's Greenhouse Gas Reduction Strategy is consistent with the goals of AB 32. Therefore, proposed projects that are consistent with the Greenhouse Gas Reduction Strategy would be consistent with the goals of AB 32, would not conflict with either plan, and would therefore not exceed the applicable GHG threshold of significance. Furthermore, a locally compliant project would not result in a substantial increase in GHGs because, as demonstrated in the GHG Reduction Strategy, San Francisco's policies have resulted in a measurable reduction in GHGs, to 14.4 percent below 1990 levels.

The following analysis of the proposed project's impact on climate change focuses on the project's contribution to cumulatively significant GHG emissions. Given the analysis in a cumulative context, project-specific impact statements are not provided.

Impact C-GG-1: The proposed project would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment. (Less than Significant)

The most common GHGs resulting from human activity associated with land use decisions are CO2, black carbon, CH4, and N2O. Individual projects contribute to the cumulative effects of climate change by directly or indirectly emitting GHGs during construction and operational phases. Direct operational emissions include GHG emissions from new vehicle trips and area sources (natural gas combustion). Indirect emissions include emissions from electricity providers, energy required to pump, treat, and convey water, and emissions associated with landfill operations.

The proposed project would increase the activity onsite by constructing and operating an expanded Moscone Center, with associated increases in employment and visitors to the project site. Therefore, the proposed project would contribute to annual long-term increases in GHGs as a result of increased vehicle trips (mobile sources) and commercial operations that result in an increase in energy use, water use, wastewater treatment, and solid waste disposal. Construction activities would also result in temporary increases in GHG emissions.

¹⁰⁵ SF Planning Department. Compliance Checklist for Greenhouse Gas Analysis: Table 2. Municipal Projects, Moscone Center Expansion Project, January 10, 2014. This document is available for review as part of Case File No. 2013.0154E at the SF Planning Department, 1650 Mission Street, Suite 400, San Francisco, California, 94103. Information from this document is provided in Table 13.

Projects that are consistent with San Francisco's Greenhouse Gas Reduction Strategy would result in a less-than-significant GHG impact. As shown in Table 13, the proposed project would comply with applicable policies, programs, and ordinances identified in the Greenhouse Gas Reduction Strategy. Depending on a proposed project's size, use, and location, a variety of controls are in place to ensure that a proposed project would not impair the state's ability to meet statewide GHG reduction targets outlined in AB 32, or impact the City's ability to meet San Francisco's local GHG reduction targets. Given that: (1) San Francisco has implemented regulations to reduce GHG emissions specific to new construction and renovations of municipal projects; (2) San Francisco's sustainable policies have resulted in the measured reduction of annual GHG emissions; (3) San Francisco has met and exceeds AB 32 GHG reduction goals for the year 2020 and is on track towards meeting long-term GHG reduction goals; (4) current and probable future state and local GHG reduction measures will continue to reduce a project's contribution to climate change; and (5) San Francisco's Strategies to Address Greenhouse Gas Emissions meet the CEQA and BAAQMD requirements for a Greenhouse Gas Reduction Strategy, projects that are consistent with San Francisco's regulations would not contribute considerably to global climate change. The proposed project would be required to comply with the requirements listed above, and was determined to be consistent with San Francisco's Strategies to Address Greenhouse Gas Emissions. Therefore, the proposed project would result in *a less-than-significant* impact with respect to GHG emissions.

Mitigation: None required.

Impact C-GG-2: The proposed project would not conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions. (Less than Significant)

San Francisco's Compliance Checklist for Greenhouse Analysis is used to demonstrate compliance of the proposed project with San Francisco's Greenhouse Gas Reduction Strategy.¹⁰⁶ Direct operational GHG emissions associated with the project would include new vehicle trips and area sources (natural gas combustion). Indirect emissions include emissions from electricity providers, energy required to pump, treat, and convey water, and emissions associated with landfill operations. The discussion of Impact C-GG-1 includes a qualitative assessment of GHG emissions that would result from the proposed project, including emissions from an increase in vehicle trips, natural gas combustion, and/or electricity use among other activities. The proposed project was determined to comply with the Greenhouse Gas Reduction Strategy.¹⁰⁷

As shown in Table 13, the proposed project would comply with applicable policies, programs, and ordinances implementing the Greenhouse Gas Reduction Strategy, and therefore would not conflict with plans, policies, or regulations adopted for the purpose of reducing GHG-related impacts, and this impact would be *less than significant*.

Mitigation: None required.

¹⁰⁶ SF Planning Department. Compliance Checklist for Greenhouse Gas Analysis: Table 2. Municipal Projects, Moscone Center Expansion Project, January 10, 2014. This document is available for review as part of Case File No. 2013.0154E at the SF Planning Department, 1650 Mission Street, Suite 400, San Francisco, California, 94103. Information from this document is provided in Table 13. ¹⁰⁷ Ibid.

Regulation	Requirement	Project Compliance	Discussion	
Transportation sector				
Emergency Ride Home Program	All City employees are automatically eligible for the emergency ride home program.	 Project Complies Not Applicable Project Does Not Comply 	Taxi vouchers are available to employees requiring emergency transportation home.	
Healthy Air and Clean Transportation Ordinance, Section 403 (San Francisco Environment Code, Chapter 4, Section 403)	 Requires all City officers, boards, commissions and department heads responsible for departments that require transportation to fulfill their official duties to reduce the Municipal Fleet by implementing Transit First policies by: (A) maximizing the use of public transit, including taxis, vanpools, and carsharing; (B) facilitating travel by bicycle, or on foot; and, (C) minimizing the use of single-occupancy motor vehicles, for travel required in the performance of public duties. 	 Project Complies Not Applicable Project Does Not Comply 	Moscone provides commuter checks to employees to encourage use of public transportation. The proposed project would provide bike parking and would not build a new parking garage (no parking is currently provided), thus discouraging use of single-occupancy vehicles for travel.	
Healthy Air and Clean Transportation Ordinance (San Francisco Environment Code, Chapter 4)	Requires the reduction of the number of passenger vehicles and light-duty trucks in the Municipal Fleet. In addition, requires new purchases or leases of passenger vehicles and light-duty trucks to be the cleanest and most efficient vehicles available on the market. There are also requirements for medium and heavy duty vehicles and for phasing out highly polluting vehicles (diesel MUNI buses).	 Project Complies Not Applicable Project Does Not Comply 	Moscone has one (1) 14' stake bed "recycling" truck and has retrofitted its propane-powered forklifts and carts with emission reduction equipment. Operations and maintenance activities would be performed by Moscone staff at the existing location, so existing fleet vehicles may be utilized. The project would not require expansion of the existing fleet. If any new fleet vehicles are required for project operations and maintenance activities, new purchases would be required to be consistent with these vehicle efficiency requirements.	
Biodiesel for Municipal Fleets (Executive Directive 06-02)	Requires all diesel using City Departments to begin using biodiesel (B20). Sets goals for all diesel equipment to be run on biodiesel by 2007 and goals for increasing biodiesel blends to B100.	 Project Complies Not Applicable Project Does Not Comply 	Consistent with this requirement, all diesel fuel vehicles owned and operated by Moscone currently use B20.	

TABLE 13 GREENHOUSE GAS REDUCTION STRATEGIES APPLICABLE TO THE PROPOSED PROJECT

Regulation	Requirement	Project Compliance	Discussion		
Transportation sector (cont.)					
Clean Construction Ordinance (San Francisco Administrative Code, Section 6.25)	 Effective March 2009, all contracts for large (20+ day) City projects are required to: A. Fuel diesel vehicles with B20 biodiesel, and B. Use construction equipment that meet USEPA Tier 2 standards or best available control technologies for equipment over 25 hp. 	 Project Complies Not Applicable Project Does Not Comply 	All diesel fuel vehicles would use B20, and construction equipment shall meet USEPA Tier 2 standards or use best possible pollution control technologies.		
Bicycle Parking in City-Owned and Leased Buildings (San Francisco Planning Code, Section 155.1)	 Class 1 and 2 Bicycle Parking Spaces Class 1 Requirements: (A) Provide two spaces in buildings with 1-20 employees. (B) Provide four spaces in buildings with 21 to 50 employees. (C) In buildings with 51 to 300 employees, provide bicycle parking equal to at least five percent of the number of employees at that building, but no fewer than five bicycle spaces. (D) In buildings with more than 300 employees, provide bicycle parking equal to at least three percent of the number of employees at that building, but no fewer than 160 bicycle spaces. (D) In buildings with more than 300 employees, provide bicycle parking equal to at least three percent of the number of employees at that building, but no fewer than 160 bicycle spaces. In addition to the Class 1 bicycle parking spaces provide Class 2 bicycle parking. Class 2 Requirements: (A) In buildings with one to 40 employees, at least two bicycle parking spaces shall be provided. (B) In buildings with 41 to 50 employees, at least four bicycle parking spaces shall be provided. (C) In buildings with 51 to 100 employees, at least six bicycle parking spaces shall be provided. (D) In buildings with more than 100 employees, at least eight bicycle parking spaces shall be provided. (D) In buildings with more than 100 employees, at least eight bicycle parking spaces shall be provided. 	 Project Complies Not Applicable Project Does Not Comply 	Moscone would have over 300 employees at project completion. The proposed project would provide 18 Class 1 bike parking spaces for employees.		

TABLE 13 (Continued) GREENHOUSE GAS REDUCTION STRATEGIES APPLICABLE TO THE PROPOSED PROJECT
Regulation	Requirement	Project Compliance	Discussion
	Energy Effici	ency Sector	
Green Building requirements for City Buildings: Indoor Water Use Reduction (San Francisco Environment Code, Chapter 7)	The LEED Project Administrator shall submit documentation verifying a minimum 30 percent reduction in the use of indoor potable water, as calculated to meet and achieve LEED credit WE3.2.	 Project Complies Not Applicable Project Does Not Comply 	The proposed project would meet the requirement of a 30% reduction in the use of indoor potable water (LEED Standard). Documentation would be provided to the Department of Building Inspection (DBI) during the permit approval process.
Resource Efficiency and Green Building Ordinance (San Francisco Environment Code, Chapter 7)	 All new construction must comply achieve at a minimum the LEED® Gold standard. City leaseholds are subject to all of the requirements of the Commercial Water Conservation Ordinance of Chapter 13A of the San Francisco Building Code, including provisions requiring the replacement of non-compliant water closets and urinals on or before January 1, 2017. All water closets (toilets) with a rated flush volume exceeding 1.6 gallons per flush and all urinals with a rated flush volume exceeding 1.0 gallon per flush must be replaced with high-efficiency water closets that use no more than 1.28 gallons per flush and lugh sper flush, respectively. Showerheads must use no more than 1.5 gal/min. In addition, all showerheads in the facility having a maximum flow rate exceeding 2.5 gallons per minute are replaced with fixtures having a maximum flow rate not to exceed 0.5 gallons per minute per appropriate site conditions. 	 ➢ Project Complies ➢ Not Applicable ○ Project Does Not Comply 	All existing and new water closets, urinals and faucets in the project would comply with the Commercial Water Conservation Ordinance of Chapter 13A of the San Francisco Building Code.
Green Building requirements for City Buildings: Energy Efficient Lighting Retrofit Requirements. (San Francisco Environment Code, Chapter 7)	These requirements (or those in the CCR Title 24, Part 6, or subsequent State standards, whichever are more stringent) shall apply in all cases except those in which a City department is not responsible for maintenance of light fixtures or exit signs. Exit Signs - At the time of installation or replacement of broken or non-functional	 Project Complies Not Applicable Project Does Not Comply 	The project would comply with the San Francisco Environment Code, Chapter Environment Code Chapter 7, Energy Efficient Lighting Retrofit Requirements.

Regulation	Requirement	Project Compliance	Discussion
	Energy Effici	iency Sector	
Green Building requirements for City Buildings: Energy Efficient Lighting Retrofit Requirements. (San Francisco Environment Code, Chapter 7) (cont.)	exit signs, all exit signs shall be replaced with light-emitting diode (L.E.D.)-type signs. Edge-lit compact fluorescent signs may be used as replacements for existing edge-lit incandescent exit signs. Fluorescent Fixtures - Mercury Content. The mercury content of each 4-foot or 8- foot fluorescent lamp ("tube" or "bulb") installed in a luminaire shall not exceed 5 mg for each 4-foot fluorescent lamp, or 10 mg for each 8-foot fluorescent lamp. Fluorescent Fixtures - Energy Efficiency. The lamp and ballast system in each luminaire that utilizes one or more 4-foot or 8-foot linear fluorescent lamps to provide illumination in a City-Owned Facility must meet the specified requirements. Exterior Light Fixtures - At the time of installation or replacement of broken or non-functional exterior light fixtures, a photocell or automatic timer shall be installed to prevent lights from operating during daylight hours.		
Green Building requirements for City Buildings: Energy Performance (San Francisco Environment Code, Chapter 7)	 Using an Alternative Calculation Method (ACM) approved by the California Energy Commission, the LEED Project Administrator shall calculate the project's energy use, and compare it to the standard or "budget" building to achieve LEED credit EA1 by either: (A) A 15 percent compliance margin over Title 24, Part 6, 2008 California Energy Standards; or, (B) Document compliance with Title 24, Part 6, 2008 California Energy Standards, including submittal of all standard documentation, and additionally demonstrate that the project achieves a 15 percent or greater compliance margin over the ASHRAE 90.1 2007 energy cost baseline using the published LEED 2009 rules. 	 ➢ Project Complies ☐ Not Applicable ☐ Project Does Not Comply 	The proposed project would achieve a 15% energy reduction compared to 2008 California Energy Code, Title 24, Part 6. Documentation would be provided to DBI during the permit approval process.
Green Building requirements for City Buildings: Renewable Energy (San Francisco Environment Code, Chapter 7)	The LEED Project Administrator shall confer with SFPUC on renewable energy opportunities for municipal construction projects. The LEED Project Administrator shall submit documentation verifying that either:	 Project Complies Not Applicable Project Does Not Comply 	At a minimum, at least 1% of the building's energy would be generated on-site with renewable sources, achieving LEED Credit A2. Documentation would be provided.

Regulation	Requirement	Project Compliance	Discussion
	Energy Efficience	cy Sector (cont.)	
Green Building requirements for City Buildings: Renewable Energy (San Francisco Environment Code, Chapter 7) (cont.)	 (A) At least 1 percent of the building's energy costs are offset by on-site renewable energy generation, achieving LEED credit A 2, including any combination of: photovoltaic, solar thermal, wind, biofuel-based electrical systems, geothermal heating, geothermal electric, wave, tidal, or low impact hydroelectric systems, or as specified in Section 25741 of the California Public Resources Code; or, (B) In addition to meeting LEED prerequisite EA 1 Energy performance requirement, achieve an additional 10 percent compliance margin over Title 24, Part 6, 2008 California Energy Standards, for a total compliance margin of at least 25 percent. 		
Green Building requirements for City Buildings: Commissioning (San Francisco Environment Code, Chapter 7)	The LEED Project Administrator shall submit documentation verifying that the facility has been or will meet the criteria necessary to achieve LEED credit EA 3.0 (Enhanced Commissioning), in addition to LEED prerequisite EAp1 (Fundamental Commissioning of Building Energy Systems.)	 Project Complies Not Applicable Project Does Not Comply 	The proposed project would have fundamental and enhanced commissioning to meet LEED EAp1 and EA 3.0. This would be verified during the design and construction phases.
	Waste Reduc	ction Sector	
Resource Efficiency and Green Building Ordinance (San Francisco Environment Code, Chapter 7)	The ordinance requires all demolition (and new construction) projects to prepare a Construction and Demolition Debris Management Plan designed to recycle construction and demolition materials to the maximum extent feasible, with a goal of 75% diversion. The ordinance specifies requires for all city buildings to provide adequate recycling space	 Project Complies Not Applicable Project Does Not Comply 	The project would comply with this requirement by working with local waste management companies to create a sorting and recycling program to divert at least 75% of the demolition and construction debris from landfills. This would be accomplished by establishing the requirement with the subcontractors and vendors and providing proper supervision to make sure it is enforced. This would be tracked by monthly reports provided by the waste management company.
Resource Conservation Ordinance (San Francisco Environment Code, Chapter 5)	This ordinance establishes a goal for each City department to (i) maximize purchases of recycled products and (ii) divert from disposal as much solid waste as possible so that the City can meet the state-mandated 50% division requirement. Each City department shall prepare a Waste Assessment. The ordinance also requires the Department	 Project Complies Not Applicable Project Does Not Comply 	Moscone Center has a conservation program that has been implemented for the past 15 years, and this program would continue with the proposed project.

Regulation	Requirement	Project Compliance	Discussion
	Waste Reductio	n Sector (cont.)	
Resource Conservation Ordinance (San Francisco Environment Code, Chapter 5) (cont.)	of the Environment to prepare a Resource Conservation Plan that facilitates waste reduction and recycling. The ordinance requires janitorial contracts to consolidate recyclable materials for pick up. Lastly, the ordinance specifies purchasing requirements for paper products.		
Green Building Requirements for City Buildings: Recycling (San Francisco Environment Code, Chapter 7)	All City departments are required to recycle used fluorescent and other mercury containing lamps, batteries, and universal waste as defined by California Code of Regulations Section 66261.9	 Project Complies Not Applicable Project Does Not Comply 	Moscone Center currently complies with this requirement and would continue to do so with the proposed project.
Mandatory Recycling and Composting Ordinance (San Francisco Environment Code, Chapter 19)	The mandatory recycling and composting ordinance requires all persons in San Francisco to separate their refuse into recyclables, compostables and trash, and place each type of refuse in a separate container designated for disposal of that type of refuse.	 Project Complies Not Applicable Project Does Not Comply 	Moscone would continue its current system of sorting trash, compostables and recyclables at project completion in a manner that complies with the City's mandatory ordinance.
Construction Recycled Content Ordinance (San Francisco Administrative Code, Section 6.4)	onstructionOrdinance requires the use of recycled content material in public worksrdinanceprojects to the maximum extent feasible and gives preference to local manufacturers and industry.		To the extent possible, the proposed project would use recycled content materials and give preference to local manufacturers and industry.
	Environment/Cor	servation Sector	
Street Tree Planting Requirements for New Construction (San Francisco Planning Code Section 138.1)	Planning Code Section 138.1 requires new construction, significant alterations or relocation of buildings within many of San Francisco's zoning districts to plant on 24-inch box tree for every 20 feet along the property street frontage	 Project Complies Not Applicable Project Does Not Comply 	It is not feasible to plant the number of trees required by the Planning Code. The Department of Public Works would pay the required fee in lieu of planted trees to meet this requirement.
Green Building requirements for City Buildings: Enhanced Refrigerant Management (San Francisco Environment Code, Chapter 7)	rn Building irrements for City dings: Enhanced igerant agement Francisco tronment Code, pter 7) The LEED Project Administrator shall submit documentation verifying that the project will reduce ozone depletion, while minimizing direct contribution to climate change, achieving LEED credit EA 4.		The project LEED Administrator would submit the required documentation, stating the project achieves LEED credit EA 4. The new or relocated project components, including the kitchen, would not have installed equipment that contains CFCs or halons.
Green Building requirements for City Buildings: Low Emitting Materials (San Francisco Environment Code, Chapter 7)	The LEED Project Administrator shall submit documentation verifying that the project is using low-emitting materials, subject to onsite verification, achieving LEED credits EQ 4.1. EQ 4.2. EQ 4.3. and EQ 4.4 wherever applicable:	 Project Complies Not Applicable Project Does Not Comply 	The proposed project would use low- emitting materials to achieve LEED credits EQ 4.1, EQ 4.2, EQ 4.3, and EQ 4.4, wherever applicable. Documentation would be submitted to the Green Building Certification Institute (GBCI) to that effect. Pursuant to Environmental

Regulation	Requirement	Project Compliance	Discussion
	Environment/Conser	vation Sector (cont.)	
Green Building requirements for City Buildings: Low Emitting Materials (San Francisco Environment Code, Chapter 7) (cont.)	 (A) Adhesives, sealants and sealant primers shall achieve LEED credit EQ 4.1. including compliance with South Coast Air Quality Management District (SCAQMD) Rule 1168. (B) Interior paints and coatings applied on-site shall achieve LEED credit EQ 4.2. including: (i) Architectural paints and coatings shall meet the VOC content limits of Green Seal Standard GS-11. (ii) Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates shall not exceed the VOC content limits of Green Seal Standard GC-03 of 250 g/L. (iii) Clear wood finishes, floor coatings, stains, primers, and shellacs applied to interior elements shall not exceed SCAQMD Rule 1113 VOC content limits. (C) Flooring systems shall achieve LEED credit EQ 4.3 Option 1. including: (i) Interior carpet shall meet the testing and product requirements of the Carpet and Rug Institute Green Label Program. (ii) Interior carpet cushioning shall meet the requirements of the carpet and Rug Institute Green Label Program. (iii) Hard surface flooring, including linoleum, laminate flooring, rubber flooring, and wall base shall be certified as compliant with the FloorScore standard, provided. 	vation Sector (cont.)	Code, Chapter 7, upon receiving the LEED rating from the GBCI, the LEED Project Administrator shall submit the LEED ratings and the final LEED Scorecard to the Department of the Environment for review. The proposed project would explore the possibility of achieving LEED Pilot Credit 2.
	(D) Interior composite wood and agrifiber products shall achieve		

Regulation	Requirement	Project Compliance	Discussion
	Environment/Conser	vation Sector (cont.)	
Green Building requirements for City Buildings: Low Emitting Materials (San Francisco Environment Code, Chapter 7) (cont.)	 LEED credit EQ 4.4 by containing no added urea formaldehyde resins. Interior and exterior hardwood plywood, particleboard, and medium density fiberboard composite wood products shall additionally meet California Air Resources Board Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections. (E) Project sponsors are encouraged to achieve LEED Pilot Credit 2: Persistent Bioaccumulative Toxic Chemicals Source Reduction: Dioxins and Halogenated Organic Compounds. This standard is consistent with Environment Code Chapter 5: Non-PVC Plastics. 		
Stormwater Management Ordinance and Construction Pollution Prevention (San Francisco Environment Code, Chapter 7)	For City sponsored projects, the LEED Project Administrator shall submit documentation verifying that a construction project that is located outside the City and County of San Francisco achieves the LEED SS6.2 credit. Construction projects located within the City and County of San Francisco shall implement the applicable stormwater management controls adopted by the San Francisco Public Utilities Commission (the "SFPUC"). All construction projects shall develop and implement construction activity pollution prevention and stormwater management controls adopted by the SFPUC, and achieve LEED prerequisite SSp1 or similar criteria adopted by the SFPUC, as applicable.	 ➢ Project Complies ➢ Not Applicable ➢ Project Does Not Comply 	The proposed project would comply using its current storm water holding tank system to which the new construction would connect. All new and existing project storm water management systems would comply with SFPUC Regulations. Documentation to that effect would be provided to SFPUC during permit review.
Environmentally Preferable Purchasing Ordinance (Formerly Precautionary Purchasing Ordinance)	Requires City Departments to purchase products on the Approved Green Products List, maintained by the Department of the Environment. The items in the Approved Green Products List has been tested by San Francisco City Depts. and meet standards that are more rigorous than ecolabels in protecting our health and environment.	 Project Complies Not Applicable Project Does Not Comply 	Any products purchased by City departments would be from the Approved Green Products List, whenever possible.
Tropical Hardwood and Virgin Redwood Ban (San Francisco Environment Code, Chapter 8)	The ordinance prohibits City departments from procuring, or engaging in contracts that would use the ordinance-listed tropical hardwoods and virgin redwood.	 Project Complies Not Applicable Project Does Not Comply 	All contracts associated with construction of the proposed project would prohibit use of the ordinance- listed tropical hardwood or virgin redwood in the proposed project.

Regulation	Requirement	Project Compliance	Discussion
	Environment/Conser	vation Sector (cont.)	
Wood Burning Fireplace Ordinance (San Francisco Building Code, Chapter 31, Section 3111.3)	 Bans the installation of wood burning fire places except for the following: Pellet-fueled wood heater EPA approved wood heater Wood heater approved by the Northern Sonoma Air Pollution Control District 	 Project Complies Not Applicable Project Does Not Comply 	The proposed project would not include the installation of fire places, wood burning or otherwise.
Regulation of Diesel Backup Generators (San Francisco Health Code, Article 30)	Requires: All diesel generators to be registered with the Department of Public Health All new diesel generators must be equipped with the best available air emissions control technology.	 Project Complies Not Applicable Project Does Not Comply 	All diesel generators used would be registered with the Department of Public Health, and new generators would be equipped with the best available air emissions control technology.

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
8.	WIND AND SHADOW—Would the project:					
a)	Alter wind in a manner that substantially affects public areas?			\boxtimes		
b)	Create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas?	\boxtimes				

The proposed project could create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas. For the purposes of this Initial Study, shadow impacts are identified as potentially significant. However, the EIR will include a detailed analysis of the project's shadow impact, both individually and cumulatively.

Impact WS-1: The proposed project would not alter wind in a manner that substantially affects public areas. (Less than Significant)

This discussion summarizes the results of the Wind Technical Memorandum prepared for the proposed project by ESA.¹⁰⁸ Wind impacts are generally caused by large building masses extending substantially above their surroundings, and by buildings oriented such that a large wall catches a prevailing wind,

¹⁰⁸ ESA, Technical Memorandum: Potential Section 148 Wind Impacts, Proposed Expansion of Moscone Center, October 15, 2013.

particularly if such a wall includes little or no articulation. Average wind speeds in San Francisco are the highest in the summer and lowest in winter; however, the strongest peak winds occur in winter. Throughout the year, the highest wind speeds occur in mid-afternoon and the lowest in the early morning. Westerly to northwesterly winds are the most frequent and strongest winds regardless of season. Of the primary wind directions, four have the greatest frequency of occurrence and also make up the majority of the strong winds that occur; these include the northwest, west -northwest, west, and west-southwest.

Per Section 148 of the *Planning Code*, the proposed project would have a significant wind impact if it would cause the 26 mile per hour (mph) wind hazard criterion to be exceeded for more than one hour per year. Under Section 148, new buildings and additions may not cause wind speeds that meet or exceed this hazard criterion.¹⁰⁹ Under Section 148, no exception may be granted for buildings that result in winds that exceed the hazard criterion.

Planning Code Section 148 also includes requirements for buildings to meet the pedestrian comfort criterion of 11 mph, unless an exception is granted. No exceptions may be granted for buildings that exceed the wind hazard criterion. A project that would cause exceedances of the pedestrian comfort criterion, of 11 mph, but not the wind hazard criterion, would not be considered to have a significant impact under CEQA.¹¹⁰

Upwind development in the vicinity is characterized by:

- to the northwest the relatively open space of the Yerba Buena Gardens, backstopped by the wall of high-rise buildings along Market Street;
- to the west-northwest and west the block-long Metreon Building, with the Moscone West building, Fifth and Mission Garage, and the San Francisco Center further blocking the free flow of wind; and,
- to the southwest a long open fetch on Howard Street, narrowed by buildings along the street.

Extensive prior experience with wind testing indicates that this is a windy area. Here, upwind high-rise buildings contribute to wind turbulence, while a substantial fetch of open space allows winds to gain strength and increase in speed while approaching the site.

The proposed Moscone Center Expansion project would include new construction, primarily above grade, both north and south of Howard Street. The new project buildings would result in higher Moscone Center frontages along Howard Street. Moscone North, at 54 feet, would be approximately 10 feet taller than the existing Moscone North lobby and restaurant structure. At project completion, the Moscone

¹⁰⁹ Because the hazard criterion is stated in terms of 1 hour of exceedance, it is most appropriate to report exceedances of this criterion in terms of the number of hours per year that the excess occurs, rather than the accompanying wind speeds. Thus, for each wind analysis, the number of locations and the total sum of the durations of exceedances of the hazard criterion are important measures of effect. This differs from reporting of both comfort criteria, for which wind speeds exceeded 10% of the time are examined and presented, but statistics other than the number of locations are not detailed.

¹¹⁰ The hazard and comfort criteria are derived from SF Planning Code §148, which applies to the City's downtown area, and are used by extension in CEQA analysis citywide.

South Expansion and Esplanade Expansion would function and appear as one building 95 feet in height, which would be 68 feet taller than the existing Moscone South lobby.

Also, the expansion would extend the frontages of Moscone Center towards Howard Street, and would add one elevated walkway and one enclosed structure that would cross Howard Street to connect the North and South parts of the Moscone Center.

A 1-inch to 50-foot scale model of the project site and vicinity was constructed in order to simulate the project and its existing and future contexts. The project's effects on wind were tested in a wind tunnel using 18 different test points. Wind test-point locations are shown in **Figure 19**. The results of the wind analysis are presented in **Table 14**.

Refer	References		Existing			Project			Cumulative			
Test Location Number	Wind Comfort Criterion Speed, miles/hour	Equivalent Wind Speed Exceeded 10% of Time, miles/hour	Percent `of Time Wind Speed Exceeds Criterion	S O U R C E	Equivalent Wind Speed Exceeded 10% of Time, miles/hour	Percent of Time Wind Speed Exceeds Criterion	Speed Change Relative to Existing, miles/hour	S O U R C E	Equivalent Wind Speed Exceeded 10% of Time, miles/hour	Percent of Time Wind Speed Exceeds Criterion	Speed Change Relative to Project, miles/hour	S O U R C E
1	11	9	5		10	6			10	8		
2	11	11	11		11	11			12	13		s
3	11	8	1		8	1			9	2		
4	11	11	10		11	8			11	11	1	
5	11	9	4		9	2	-1		10	5	1	
6	11	11	8		12	12	1	р	13	17	1	р
7	11	8	1		10	4	1		9	3		
8	11	15	22	e	12	12	-3	e	13	15	1	e
9	11	15	19	e	9	2	-6	-	9	3	1	
10	11	15	21	e	12	11	-3	e	13	16	1	e
11	11	11	10		9	3	-2		9	3		
12	11	11	11		10	8	-1		11	9		
13	11	9	2		9	2			9	2		
14	11	10	5		9	2	-1		9	3		
15	11	10	4		11	10	1		11	10		
16	11	16	29	e	16	26		e	17	31	1	e
17	11	9	4		10	4			9	4		
18	11	15	26	e	9	3	-6	-	10	4		
Ave. of 10%		11.4 mph			10.3 mph		-1.1 mph		10.8 mph		-0.6 mph	
	percent:		11%			7%				9 %		
Total I	Exceedances:	Total	5			Total	4			Total	5	
Subi	totals by type:	Existing	5	e		Existing	3	e	Exist	ting or Project	4	e/p
	5 51	8			New,	due to project	1	р	New, due to	Cumulative	1	s
					New, a	t new location	0	'n	New, a	t new location	0	n
SOURCE: En	vironmental	Science Associ	ates		Elimina	ated by Project	2	-	Eliminated by	Cumulative	0	-

TABLE 14 WIND ANALYSIS: EXISTING, PROJECT, AND CUMULATIVE SCENARIOS MOSCONE EXPANSION – WIND-TUNNEL TEST, AUGUST 2013

NOTES:

Comfort criterion: e = Existing exceedance; p = Exceedance due to project; s = Exceedance due to cumulative conditions.

Hazard criterion: Points that exceed the hazard criterion are shown in **bold** (none does).

Wind speeds and durations are rounded, so column totals and row differences may not add.



Under existing conditions, 13 of the 18 pedestrian test points are at or less than the Planning Code's pedestrian comfort criterion of 11 mph. The project would create one new pedestrian-comfort criterion exceedance at street level, near the northwest corner of Moscone South. The project would also eliminate two existing pedestrian-comfort criterion exceedances, one on the north side of Howard Street, in front of the North Lobby entrance, and one in the open space south of the Moscone South building. A total of 14 of the 18 pedestrian test points would meet the Planning Code's pedestrian-comfort criterion of 11 mph. The Code's wind hazard criterion would not be exceeded at any of the 18 pedestrian test locations under existing conditions. The proposed project's walkway and terraces would be similarly free of wind hazards.¹¹¹

For this reason, any changes in wind speeds due to the project would be considered to be *less than significant*.

Mitigation: None required.

Impact C-WS: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not alter wind in a manner that substantially affects public areas. (Less than Significant)

Wind tunnel testing was also conducted for cumulative conditions. The cumulative development scenario includes projects within proximity to the project site that could combine with the proposed project to affect wind conditions. Given that wind is redirected to the ground level on a building-by-building basis, wind impacts are highly localized. Cumulative developments that could affect these localized wind impacts are located within the immediate project site vicinity and in areas that are upwind from the project site. The cumulative development scenario includes the proposed project, as well as the three following proposed cumulative developments replacing the existing buildings at those project sites:

- 706 Mission Street,
- 5M Project, at Fifth Street between Mission and Howard Streets, and
- 250 Fourth Street.

These projects are further described in "Approach to Cumulative Analysis" on p. 40.

Compared to existing conditions, the cumulative development scenario would create one new pedestrian-comfort criterion exceedance at street level, on the southwest corner of Fourth and Howard Streets and a second new pedestrian-comfort criterion exceedance at street level, near the northwest corner of Moscone South. However, cumulative development would also eliminate two existing pedestrian-comfort criterion exceedances, one in front of the North Lobby entrance on Howard Street and one in the open space south of the Moscone South building. Thirteen of the 18 pedestrian test points would meet the Planning Code's pedestrian-comfort criterion of 11 mph.

¹¹¹ The test model did not include simulated parapet walls or railings around the walkway or the terraces, and the measured wind speeds therefore represent maximum expected values. Solid parapet walls or railings to a height of approximately 4 feet are expected to reduce wind speeds by several miles per hour.

Under the cumulative development scenario, a wind hazard would not exist at any of the 18 pedestrian locations. For this reason, cumulative wind impacts would be considered to be *less than significant*. Given that the project and cumulative development would not result in a wind hazard exceedance, no cumulatively significant wind impacts would occur and cumulative wind impacts would be *less than significant*.

Mitigation: None required.

Торі	cs:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
9.	RECREATION-Would the project:					
a)	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?			\boxtimes		
b)	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?					
c)	Physically degrade existing recreational resources?			\boxtimes		

Impact RE-1: The proposed project would increase the use of existing neighborhood parks or other recreational facilities, but not to the extent that substantial physical deterioration or degradation of the facilities would occur or be accelerated. (Less than Significant)

The Moscone Center is made up of three main halls: Moscone North and Moscone South, which are located across Howard Street from each other between Third and Fourth Streets, and the Moscone West exhibition hall, located across Fourth Street, north of Howard Street. In addition to Moscone North, the project block north of Howard Street shares Lot 115 with other buildings and uses above grade, including the large Yerba Buena Garden (a public park that contains the Sister Cities Garden, the Martin Luther King, Jr. Memorial, and various art installations), the Yerba Buena Center for the Arts Galleries and Forum building, and the Yerba Buena Center for the Arts Theater. The project block south of Howard Street shares Lot 91 with a variety of other buildings and uses, including the Yerba Buena Bowling and Ice Skating Center, the Children's Creativity Museum, the Child Development Center, the Children's Garden, and the restored 1905 Carousel.

The Moscone Center currently employs 317 full-time-equivalent (FTE) employees. The project is expected to increase FTE employees by approximately 28 persons, totaling 345 employees upon project completion. Also, up to 4,200 additional visitors could attend the largest events, although this is a conservative estimate because the additional space would likely be used to increase space devoted to exhibition, not

necessarily to visitor circulation.¹¹² Although new employees or an increased number of visitors may utilize parks and recreational spaces in the vicinity of the proposed project, the increased use would likely be minimal as the employees' and visitors' main destination would be the proposed project site. Furthermore, it is unlikely that any possible increased use could cause a substantial physical deterioration to recreation facilities as the duration of time spent in the area by employees and visitors would be far less than those of nearby residents. Therefore, this impact would be *less than significant*.

Mitigation: None required.

Impact RE-2: The proposed project would not require the construction or expansion of recreational facilities that would have a significant effect on the environment. (No impact)

The proposed project does not include recreational facilities or residential use. As discussed in RE-1, the proposed project would not substantially increase use of nearby recreational facilities and thus would not require the construction or expansion of recreational facilities. The project proposes modifications to the circulation system that are intended to enhance access from the site to and through the Yerba Buena Gardens and surrounding area. Therefore, the project would not result in the construction of recreational facilities that would themselves have a physical environmental impact. There would be *no impact* with regard to this criterion.

Mitigation: None required.

Impact C-RE: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the vicinity, would not result in considerable contribution to cumulative recreation impacts. (Less than Significant)

The geographic scope for potential cumulative recreation impacts encompasses recreational facilities and parks in the vicinity of the Moscone Center. The area generally includes the Central South of Market area, which includes Yerba Buena Gardens, Yerba Buena Center for the Arts Galleries and Arts Theater, Yerba Buena Bowling and Ice Skating Center, and other nearby recreational facilities and parks. Similar to the proposed project, projects within the vicinity would utilize such recreational facilities and parks, which may increase the use of these facilities or result in physical deterioration of the facilities.

The Central SoMa Plan would implement changes to allowed land uses and building heights to promote a greater mix of uses while also emphasizing office uses in the central portion of the plan area, allowing the area to accommodate additional jobs and residential uses. Like the proposed project, cumulative projects in the area would be subject to Planning Code open space requirements regarding the provision of public and/or private open space. Cumulative projects could result in cumulative impacts to recreational facilities and parks, but would be subject to implementation of the Planning Code and other

¹¹² Adavant Consulting, Memorandum RE: Moscone Center Expansion Project – Estimation of Travel Demand, January 9, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E.

requirements, as needed. However, the use of recreational facilities in the vicinity of the project site is not expected to noticeably increase as a result of the proposed project, the increase of new employees and visitors in the project vicinity as a result of the proposed project would be relatively small compared to the existing conditions. Furthermore recreational facilities would not be the focal point for Moscone Center employees and visitors. For these reasons, the proposed project would not result in a considerable contribution to any potential cumulative impact to recreational facilities and cumulative impacts would be *less than significant*.

Mitigation: None required.

Торі	cs:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
10.	UTILITIES AND SERVICE SYSTEMS— Would the project:					
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			\boxtimes		
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				\boxtimes	
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				\boxtimes	
d)	Have sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements?					
e)	Result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			\boxtimes		
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			\boxtimes		
g)	Comply with federal, state, and local statutes and regulations related to solid waste?			\boxtimes		

Impact UT-1: Implementation of the proposed project would not result in significant impacts to wastewater collection and treatment facilities or require or result in the construction of new wastewater facilities, the construction of which could cause significant environmental impacts. (Less than Significant)

The project site is served by San Francisco's combined sewage system. The sewage system is designed to collect and treat both sanitary sewage and rainwater runoff in the same sewer and treatment plants. Wastewater treatment for the east side of the City is provided primarily by the Southeast Water Pollution

Control Plant. The SFPUC Commission approved Phase 1 of the Sewer System Improvement Program to improve the function of the wastewater system citywide on August 28, 2012.¹¹³ Additional efforts are under way to address wastewater needs in the San Francisco capital improvement program (CIP) to reduce the potential for on-street flooding during heavy rains.

Operational Sanitary Flows. The proposed project would utilize high-efficiency water fixtures as required by the City's Commercial Water Conservation Ordinance. Analysis of wastewater flows under the proposed project indicates that use of high-efficiency water fixtures, as required by San Francisco's Green Building Code, would result in a project-related increase in water use of approximately 9,300 gallons per day, or 3.4 million gallons annually.¹¹⁴ If it is conservatively assumed that 100 percent of water used on site would be converted to wastewater, the proposed project would result in additional wastewater flows of up to an additional 3.4 million gallons annually. While the proposed project would increase sanitary sewage flows in the area, it would not cause collection treatment capacity of the sewer system in the City to be exceeded. The proposed project would meet wastewater pre-treatment requirements of the SFPUC, as required by the San Francisco Industrial Waste Ordinance.¹¹⁵ Additionally, the proposed project would be subject to the City's Wastewater Capacity Charge. As required, funds raised through the capacity charge would be directly used to offset the cost of future wastewater capital improvement projects and repairs.

Operational Groundwater Flows. Under the proposed project, groundwater would be re-used at the project site. The average amount of groundwater pumped from the existing sumps is approximately 41,400 gallon per day (15.1 million gallons annually). Due to the relatively shallow depth of groundwater on site, foundation dewatering for the new excavated area would likely be required, slightly increasing the amount of groundwater pumped. Under the proposed project, the below-ground area would be slightly enlarged to include the currently unexcavated "plugs," and the groundwater that is currently pumped for dewatering would be treated on-site and reused for non-potable purposes, such as landscape irrigation, toilet flushing, street sweeping, or firefighting under the City's voluntary non-potable water program described above. Reuse of the approximately 15.1 million gallons of groundwater produced during permanent dewatering for non-potable purposes would result in a net reduction of wastewater discharges to the combined sewer system by an average of 11.7 million gallons per year when the addition of 3.4 million gallons per year of wastewater is considered. The impacts to the sewage system resulting from the proposed project would be negligible.¹¹⁶

Construction Groundwater Flows. The proposed project could also require additional dewatering during construction activities, which would also increase the amount of groundwater discharge. Any dewatering that occurs would be discharged into the City sewer system; this would require a permit pursuant to Public Works Code Article 4.1, which regulates the quantity and quality of discharges to the combined sewer system. Public Works Code Article 4.1 incorporates and implements the City's National Pollutant Discharge Elimination System (NPDES) permits. Generally, the City's requirements include the development of a

¹¹³ SFPUC, History of the SSIP, available online at http://www.sfwater.org/index.aspx?page=609, accessed September 10, 2013.

¹¹⁴ Built Ecology, 2013. SFPUC Meeting Follow Up – Summary of Water Flows. March 13.

¹¹⁵ San Francisco Public Works Code, Article 4.1 (amended by Ordinance No. 19-92, January 13, 1992).

¹¹⁶ Scarpulla, John, San Francisco Public Utilities Commission, personal communication with Brook Mebrahtu, San Francisco Department of Public Works, November 12, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E.

stormwater pollution prevention plan (SWPPP), which includes an erosion and sediment control plan, and review of that plan by SFPUC. The San Francisco Public Works Code also requires the use of BMPs during the construction and operational periods. However, this discharge would be temporary in nature and would not generate additional wastewater that would require the construction of new, or expansion of existing, wastewater facilities. In light of the above, the proposed project would not exceed wastewater treatment requirements of the Regional Water Quality Control Board, and it would have a *less than significant* impact with regard to this criterion. The project would not require the construction of new wastewater treatment facilities or expansion of existing ones, and it would have *no impact* with regard to requiring new wastewater facilities that could result in significant environmental effects.

Mitigation: None required.

Impact UT-2: Implementation of the proposed project would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (No Impact)

The proposed project would primarily extend structures above existing impervious surfaces or involve expansion below grade. The proposed project would not increase the amount of impervious surfaces at the project site. The project would reduce the existing stormwater runoff rate and volume by 25 percent by including a rainwater treatment system that would collect and treat 32,000 gallons annually. Additionally, the project proposes the use of low impact design features to capture stormwater runoff. The proposed project would be required to meet the standards for stormwater management identified in the San Francisco Stormwater Management Ordinance and would be designed to meet the San Francisco 2010 Stormwater Design Guidelines, which would reduce the total stormwater runoff volume and peak stormwater runoff rate through the use of low impact designs approaches and BMPs including landscape planters designed to capture rain water. The project sponsor would be required to submit for SFPUC's approval a Stormwater Control Plan that complies with the stormwater design guidelines, and implementation of the plan would would ensure that the project meets performance measures set by the SFPUC related to storm water runoff rate and volume. Since the proposed project would not substantially increase the amount of impervious surfaces, it would not create a substantial amount of additional runoff water. Therefore, the proposed project would not require or result in the construction of a new or expansion of an existing storm drainage facility, and *no impact* would occur.

Mitigation: None required.

Impact UT-3: The SFPUC has sufficient water supply and entitlements to serve the proposed project, and implementation of the proposed project would not require expansion or construction of new water treatment facilities. (Less than Significant)

Water for the proposed project is provided by the SFPUC, which provides both water supply and wastewater collection and treatment. On June 14, 2011, the SFPUC adopted the 2010 Urban Water Management Plan (UWMP) for the City and County of San Francisco. The UWMP includes citywide demand projections to the year 2035, compares available water supplies to meet demands, and presents

water demand management measures to reduce long-term water demand. In May 2013, SFPUC updated citywide water supply and demand projections with the 2013 Water Availability Study (WAS).¹¹⁷ According to the WAS, available water supply in 2015 will be 83.5 mgd. Retail water use¹¹⁸ will be 83.7 mgd in 2015, comprising 78.1 mgd of in-City retail and irrigation use and 5.6 mgd of suburban retail use. Total retail demand is expected to hold relatively steady, at 83.4 mgd in 2020 and 84.2 mgd in 2035, with the relatively small increase in demand due primarily to expected growth in business and industry. The SFPUC plans to augment local supplies by extracting up to 4 mgd of groundwater from new wells in the City's Westside Groundwater Basin, as well as 4.0 mgd of recycled water from new recycled water projects. Total retail supply is expected to increase to 90.3 mgd by 2035.¹¹⁹

The SFPUC updated forecasts for future water demand using updated Planning Department forecasts based on the ABAG and Metropolitan Transportation Commission (MTC) Bay Area Sustainable Communities Strategy "Land Use Allocation," which was released in 2012. According to the WAS, the SFPUC can meet the current and future water demand in years of average or above-average precipitation. It can also meet future water demand in single-dry-year and multiple-dry-year events, with the exception of 2015. The proposed project construction is anticipated to be completed in 2018, and would therefore not be affected by any short-term water supply shortfall. With the Water Shortage Allocation Plan in place, and the addition of local supplies developed under the SFPUC Water System Improvement Program, the SFPUC concluded that it has sufficient water available to serve existing customers and planned future uses.¹²⁰

The proposed project would increase employment during events at the project site by 28 FTE, and it could increase total daily event attendance by 4,200.¹²¹ Due to this increase the proposed project would increase the demand for water. The proposed project would use approximately 9,269 gallons of water per day, or 3.3 million gallons annually.¹²²

No new water delivery facilities would be required to serve the proposed project. The proposed project would be subject to the City's Commercial Water Conservation Ordinance, which is designed to minimize water use, and would be designed to incorporate water-conserving measures, such as low-flush toilets and urinals, as required by the water conservation ordinances and Chapter 4 of the California Plumbing Code. As required by the City's Commercial Water Conservation Ordinance the proposed project would utilize high-efficiency water fixtures. To further offset the need for water, the proposed project would re-use groundwater for irrigation, toilet flushing, street sweeping and firefighting. Furthermore, the proposed

¹¹⁷ SFPUC, 2013 Water Availability Study for the City and County of San Francisco, March 2013.: http://sfwater.org/ index.aspx?page=75, accessed December 27, 2013.

¹¹⁸ Retail water use is distinguished from wholesale use, under which the SFPUC provides potable water to suburban water agencies throughout the San Francisco Bay Area.

¹¹⁹ SFPUC, 2013 Water Availability Study for the City and County of San Francisco, March 2013. Available online at: http://sfwater.org/index.aspx?page=75, accessed December 27, 2013.

¹²⁰ SFPUC, 2010 Urban Water Management Plan for City and County of San Francisco, adopted June 14, 2011.

¹²¹ Adavant Consulting, Memorandum RE: Moscone Center Expansion Project – Estimation of Travel Demand, January 9, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E. This is a conservative assumption since although the proposed increase in exhibit floor space will likely increase the total number of exhibitors and their staff; it does not necessarily imply an increase in the number of event visitors.

¹²² Built Ecology, Memorandum: SFPUC Meeting Follow Up: Summary of Water Flows, March 13, 2013.

project would be subject to the Recycled Water Ordinance, adopted as Article 22 of the San Francisco Public Works Code. The proposed project would include all necessary plumbing for the future use of recycled water for non-potable applications. Therefore, the proposed project would incorporate required water-saving and groundwater re-use features that would reduce water consumption. Since the proposed project would have sufficient water supply available from existing entitlements, it would not require new water supply or water treatment facilities, and this impact would be *less than significant*.

Mitigation: None required.

Impact UT-4: The proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. (Less than Significant)

San Francisco uses a three-cart collection program: residents and businesses sort solid waste into recyclables, compostable items such as food scraps and yard trimmings, and garbage. The City's Mandatory Recycling and Composting Ordinance (Ordinance 100-09) requires everyone in San Francisco to separate their refuse into recyclables, compostables, and trash. Recology (formerly Norcal Waste Systems, Inc.) provides solid waste collection, recycling, and disposal services for residential and commercial garbage, recycling, and composting in San Francisco through its subsidiaries San Francisco Recycling and Disposal, Golden Gate Disposal and Recycling, and Sunset Scavenger. Materials collected are hauled to the Recology transfer station/recycling center on Tunnel Avenue, near the southeastern city limit, for sorting and subsequent transportation to other facilities. Recyclable materials are taken to Recology's Pier 96 facility, where they are separated into commodities (e.g., aluminum, glass, and paper) and transported to other users for reprocessing. Compostables (e.g., food waste, plant trimmings, soiled paper) are transferred to a Recology composting facility in Solano County, where they are converted to soil amendment and compost. The remaining material that cannot otherwise be reprocessed ("trash") is transported to, and disposed of at, the Altamont Landfill in Alameda County.

The Altamont Landfill has a permitted peak maximum daily disposal of 11,150 tons per day and accepted 1.16 million tons in 2012.¹²³ The landfill has an estimated remaining capacity of approximately 46 million cubic yards or 74 percent of its permitted capacity. The estimated closure date of the landfill is January 2025.¹²⁴ In 2012, San Francisco generated approximately 454,500 tons of solid waste and sent approximately 375,000 tons to the Altamont Landfill, about 40 percent of the total volume of waste received at that facility.¹²⁵

In 1988, San Francisco contracted for the disposal of 15 million tons of solid waste at the Altamont Landfill. The City contract with the Altamont Landfill expires in 2015. Through August 1, 2009, the City

 ¹²³ CalRecycle, "2012 Landfill Summary Tonnage Report". Available online at: http://www.calrecycle.ca.gov/SWFacilities/ Landfills/tonnages; accessed January 21, 2014.
 ¹²⁴ CalRecycle, "Active Landfills Profile for Altamont Landfill and Resource Recovery (01-AA-0009)". Available online at:

 ¹²⁴ CalRecycle, "Active Landfills Profile for Altamont Landfill and Resource Recovery (01-AA-0009)". Available online at: http://www.calrecycle.ca.gov/SWFacilities/Directory/01-AA-0009/Detail/, accessed on May 28, 2013.
 ¹²⁵ Data includes only landfilled waste. Most of the City's remaining solid waste was sent to the Ox Mountain Landfill in

¹²⁵ Data includes only landfilled waste. Most of the City's remaining solid waste was sent to the Ox Mountain Landfill in San Mateo County. CalRecycle, Single-year Countywide Origin Detail, 2012, San Francisco. Available online at: http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=OriginJurisdictionIDs%3d438%26ReportYear%3d2012 %26ReportName%3dReportEDRSJurisDisposalByFacility. Reviewed November 27, 2013.

had used approximately 12.5 million tons of this contract capacity. The City projects that the remaining contract capacity will be reached no sooner than August 2014. In 2009, the City announced that it could award its landfill disposal contract to a Recology subsidiary for shipment of solid waste by truck and rail to the Recology Ostrom Road Landfill in Yuba County. This facility has an expected closure date of 2066 with a total design capacity of over 41 million cubic yards.¹²⁶ The ultimate determination with respect to future landfill contracting will be made by the Board of Supervisors on the basis of solid waste planning efforts being undertaken by the City's Department of the Environment.

Recycling, composting, and waste reduction are expected to increasingly divert waste from the landfill, per California and local requirements. The City was required by the State's Integrated Waste Management Act (AB 939) to divert 50 percent of its waste stream from landfill disposal by 2000. The City met this threshold in 2003 and has since increased it to 69 percent in 2005 and 70 percent in 2006. San Francisco exceeded its goal to divert 75 percent of its waste by 2010 and will implement new strategies to meet its zero waste goal by 2020.¹²⁷ In 2011, the target disposal rate for San Francisco residents and employees was 6.6 pounds/resident/day and 10.6 pounds/employee/day. Both of these targeted disposal rates were met in 2011 (the most recent year reported), with San Francisco generating about 2.9 pounds/resident/day and about 4.4 pounds/per employee/per day.¹²⁸

Regardless of whether San Francisco renews its contract with the Altamont Landfill, switches to the Ostrom Road Landfill, or selects another facility, the proposed project would be subject to the City's Mandatory Recycling and Composting Ordinance, which requires the separation of refuse into recyclables, compostables, and trash, thereby minimizing solid waste disposal and maximizing recycling and composting. Although the proposed project could incrementally increase total waste generation from the City by increasing employment and attendance at Moscone events, the increasing rate of diversion through recycling and other methods would result in a decreasing share of total waste that requires deposition into the landfill. Given this, and given the existing and potential future long-term capacity available at the applicable landfill(s), the solid waste generated by the proposed project during operation would not result in the landfill exceeding its permitted capacity, and the proposed project would result in a *less-than-significant* solid waste generation impact.

As described in the Project Description, construction activities would result in an estimated 45,000 cubic yards of excess soils from the excavation activities beneath Howard Street, between Moscone North and South, and at the location of proposed building footings and foundations. Excavated soil would be would be taken to an appropriate facility for recycling, reuse, or disposal. The proposed project would be subject to the City's Construction and Demolition Debris Recovery Ordinance, which requires all construction and

¹²⁶ San Francisco is currently participating as a responsible agency in the environmental review process that Yuba County has begun for the Recology Ostrom Road Green Rail and Permit Amendment Project and to conduct CEQA review of San Francisco's proposal to enter into one or more new agreements with Recology. On March 28, 2013, Yuba County and San Francisco entered into a Cooperative Agreement to designate Yuba County as the lead agency for this project and to outline their cooperative efforts concerning environmental review.

outline their cooperative efforts concerning environmental review. ¹²⁷ San Francisco Department of the Environment, Zero Waste webpage. Available at: http://www.sfenvironment.org/zerowaste/overview/goals.

¹²⁸ CalRecycle, Jurisdiction Diversion/Disposal Rate Detail, San Francisco, 2011. Available on the internet at: http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/JurisdictionDiversionDetail.aspx?JurisdictionID=438 &Year=2011, accessed December 4, 2013. These data do not provide separate averages for residential and non-residential generation, but merely different metrics for averaging overall citywide waste generation.

demolition debris to be transported to a registered facility that can divert a minimum of 65 percent of the material from landfills. The Altamont Landfill and Corinda Los Trancos Landfill are registered facilities available to accept waste from San Francisco that could accept excess soils generated during construction. The Corinda Los Trancos Landfill is permitted to receive 3,598 tons of waste per day; it has a remaining capacity of approximately 44.6 million cubic yards and with this capacity, the landfill can operate until 2018.¹²⁹ Because the proposed project would be consistent with City ordinances and because the local landfills would have sufficient capacity to accept the remaining construction waste, the proposed project would be served by landfills with sufficient permitted capacity to accommodate the project's solid waste disposal needs. This impact would be *less than significant*.

Mitigation: None required.

Impact UT-5: Construction and operation of the proposed project would follow all applicable statutes and regulations related to solid waste. (No Impact)

The California Integrated Waste Management Act of 1989 (AB 939) requires municipalities to adopt an Integrated Waste Management Plan (IWMP) to establish objectives, policies, and programs relative to waste disposal, management, source reduction, and recycling. Reports filed by the San Francisco Department of the Environment show that the City generated approximately 870,000 tons of waste material in 2000. By 2010, that figured decreased to approximately 455,000 tons. Waste diverted from landfills is defined as recycled or composted. San Francisco has a goal of 75 percent landfill diversion by 2010, and 100 percent by 2020.¹³⁰ As of 2012, 80 percent of San Francisco's solid waste was being diverted from landfills, having met the 2010 diversion target.¹³¹

The San Francisco Construction and Demolition Ordinance (Ordinance No. 27-06) requires a minimum of 65 percent of all construction and demolition debris to be recycled and diverted from landfills. Furthermore, the proposed project would be required to comply with the City's Ordinance 100-09, the Mandatory Recycling and Composting Ordinance, which requires separation of refuse into recyclables, compostables, and trash.

As discussed in Section E.15, Hazards and Hazardous Materials, soils from excavation activities, as well as building materials (e.g., fluorescent lights) could be classified as a California hazardous waste. Accordingly, the proposed project would be required to follow state and federal regulations for the disposal of hazardous wastes and would be transported to a permitted disposal or recycling facility.

¹²⁹ CalRecycle, Facility/Site Summary Details: Corinda Los Trancos Landfill (Ox Mtn)(41-AA-0002), Available online at http://www.calrecycle.ca.gov/SWFacilities/Directory/41-AA-0002/Detail/, accessed September 10, 2013.

¹³⁰ San Francisco Department of the Environment, Zero Waste FAQ. Available online at http://www.sfenvironment.org/zerowaste/overview/zero-waste-faq. Accessed on December 27, 2013.

¹³¹ San Francisco Department of the Environmental, Recology & City Recycling & Compost Program Creates Jobs, Stimulates Growth of Green Economy & Supports City's 2020 Zero Waste Goal, October 5, 2012. Available online at http://www.sfenvironment.org/ news/press-release/mayor-lee-announces-san-francisco-reaches-80-percent-landfill-waste-diversion-leads-all-cities-in-northamerica. Accessed November 14, 2013.

The proposed project would comply with all applicable local, state, and federal laws and regulations pertaining to solid waste, and there would be *no impact*.

Mitigation: None required.

Impact C-UT: In combination with past, present, and reasonably foreseeable future development in the project site vicinity, the proposed project would have a less-than-significant cumulative impact on utilities and service systems. (Less than Significant)

The geographic scope for potential cumulative wastewater systems impacts encompasses the City and County of San Francisco. Wastewater system facilities in the project vicinity include the San Francisco's combined sewage system and the Southeast Water Pollution Control Plant. Similar to the proposed project, projects within the vicinity would utilize the same wastewater systems, which increase the demand on such facilities.

Like the proposed project, cumulative projects in the area would be subject to the City's Wastewater Capacity Charge. The Wastewater Capacity Charge funds the cost of expansion of the wastewater conveyance and treatment system, if necessary. All funds raised through the capacity charge are directly used to offset the cost of future wastewater capital improvement projects and repairs. Furthermore, cumulative projects would utilize high-efficiency water fixtures as required by the City's Commercial Water Conservation Ordinance or Green Building Ordinance, as applicable, which would further decrease the amount of wastewater and water entering treatment facilities.

The proposed project, like cumulative projects in the area, would utilize low impact design features to comply with the Stormwater Ordinance. Project designs would be required meet the San Francisco 2010 *Stormwater Design Guidelines*, which would reduce the total stormwater runoff volume and peak stormwater runoff rate through the use of low impact designs approaches and other BMPs. As noted above the proposed project would comply with all applicable regulations, and would reuse wastewater, and reduce operational discharges to the combined sewer. Therefore its contribution to San Francisco's combined sewer system would not be cumulatively considerable.

The geographic scope for potential cumulative water supply impacts encompasses the SFPUC water supply system. SFPUC water supply system supplies the City and County of San Francisco as well as others in the region with water. Similar to the proposed project, projects within the vicinity or the region would require the use of the SFPUC water supply.

Like the proposed project, cumulative projects in the area would be subject to the City's Commercial Water Conservation Ordinance or Green Building Ordinance, as applicable, which requires project to utilize high-efficiency water fixtures to offset the need for water. In addition, cumulative projects in the vicinity would be subject to the Recycled Water Ordinance. Such requirements would cumulatively reduce the increase demand for water. The proposed project, in addition to cumulative projects in the region, would incrementally increase demand on the water supply. However, as discussed above, SFPUC has available water supply to serve existing and projected growth. Therefore, cumulative impacts to the SFPUC water system would be *less than significant*.

The geographic scope for potential cumulative waste generation impacts encompasses Recology and those jurisdictions that haul and dump their waste at the Altamont Landfill in Alameda County and Ostrom Road Landfill in Yuba County. Similar to the proposed project, projects within the vicinity, or jurisdictions that have contracts with these landfills, would affect the landfills' capacity by hauling and dumping their waste.

Increased waste generation from the proposed project and cumulative developments would be partially offset by existing San Francisco ordinances and policies regarding waste reduction. The increasing rate of diversion through recycling, composting, and other methods would result in a decreasing share of total waste that requires deposition in local landfills. As stated under Impact UT-4, Ostrom Road Landfill (Yuba County) will be the future disposal site of all solid waste collected in the City until 2025, or until 5 million tons have been deposited.¹³² The total permitted capacity of the landfill is approximately 41 million cubic yards with an estimated closure date of 2066.

Therefore, the increased generation of solid waste from the proposed project and nearby proposed cumulative development would not exceed the permitted landfill capacity, and this impact would be *less than significant*.

Mitigation: None required.

Торі	cs:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
11.	PUBLIC SERVICES— Would the project:					
a)	Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any public services such as fire protection, police protection, schools, parks, or other services?					

The proposed project's impacts to parks are analyzed in Section E.9, Recreation, above.

¹³² City and County of San Francisco Board of Supervisors, 2011 (July 26). Resolution No. 322-11: Resolution Approving a Ten-Year Landfill Disposal Agreement and Facilitation Agreement with Recology San Francisco under Chapter Section 9.118. Available online at: http://www.sfbos.org/ftp/uploadedfiles/bdsupvrs/resolutions11/r0322-11.pdf, accessed September 10, 2013.

Impact PS-1: The proposed project would increase demand for police protection and fire protection, but not to an extent that would require new or physically altered governmental facilities, the construction of which could cause significant environmental impacts. (Less than Significant)

The project site currently receives emergency services from the San Francisco Fire Department, Station 1 at 935 Folsom at Fifth Street, which is 0.6 miles southwest of the project site, and the San Francisco Police Department, Southern Station at 850 Bryant Street, which is 1 mile southwest of the project site.¹³³

The proposed project would add approximately 306,000 gross square feet of floor area to the existing 1.212-million-square-foot facility and result in a 42 percent increase in functional (exhibition and meeting) space, from 625,600 square feet to 888,300 square feet, as well as additional support space. No new structures would be habitable. The proposed structures would be subject to, and would comply with, the regulations of the California Fire Code, which establishes requirements pertaining to fire protection systems, including the provision of state-mandated smoke alarms, fire extinguishers, appropriate building access, and emergency response notification systems.

The proposed project would increase the service population (employees and visitors) at the Moscone Center. Up to 28 additional FTE employees could work at the site, and up to 4,200 additional visitors could attend major conventions.¹³⁴ This increased population could result in an incremental increase in demand for fire and police protection services, but not in excess of amounts expected and provided for in this area. No new or physically altered facilities would be required.

Given that the proposed project is located near, and already served by, existing police and fire protection services, the proposed new and modified structures would be required to comply with fire codes, and the proposed project would only incrementally increase service population in the area of the Moscone Center, impacts to police and fire services would be *less than significant*.

Mitigation: None required.

Impact PS-2: The proposed project would not substantially increase the population of school-aged children and would not require new or physically altered school facilities. (Less than Significant)

The San Francisco Unified School District (SFUSD) provides school services to residents in the project vicinity. The proposed project would not construct any new habitable structures. As described in the Population and Housing analysis, the 28 additional FTE employees at the project site could be new employees living in San Francisco. These employees could have children that would attend local schools. However, most of these additional employees are likely to be residents of San Francisco or the Bay Area

¹³³ San Francisco Fire Department, website: http://www.sf-fire.org/, accessed online on September 19, 2013. San Francisco Police Department, website: http://sf-police.org/, accessed online on September 19, 2013.

¹³⁴ Adavant Consulting, Memorandum RE: Moscone Center Expansion Project – Estimation of Travel Demand, January 9, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E. This is a conservative assumption since although the proposed increase in exhibit floor space will likely increase the total number of exhibitors and their staff, it does not necessarily imply an increase in the number of event visitors.

and the number of additional school-age children associated with them would be very small compared to the total SFUSD enrollment. Therefore, the proposed project would not increase the population of school-aged children to the extent that new school facilities would be required, and the project would have a *less-than-significant* impact to schools.

Mitigation: None required.

Impact PS-3: The proposed project would not increase demand for other government services to the extent that it would require new or physically altered government facilities. (Less than Significant)

The proposed project would not construct any new habitable structures. Although the project would increase the service population (employees and visitors) of the Moscone Center, this increased population would not generate demand for libraries, community centers, and other public facilities to the extent that new or physically altered facilities would be required. Therefore, the proposed project would have a *less-than-significant* impact on other government services.

Mitigation: None required.

Impact C-PS: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the vicinity, would result in a less than cumulatively considerable impact to public services. (Less than Significant)

The geographic scope for potential cumulative public services impacts encompasses public service providers in the vicinity of the Moscone Center. Public services in the project vicinity include services provided by the San Francisco Police Department, San Francisco Fire Department, SFUSD, and City and County of San Francisco. Similar to the proposed project, projects within the vicinity would utilize services provided by these departments.

The Central SoMa Plan would implement changes to allowed land uses and building heights to promote a greater mix of uses while also emphasizing office uses in the central portion of the plan area, allowing the area to accommodate additional jobs and residential uses. Cumulative development in the project vicinity could incrementally increase demand for public services, which could result in the need for new or altered government facilities. The proposed project's increase in employment and visitor attendance would incrementally increase demand for public services, but this increase would not be cumulatively considerable because the increase in demand would not be beyond levels anticipated and planned for in the project site vicinity. For these reasons, the proposed project would not result in a considerable contribution to cumulative public service impacts, and this impact would be *less than significant*.

Mitigation: None required.

Тор	ics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
12.	BIOLOGICAL RESOURCES— Would the project:					
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?					
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?					
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?					
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?					
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			\boxtimes		
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?					

The project area does not include riparian habitat or other sensitive natural communities as defined by the California Department of Fish and Wildlife and the United States Fish and Wildlife Service; therefore, Topic E.12(b) is not applicable to the proposed project. In addition, the project area does not contain any wetlands as defined by Section 404 of the Clean Water Act; therefore Topic E.12(c) is not applicable to the proposed project does not fall within any local, regional or state habitat conservation plans; therefore, Topic E.12(f) is not applicable to the proposed project.

The project is located in an area that does not contain sensitive or protected habitat and generally does not provide suitable habitat for special-status species.

Impact BI-1: The proposed project would not have a substantial adverse effect on special-status species or interfere with native resident or migratory wildlife. (Less than Significant)

A review of the California Natural Diversity Database (CNDDB) was conducted for historic occurrences of listed species within the San Francisco North USGS 7.5-minute quadrangle (where the project area is

located) and the surrounding quadrangles.¹³⁵ The project site is located in a developed area that is primarily covered by paved, impervious surfaces and thus most of the listed species identified in the records search have been extirpated from this area. With the exception of trees (primarily street trees) and landscaped areas, the project area does not support or provide habitat for any known rare or endangered species and project development would not interfere with any resident or migratory species. The project would replace existing structures in the same location. The proposed project would increase the height of Moscone North by about 10 feet and Moscone South by 68 feet, and therefore would not alter species movement or migratory corridors. The project would not conflict with any local policies or ordinances directed at protecting biological resources. Tree protection regulations are discussed separately under Impact BI-2, below.

The San Francisco Board of Supervisors adopted Standards for Bir**G**afe Buildings, Planning Code Section 139, on July 14, 2011.¹³⁶ The Standards for BirdSafe Buildings include guidelines for use and types of glass and façade treatments, wind generators and grates, and lighting treatments. The project would be subject to the Standards for BirdSafe Buildings. The project would also be required to comply with the California Fish and Game Codes and the Migratory Bird Treaty Act (MBTA) which protect special-status bird species.

Existing street trees could support native nesting birds protected under the California Fish and Game Code or the MBTA. Although the majority of these existing trees would not be directly affected by construction activities, the activities could occur during the breeding season. However, compliance with the requirements of the Fish and Game Code and the MBTA would ensure that there would be no loss of active nests or bird mortality. These requirements include one or more of the following if construction takes place during the bird nesting season (January 15–August 15):

- Preconstruction surveys conducted by a qualified biologist no more than 15 days prior to the start of work during the nesting season to determine if any birds are nesting in or in the vicinity of the vegetation to be removed or construction to be undertaken.
- Avoidance of any nests identified and the establishment by the qualified biologist of a construction-free buffer zone, to be maintained until nestlings have fledged.

Given the foregoing, effects on special-status species, including those protected by the California Fish and Game Codes and the MBTA, would be *less than significant*.

Mitigation: None required.

¹³⁵ California Department of Fish and Wildlife, 2013. California Natural Diversity Database Commercial Version dated May 7, 2013.

¹³⁶ San Francisco Planning Department, Standards for Bird-Safe Buildings, July 2011. Available online at http://www.sfplanning.org/ftp/files/publications_reports/bird_safe_bldgs/Standards_for_Bird-Safe_Buildings_8-11-11.pdf. Accessed September 7, 2011.

Impact BI-2: The proposed project would not conflict with the City's local tree ordinance. (Less than Significant)

The San Francisco Planning Department, Department of Building Inspection (DBI), and Department of Public Works (DPW) have established guidelines to ensure that legislation adopted by the Board of Supervisors governing the protection of trees is implemented. DPW Code Section 8.02-8.11 requires disclosure and protection of landmark, significant, and street trees, collectively referred to as "protected trees," located on private and public property. As described in Section 2.D, Project Characteristics, under the heading "Landscaping," the proposed project would not remove any street trees, and no significant trees would be affected.¹³⁷ A significant tree is one that is either on property under the jurisdiction of the DPW or on privately owned land within 10 feet of the public-right-of-way, that is greater than 20 feet in height or which meets other criteria. The proposed project would also include the planting of street trees in accordance with *Planning Code* Section 138.1 requirements, which would require up to approximately 220 street trees, or would meet the requirement through payment of an in-lieu fee. New trees would be planted along both the north and south sides of Howard Street. In addition, the proposed project would include several seating areas throughout the project site, including on the south side of Howard Street, just west of the pedestrian plaza, and on both the north and south sides of Howard Street, near Third Street that could include additional landscaping and trees (see Figure 10). Therefore, the project would not conflict with the City's local tree ordinance. Thus, this impact would be *less than significant*.

Mitigation: None required.

Impact C-BI-1: The proposed project in combination with other past, present or reasonably foreseeable projects, would not result in a considerable contribution to cumulative impacts on biological resources. (Less than Significant)

The geographic scope for potential cumulative biological resources impacts encompasses land uses in the vicinity of the Moscone Center. The area generally includes the Central SoMa area, bounded by Market Street to the north, Sixth Street to the west, Second Street to the east, and Townsend Street to the south, and including the southern portion of the Central Subway transit line along Fourth Street. Similar to the project area, the project vicinity does not include riparian habitat or other sensitive natural communities and with the exception of trees (primarily street trees) and landscaped areas, the area does not support or provide habitat for any known rare or endangered species and project development would not interfere with any resident or migratory species.

Like the proposed project, cumulative projects in the area would also be required to comply with the federal Endangered Species Act, California Fish and Game Codes and the MBTA which protect special-status bird species and the Standards for Bird-Safe Buildings. Projects could result in cumulative impacts

¹³⁷ City and County of San Francisco, Department of Public Works, 2013. Significant and Landmark Trees website. Available online at: http://www.sfdpw.org/index.aspx?page=663, accessed June 2, 2013. City and County of San Francisco, Department of the Environment, 2013. Map of San Francisco's Landmark Trees website. Available online at: http://www.sfenvironment.org/article/landmark-tree-program/map-of-san-francisco%E2%80%9A%27s-landmark-trees, accessed June 2, 2013.

to street trees or other protected trees, but would be subject to DPW Code Section 8.02-8.11, as well as Planning Code Section 138.1 regarding planting of street trees. The project would not include removal of street trees or affect protected trees and thus would not have the potential to contribute to potential cumulative impacts on biological resources.

In summary, as noted above, the project would not have significant impacts on special status species, avian species, riparian, wetland, or sensitive natural communities; would not conflict with an approved local, regional, or state habitat conservation plan or tree protection ordinance; and would not contribute to potential cumulative impacts on biological resources. Therefore, the proposed project's contribution to cumulative impacts to biological resources would not be cumulatively considerable (*less than significant*).

Mitigation: None required.

Торі	CS:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	_Not Applicable
13.	GE Wo	OLOGY AND SOILS— uld the project:					
a)	Exp adv dea	pose people or structures to potential substantial verse effects, including the risk of loss, injury, or th involving:					
	i)	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)					
	ii)	Strong seismic ground shaking?			\boxtimes		
	iii)	Seismic-related ground failure, including liquefaction?			\boxtimes		
	iv)	Landslides?				\boxtimes	
b)	Res	ult in substantial soil erosion or the loss of topsoil?			\boxtimes		
c)	Be l that and spre	located on geologic unit or soil that is unstable, or t would become unstable as a result of the project, l potentially result in on- or off-site landslide, lateral eading, subsidence, liquefaction, or collapse?					
d)	Be l of ti risk	ocated on expansive soil, as defined in Table 18-1-B he Uniform Building Code, creating substantial is to life or property?			\boxtimes		
e)	Hav of s syst of v	ve soils incapable of adequately supporting the use eptic tanks or alternative wastewater disposal tems where sewers are not available for the disposal vastewater?					\boxtimes
f)	Cha geo	ange substantially the topography or any unique logic or physical features of the site?				\boxtimes	

The proposed project would connect to the combined sewer system which is the wastewater conveyance system for San Francisco, and would not use septic tanks or other on-site land disposal systems for sanitary sewage. Therefore, initial study Topic E.13(e) is not applicable.

The project site is generally flat, with no unique topographic, geologic, or physical features. Neither construction of the expanded Moscone North and South buildings and expanded exhibition areas nor reconfiguration of the bus drop-off and pick-up facilities would substantially alter the topography of the site. Therefore, there is no impact related to initial study Topic E.13(f).

Evaluation of geology and soils impacts is based on a preliminary geotechnical report prepared for the project and on previous geotechnical investigations at the site and in the vicinity as well as published geologic maps.¹³⁸ Potential seismic impacts related to the project include seismically induced groundshaking, as well as liquefaction and related ground failures that could damage below-grade structures at the Moscone Center. Construction-related impacts include potential erosion, excavation instability, and settlement from excavation dewatering. The final features to be included in the project to avoid or withstand seismic and geologic effects would be determined on the basis of a design-level geotechnical investigation required as part of the building permit process administered by the San Francisco Department of Building Inspection (DBI), as discussed below.

At an elevation of 20 feet San Francisco City Datum (SFD),¹³⁹ the project site is relatively level. Prior to development in the 1800s, the project site was located on a marsh at the edge of Mission Bay, and was covered with Holocene -aged dune sands. The original structures at this site were destroyed in the 1906 earthquake and fire, and the earthquake debris was incorporated into fill materials. As a result, the site is immediately underlain by artificial fill materials and dune sands. These are in turn underlain by older sedimentary deposits of Pleistocene age, including marsh deposits, Older Alluvium, the Colma Formation, and Old Bay Clay (also referred to as the Yerba Buena Mud or the San Antonio Formation). Bedrock beneath San Francisco consists of sedimentary and volcanic rocks of the Jurassic and Cretaceous age Franciscan complex. These geologic units are described as follows (from youngest to oldest):

- Artificial fill ranging in thickness from a few feet to 20 feet, artificial fill beneath the site was primarily derived from the dune deposits that were used to level the site when it was developed in the mid to late 1800s and from debris from the 1906 earthquake and fire. The average thickness of the fill is 15 feet. It is typically gray to brown, loose to medium dense sand with some clay and silt, and contains fragments of brick, wood, asphalt, concrete, and gravel.
- **Dune Sand** (Holocene) encountered at a depth of 11 to 23 feet below ground surface, the dune sands consist of fine to very fine grained, gray to brown medium dense sand with minor amounts of sand with silt. The thickness of dune sands ranges from 4 to 17 feet.

¹³⁸ Geotechnical Consultants, Inc. Phase I Preliminary Geotechnical Report, Moscone Center Expansion, San Francisco, California. April 2013. Available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.154E.

¹³⁹ San Francisco City Datum (SFD) establishes the City's zero point for surveying purposes at approximately 8.6 feet above the mean sea level established by 1929 U.S. Geological Survey datum, and approximately 11.3 feet above the current 1988 North American Vertical Datum. Because tides are measured from mean lower low water, which is about 3.1 feet below mean sea level (MSL), an elevation of 0, SFD, is approximately 8.2 feet above MSL.

- Marsh Deposits (late Pleistocene) encountered at a depth of 23 to 40 feet below ground surface, the marsh deposits are typically black to gray and locally contain decaying vegetation. The composition ranges from peat to silt to fat clay to clayey sand. The thickness of marsh deposits ranges from 0 to 5 feet, and the average thickness is about 1.5 feet.
- Older Alluvium (late Pleistocene) encountered at depths of 14 to 33 feet below ground surface, this unit consists of layered and interfingered older alluvial, estuarine, and marine deposits. The layers are typically gray to brown with many color variations within this range. The soils consist of medium dense to dense sand, sandy clay and clayey silty sand. The clay layers are stiff. The thickness of older alluvium ranges from 6 to 19 feet.
- **Colma Formation** (late Pleistocene) encountered at depths of 39 to 44 feet below ground surface, this unit consists of dense to very dense sand to silty sand with local layers of clayey sand. The thickness of the Colma Formation ranges from approximately 40 to 60 feet.
- Old Bay Clay (late Pleistocene) encountered at a depth of 78 to 91 feet below ground surface, this unit consists of a thick sequence of marine clay and interfingered estuarine and alluvial clayey sand, silty sand, and sand. The interfingered clay layers consist primarily of dark gray to greenish gray, stiff to hard silty clay with local thin layers of gray, very stiff sandy clay. The clay contains some small shells, angular gravel, and coarse sand. The interfingered sand layers consist of dense to very dense, dark gray to gray clayey sand, fine to medium grained sand, and silty sand. The thickness of the Old Bay Clay ranges from approximately 35 to 180 feet, thinning to the east.
- Franciscan Complex (Jurassic and Cretaceous) encountered at depths of about 140 to 250 feet below ground surface, the Franciscan Complex beneath the site consists of black shale, black to dark gray interbedded shale and sandstone, and black chert with thin shale interbeds.

The depth to groundwater at the project site is on the order of 20 to 24 feet below ground surface, corresponding to an elevation of 0 to -4 feet SFD, and groundwater can be perched above the marsh deposits. Groundwater levels beneath the marsh deposits are highly variable, and are affected by construction-related dewatering and possibly by permanent dewatering systems in the project vicinity.

Impact GE-1: The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, seismic groundshaking, seismically induced ground failure, or landslides. (Less than Significant)

Fault Rupture. The project site is not located within an Alquist-Priolo Earthquake Fault Zone, and no active or potentially active faults exist on or in the immediate vicinity of the site. Therefore, the potential for surface fault rupture is low, and this impact would be *less than significant*.

Groundshaking. The intensity of seismic shaking, or strong ground motion, at the project site during an earthquake is dependent on the distance between the site and the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the site. Earthquakes occurring on faults closest to the site would most likely generate the largest ground motions. The intensity of earthquake-induced ground motions can be described in terms of "peak ground acceleration," which is represented as a fraction of the acceleration of gravity (g).¹⁴⁰

¹⁴⁰ Acceleration of gravity (g) = 980 centimeters per second squared. 1.0 g of acceleration is a rate of increase in speed equivalent to a car traveling 328 feet from rest in 4.5 seconds.

The U.S. Geological Survey (USGS) concluded that there is a 63 percent probability of a strong earthquake (Mw 6.7¹⁴¹ or higher) occurring in the San Francisco Bay region in the 30-year period between 2007 and 2036.¹⁴² The faults that would be capable of causing strong groundshaking at the project site are the San Andreas Fault, located within 8 miles; the Hayward fault, located within 10 miles; the San Gregorio fault, located within 12 miles; and the Calaveras, Mt. Diablo and Rodgers Creek faults, located 21 or more miles away.¹⁴³ Based on shaking hazard mapping by ABAG, the project site would experience very strong ground shaking due to an earthquake along the peninsula segment of the San Andreas Fault or the northern and southern Hayward fault, which are the faults closest to the project site.¹⁴⁴ The California Geological Survey estimates that peak ground accelerations in the project site vicinity would range from approximately 0.45 to 0.57g.¹⁴⁵ Although the project site would be subject to very strong ground shaking in the event of a major earthquake, the project would not expose people or structures to substantial adverse effects related to ground shaking because the project would be designed and constructed in accordance with the most current San Francisco Building Code, which incorporates California Building Code requirements. The California Building Code specifies definitions of seismic sources and the procedure used to calculate seismic forces on structures during groundshaking. The preliminary geotechnical report estimates that when site specific conditions are considered, the peak ground acceleration would be about 0.35g.¹⁴⁶ However, the design level geotechnical investigation will refine this estimate at a level suitable for project design in accordance with the San Francisco Building Code.

Incorporation of appropriate engineering and design features in accordance with the *San Francisco Building Code*, subject to review by the DBI as part of the building permit approval process, would ensure that the structure would not suffer substantial damage, that substantial debris such as building exterior finishes or windows would not separate from the building, that building occupants would be able to safely vacate the building following an earthquake, and that pedestrians and other bystanders would not be injured. While some damage could occur, building occupants could reoccupy the building after an earthquake with the completion of any necessary repairs. Therefore, impacts related to ground shaking would be *less than significant*.

Liquefaction, Lateral Spreading, and Earthquake-Induced Settlement. Liquefaction is a phenomenon in which saturated granular sediments temporarily lose their shear strength during periods of earthquake-induced, strong groundshaking. The susceptibility of a site to liquefaction is a function of the depth,

¹⁴¹ An earthquake is classified by the amount of energy released, expressed as the magnitude of the earthquake. Traditionally, magnitudes have been quantified using the Richter scale. However, seismologists now use a moment magnitude (Mw) scale because it provides a more accurate measurement of the size of major and great earthquakes. Moment magnitude is directly related to the average slip and fault rupture area.

¹⁴² U.S. Geologic Survey (USGS), The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2), by the Working Group on California Earthquake Probabilities, Open File Report 2007-1437, 2008.

¹⁴³ Distance obtained from Geotechnical Consultants, Inc. Phase I Preliminary Geotechnical Report, Moscone Center Expansion, San Francisco, California. April 2013. Available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E.

¹⁴⁴ Association of Bay Area Governments, Hazard Maps, Shaking Maps, 2003, www.abag.ca.gov, accessed May 5, 2013.

¹⁴⁵ California Department of Conservation, Division of Mines and Geology, Seismic Hazard Zone Report 043, Seismic Hazard Zone Report for the City and County of San Francisco, California, 2000.

¹⁴⁶ Geotechnical Consultants, Inc. Phase I Preliminary Geotechnical Report, Moscone Center Expansion, San Francisco, California. April 2013. Available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E.

density, and water content of the granular sediments and the magnitude of earthquakes likely to affect the site. Saturated, unconsolidated silts, sands, silty sands, and gravels within 50 feet of the ground surface are most susceptible to liquefaction. The primary liquefaction-related phenomena include vertical settlement¹⁴⁷ and lateral spreading.¹⁴⁸

The project site is located in an area of liquefaction potential identified by the California Department of Conservation under the Seismic Hazards Mapping Act of 1990,¹⁴⁹ and could therefore be subject to both liquefaction and earthquake-induced settlement due to the presence of shallow groundwater and the loose to medium dense sands that make up the artificial fill materials and dune sands. However, the foundations of the proposed structures would not be subjected to liquefaction damage because they would be supported on a mat foundation or drilled shafts founded in the underlying Colma Formation, which has a low liquefaction potential. Further, the below-grade walls would be properly drained and designed for increased forces resulting from liquefaction effects. However, adjacent roadways, sidewalks, and utilities that are supported within the artificial fill and dune sand could experience damage as a result of liquefaction, as could any tiebacks used to anchor the east wall of the existing truck ramp along Third Street within the sandy deposits (see Impact GE-3 for a discussion of the tiebacks). The potential for lateral displacement is low because the project site is located in a developed area of downtown San Francisco and there are no nearby exposed slopes or stream banks that could be susceptible to lateral displacement.

To address the potential for liquefaction and earthquake-induced settlement, and to develop specific design elements to be included in the project design to avoid adverse effects related to these phenomena, the project sponsor would be required to prepare a site-specific, design-level geotechnical report pursuant to the State Seismic Hazards Mapping Act. The report would assess the nature and severity of the hazard(s) on the site and recommend project design, soil improvement requirements, and construction features that would reduce the identified hazard(s). The building plans and geotechnical report would be submitted as part of the building permit application and reviewed by DBI to ensure compliance with all *San Francisco Building Code* provisions regarding structural safety. Therefore, impacts related to liquefaction, earthquake-induced settlement, and lateral spreading would be *less than significant*.

Earthquake-Induced Landslides. The project site is relatively flat and does not include any areas of mapped earthquake-induced landslide susceptibility identified by the California Department of Conservation under the Seismic Hazards Mapping Act of 1990.¹⁵⁰ Therefore, there would be *no impact* related to earthquake-induced landslides.

Mitigation: None required.

¹⁴⁷ During an earthquake, settlement can occur as a result of the relatively rapid rearrangement, compaction, and settling of subsurface materials (particularly loose, non-compacted, and variable sandy sediments). Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different rates). Areas are susceptible to differential settlement if underlain by compressible sediments, such as poorly engineered artificial fill or bay mud.

¹⁴⁸ Of the liquefaction hazards, lateral spreading generally causes the most damage. This is a phenomenon in which large blocks of intact, non-liquefied soil move downslope on a liquefied substrate that covers a large area.

¹⁴⁹ California Department of Conservation, Division of Mines and Geology, State of California Seismic Hazard Zones, City and County of San Francisco, Official Map, November 17, 2000.

¹⁵⁰ California Department of Conservation, Division of Mines and Geology, State of California Seismic Hazard Zones, City and County of San Francisco, Official Map, November 17, 2000.

Impact GE-2: The proposed project would not result in substantial erosion or loss of top soil. (Less than Significant)

Soil movement for foundation excavation and other improvements could create the potential for windand water-borne soil erosion. However, the project site is flat, and the proposed project would affect only relatively small areas where site soils would be exposed; therefore, substantial erosion and loss of soil would not be expected to occur during site preparation and construction. Furthermore, the project sponsor would be required to implement an erosion and sediment control plan during construction activities in accordance with Article 4.1 of the San Francisco Public Works Code (discussed in Topic 14, "Hydrology and Water Quality") to reduce the impact of runoff from the construction site. The SFPUC must review and approve the erosion and sediment control plan prior to implementation, and would conduct periodic inspections to ensure compliance with the plan. Therefore, impacts related to soil erosion would be *less than significant*.

The project site is built out and covered with impervious surfaces, including buildings of the Moscone Center, streets, and sidewalks. Previous construction of these features would have involved removal of any top soil (a fertile soil horizon that typically contains a seed base). Therefore, impacts of the proposed project related to loss of top soil would be *less than significant*.

Mitigation: None required.

Impact GE-3: The project site is not located on a geologic unit or soil that is unstable, or that could become unstable as a result of the project. (Less than Significant)

Ground settlement could result from excavation for construction of the expanded exhibit hall areas beneath Howard Street and from construction dewatering. These potential effects are described below, followed by DBI procedures that are in place to ensure that unstable conditions do not result.

Excavation

Construction of the proposed expansions would require excavation to a depth of approximately 40 feet below ground surface. During excavation, the existing concrete walls and mat foundations of Moscone Center North and South and the adjoining tunnels under Howard Street would be exposed on all four sides of the excavation. Settlement, and potentially collapse, could occur if these structures and the underlying soil were not adequately supported during construction. Shoring systems--such as soldier beams,¹⁵¹ walers,¹⁵² and cross lot struts¹⁵³ or corner braces¹⁵⁴--would be required to provide the necessary support, and the adjoining structures my need to be underpinned, as well. Tiebacks anchored in the fill material, dune sand, or alluvial materials could be required along the east wall of the existing truck ramp along Third Street. Further, a monitoring program utilizing an inclinometer would be

¹⁵¹ A soldier beam system uses piles and lagging to retain soil behind the lagging. Soldier beam refers to the pile.

¹⁵² Walers are horizontal timbers or beams used to support the soil behind the shoring.

¹⁵³ Cross lot struts are internal bracing that extends between the walls of an excavation, the struts typically rest on a series of walers.

¹⁵⁴ Corner braces are used to support the corners of an excavation.

required to monitor for movement at the face of the excavations. The monitoring program would include a baseline survey and frequent surveying of the excavation as construction progresses to evaluate the effects of construction and ensure that the soil and existing walls do not become unstable.

Construction-Related Dewatering

The 40-foot excavation depth would extend 15 to 20 feet below the anticipated groundwater levels. Therefore, there is the potential for substantial water inflow into the excavated areas during construction. Without an adequate groundwater control program, groundwater could also intrude into the existing buildings where the existing mat foundation or waterproofing systems would be penetrated to install features such as foundations and tiedown anchors. Dewatering would be required to maintain the groundwater level beneath the depth of excavation and could potentially result in settlement of adjacent structures, including buildings, sidewalks, streets, and utilities. To prevent adverse settlement during construction, a site-specific dewatering plan could be necessary.

DBI Requirements

DBI would review the detailed geotechnical report to ensure that the potential settlement and subsidence impacts of excavation and dewatering are appropriately addressed in accordance with Section 1704.15 of the *San Francisco Building Code*. DBI would also require that the report include a determination as to whether a lateral movement and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets during construction. If a monitoring survey were recommended, DBI would require that a Special Inspector be retained by the project sponsor to perform this monitoring. Groundwater observation wells could be required to monitor potential settlement and subsidence during dewatering. If, in the judgment of the Special Inspector, unacceptable movement were to occur during construction, corrective actions would be used to halt this settlement. Groundwater recharge could be used to halt settlement due to dewatering. Further, the final building plans would be reviewed by DBI, which would determine if additional site-specific reports would be required.

With implementation of the recommendations provided in the detailed geotechnical study, subject to review and approval by DBI, and monitoring by a DBI Special Inspector (if required), impacts related to the potential for settlement and subsidence due to construction on soil that is unstable, or could become unstable as a result of the project, would be *less than significant*.

Mitigation: None required.

Impact GE-4: The proposed project would not create substantial risks to life or property as a result of being located on expansive soil. (Less than Significant)

The presence of expansive soils is not expected because the artificial fill and dune sand beneath the project area do not contain high proportions of clay particles that can shrink or swell with changes in moisture content and thus would not be expansive. The marsh deposits and deeper deposits beneath the

project site are generally below the groundwater table and are permanently saturated. Therefore, impacts related to expansive soils would be *less than significant*.

Mitigation: None required.

Impact C-GE-1: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in a considerable contribution to cumulative impacts related to geologic hazards. (Less than Significant)

Geologic impacts are usually restricted to the immediate vicinity and geologic impacts resulting from the proposed project are limited to seismic effects and the potential for creation of an unstable geologic unit. Seismic effects could occur in the project vicinity, including the financial district and south of Market area. Therefore, these areas are considered the geographic scope for seismic effects. The creation of unstable geologic units is a local effect; therefore, the geographic scope for this cumulative impact is the project area and immediate vicinity.

Seismic Safety. Several cumulative projects would contribute to an increase in the number of persons potentially exposed to seismic risks in the south of Market and greater downtown San Francisco areas, which could result in a potential cumulative impact. However, as noted in Impact GE-1, the project site is not subject to fault rupture because there are no known earthquake faults that cross the site or vicinity. The proposed project and any development within the project area would be subject to very strong groundshaking and could experience liquefaction effects in the event of an earthquake on a nearby fault. However, the project and any new buildings would be constructed in accordance with the most current building code requirements for seismic safety, providing for increased life-safety protection of residents and workers. These requirements would reduce potential cumulative impacts to a *less-than-significant* level, and the proposed project's compliance with these requirements would ensure that it would not make a cumulatively considerable contribution to cumulative impacts related to seismic safety.

Unstable Geologic Unit. As discussed in Impact GE-3, implementation of the proposed project could result in ground settlement from excavation for construction of the expanded exhibition areas or from construction dewatering. The nearby projects that could contribute to cumulative impacts related to an unstable geologic unit are the 706 Mission Street Project, 250 Fourth Street Project, and the SF Museum of Modern Art Expansion. However, as for the proposed project, these projects would be required to implement the DBI procedures described above, including preparation of a detailed geotechnical report and site-specific reports as needed to address the potential settlement and subsidence impacts of excavation and dewatering; implementation of a lateral movement and settlement survey to monitor any movement or settlement of surrounding buildings and adjacent streets during construction and monitoring by a Special Inspector, if needed; and implementation of corrective actions, as necessary. With implementation of these requirements, cumulative impacts related to ground settlement would be *less than significant*.

Mitigation: None required.

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
14.	HYDROLOGY AND WATER QUALITY— Would the project:					
a)	Violate any water quality standards or waste discharge requirements?			\boxtimes		
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?					
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion of siltation on- or off-site?			\boxtimes		
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?					
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			\boxtimes		
f)	Otherwise substantially degrade water quality?			\boxtimes		
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map?					
h)	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?					\boxtimes
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			\boxtimes		
j)	Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?				\boxtimes	

The proposed project does not include the construction of housing. Further, the project site is not located within an area of sewer-related flooding identified by the SFPUC;¹⁵⁵ within a Special Flood Hazard Area identified on San Francisco's Interim Floodplain Map;¹⁵⁶ or an area that would be inundated with a

¹⁵⁵ San Francisco Planning Department, Planning Director Bulletin No. 4, Review of Project Identified in Areas Prone to Flooding.

¹⁵⁶ City and County of San Francisco, San Francisco Interim Floodplain Map, Northeast. Final Draft July, 2008.
sea level rise of 55 inches by 2100 based on mapping by the Pacific Institute.¹⁵⁷ Therefore, initial study Topics E.14(g) and E.14(h) are not applicable.

The project site is not located in an area subject to reservoir inundation hazards¹⁵⁸ and is not located on or near a slope that could be subject to mudflow. Based on the state's official tsunami inundation maps, the project site is not located within a tsunami inundation zone.¹⁵⁹ Therefore, there is *no impact* related to initial study Topic E.14(j).

Impact HY-1: The proposed project would not violate water quality standards, contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality. (Less than Significant)

Construction-Related Stormwater Discharges

During construction of the proposed project, water quality could be affected by erosion from grading and earthmoving operations, a release of fuels or other chemicals used during construction, or a release of materials generated during demolition and construction. Grading and earthmoving would expose soil during construction and could result in erosion and excess sediments carried in stormwater runoff to the combined sewer system. Stormwater runoff from temporary on-site use and storage of vehicles, fuels, wastes, and building materials could also carry pollutants into the combined sewer system if these materials were improperly handled.

Erosion and Use of Hazardous Materials During Construction. The federal Clean Water Act prohibits discharges of stormwater from construction projects unless the discharge is in compliance with a NPDES permit. Stormwater from the project site is collected in the Eastern Basin of the City's combined sewer system. Construction stormwater discharges to the system would be subject to the requirements of Article 4.1 of the San Francisco Public Works Code (supplemented by Department of Public Works [DPW] Order No. 158170), which incorporates and implements the City's NPDES permit for the Southeast Water Pollution Control Plant (Southeast Plant), the North Point Wet Weather Facility, and all of the Bayside wet weather facilities. This permit also incorporates the requirements of the federal Combined Sewer Overflow (CSO) Control Policy. At a minimum, the City requires that a project sponsor develop and implement an erosion and sediment control plan to reduce the impact of runoff from a construction site. The plan must be reviewed and approved by the City prior to implementation, and the City conducts periodic inspections to ensure compliance with the plan. Any stormwater drainage during construction that flows to the City's combined sewer system would receive treatment at the Southeast Plant or other wet weather facilities and would be discharged through an existing outfall or overflow structure in compliance with the City's permit. Therefore, water quality impacts related

¹⁵⁷ Pacific Institute, California Flood Risk: Sea Level Rise, San Francisco North Quadrangle, 2009.

¹⁵⁸ URS Corporation, City and County of San Francisco Hazard Mitigation Plan, December, 2008. Map C-14.

¹⁵⁹ California Emergency Management Agency, California Geological Survey, University of Southern California. Tsunami Inundation Map for Emergency Planning, San Francisco North Quadrangle/San Francisco South Quadrangle (SF Bay). June 15, 2009.

to a violation of water quality standards or degradation of water quality due to discharge of constructionrelated stormwater runoff would be *less than significant*.

Construction-Related Groundwater Dewatering Discharges. As noted in Topic 13, "Geology and Soils," the 40-foot excavation depth would extend 15 to 20 feet below the anticipated groundwater levels. Therefore, there is the potential for water inflow into the excavations during construction. If the groundwater produced during dewatering contained contaminants or excessive sediment, discharge of the groundwater into the combined sewer system could potentially degrade water quality.

Groundwater produced during construction-related dewatering would be discharged to the City's combined sewer system in accordance with a permit issued by the Wastewater Enterprise Collection System Division of the SFPUC in accordance with Article 4.1 of the *San Francisco Public Works Code*, as supplemented by Order No. 158170, which regulates the quantity and quality of discharges to the combined sewer system. This permit would contain appropriate discharge standards and may require installation of meters to measure the volume of the discharge. Although the groundwater could contain contaminants related to past site activities--as discussed in Topic 15, "Hazards and Hazardous Materials"--as well as sediment and suspended solids, the groundwater would be treated as necessary to meet permit requirements prior to discharge. With discharge to the combined sewer system in accordance with regulatory requirements, water quality impacts related to a violation of water quality standards or degradation of water quality due to discharge of groundwater during construction would be *less than significant*.

Combined Sewer Overflows During Operation

The proposed project is located in the Eastern Basin of the City's combined sewer system, within the Channel and North Shore sub-basins. Three aspects of the project in combination could result in long-term changes in the wastewater flows to the City's combined sewer system in these sub-basins: (1) increased visitors and employees at the Moscone Center would increase the amount of wastewater generation (2) implementation of stormwater best management practices (BMPs) in accordance with the San Francisco Stormwater Design Guidelines would decrease the volume of stormwater runoff to the combined sewer system; and (3) the project would include reuse of groundwater produced from dewatering (currently discharged to the combined sewer system) for non-potable purposes, which would decrease the volume of discharges to the combined sewer system. The effects of these factors on the combined sewer system are closely related, and the combined effect on the volume and/or frequency of combined sewer discharges to the Bay is discussed below.

Changes in Sanitary Sewage Flows. As described in Topic 10, "Utilities and Service Systems," the proposed project would increase the number of visitors to the Moscone Center and employees at the center, which would result in an increase in wastewater generation at the site. Without use of high-efficiency water fixtures or reuse of the groundwater produced during dewatering, the project-related increase in water use would be approximately 11,700 gallons per day, or 4.3 million gallons annually.¹⁶⁰ However, in accordance with San Francisco's Green Building Code requirements (Chapter 13C of the *San Francisco Building Code*),

¹⁶⁰ Built Ecology, 2013. SFPUC Meeting Follow Up – Summary of Water Flows. March 13.

and Section 706 of the San Francisco Environment Code, the project sponsor would be required to reduce indoor use of potable water by 30 percent compared to conventional development (defined in the California Building Code). Chapter 13C would also require a 20 percent reduction in wastewater production. The reduction in wastewater generation is directly related to the amount of water used in the operation of the building, and may be achieved by using water conservation fixtures, such as toilets. Analysis of water flows under the proposed project indicates that use of high-efficiency water fixtures, as required by San Francisco's Green Building Code would reduce the project-related increase in water flows to approximately 9,300 gallons per day, or 3.4 million gallons annually.¹⁶¹ If it is conservatively assumed that 100 percent of water used on site would be converted to wastewater, the proposed project would result in additional wastewater flows of up to an additional 3.4 million gallons annually.

During dry weather (typically, May 1st to October 15th), all wastewater generated from the proposed project would be treated at the Southeast Plant, which currently operates at about 75 percent of its dry-weather design flow capacity of 84.5 million gallons per day.¹⁶² The increased discharge with the use of high efficiency water fixtures represents less than 0.05 percent of the remaining treatment capacity. Therefore, the additional dry weather flow under the proposed project would be accommodated within the system's existing capacity.

During wet weather (typically, October 16th to April 30th), there is a variation in volume of wet weather flow due to the addition of stormwater and the increased flows can exceed the 400 million gallon per day treatment capacity of the eastside wet weather facilities. The volume of wet weather flows is directly related to the rainfall intensity, and treatment of the wet weather flows varies depending on the characteristics of any individual rainstorm. Flows in excess of the treatment capacity are conveyed to storage and transport boxes which provide "flow-through treatment" to remove settleable solids and floatable materials, which is similar to primary treatment. The excess flows are then eventually discharged through 29 combined sewer discharge structures located along the City's bayside waterfront from the Marina Green to Candlestick Point. Wet weather flows are intermittent throughout the rainy season, and combined sewer overflow events vary in nature and duration depending largely on the intensity of individual rainstorms. All discharges from the combined sewer system to the Bay, through either the primary outfalls or the combined sewer discharge structures, are operated in compliance with the federal Clean Water Act and the State's Porter-Cologne Water Quality Control Act through permits issued by the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB).

While the system is in compliance with current regulations and permits, an incremental increase in wastewater volume could affect the overall system's wet weather operations in the Channel and North Shore sub-basins. Unless offset by decreases in stormwater flows, an increase in wastewater discharges to the combined sewer system could contribute to an increase in wet-weather discharges through the 15 combined sewer discharge structures associated with the Channel and North Shore sub-basins. Nine of these structures discharge from the Channel sub-basin, including two located at Howard and at Brannan

¹⁶¹ Built Ecology, 2013. SFPUC Meeting Follow Up – Summary of Water Flows. March 13. Available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E.

¹⁶² SFPUC, Sewer System Improvement Program Report: Draft Report for SFPUC Commission Review, prepared by Wastewater Enterprise Staff, August 10, 2010.

Streets and seven that discharge to Mission Creek. These discharge facilities are constructed to capture flows for a long-term average of 10 overflow events per year. Six combined sewer discharge structures located along the northern Bay shore discharge overflows from the North Shore sub-basin. These structures are located at Baker, Pierce, Laguna, Beach, Sansome, and Jackson Streets. They are constructed to capture flows for a long-term average of four overflow events per year.

An increase in the volume of combined sewer discharges could be a concern because the RWQCB has designated Mission Creek and Central Bay as impaired water bodies under Section 303(d) of the Clean Water Act, which indicates water quality standards are not expected to be met after implementation of technology-based effluent limitations, and because combined sewer discharges contain pollutants for which these water bodies are impaired.

The total volume of combined sewer discharges from the Eastern Basin of the combined sewer system was approximately 1,234 million gallons per year and the total volume of discharges to Mission Creek was 353 million gallons per year in 2007.¹⁶³ The additional project-related wastewater flows with the use of high efficiency water fixtures would be approximately 1.6 million gallons per year during the wet season. This total volume represents a very small part of combined sewer discharges (less than 0.2 percent and 0.5 percent, respectively). However, a large part of the increased wastewater flows would treated at the Southeast Plant and North Point Wet Weather facility, and would not contribute to combined sewer discharges.

In addition, the project-related increase in wastewater flows could be reduced if the project sponsor elects to reuse grey water generated at the site for non-potable uses under the City's voluntary non-potable water program that promotes and provides incentives for the on-site reuse of non-potable water. Established through an ordinance adopted by the San Francisco Board of Supervisors in September 2012, this voluntary program includes guidelines for installing non-potable water systems and local regulations to ensure that appropriate water quality standards are met. To use a non-potable water system, the project applicant must submit a Water Budget Application to the SFPUC, and a Non-Potable Engineering Report to the San Francisco Department of Public Health. The Engineering report must demonstrate compliance with the SFDPH rules and regulations regarding the operation of on-site non-potable water treatment and reuse systems. A plumbing permit must also be obtained from DBI.

Further, the SFPUC is developing a Sewer System Improvement Program that would include measures by the City to reduce the quantity and frequency of overflows and improve the water quality of overflows.

Changes in Stormwater Runoff. Stormwater runoff in an urban location, such as the project site, is a known source of pollution. Runoff from the site may contain polynuclear aromatic hydrocarbons¹⁶⁴

¹⁶³ San Francisco Public Utilities Commission, Task 600 Technical Memorandum No. 603, Collection System Configurations Analysis and Impact on Combined Server Discharge, Final Draft, December 2010.

¹⁶⁴ Polynuclear aromatic hydrocarbons (PAHs) are group of chemicals that are formed during the incomplete burning of coal, oil, gas, wood, garbage, or other organic substances, such as tobacco and charbroiled meat. PAHs usually occur naturally, but they can be manufactured. A few PAHs are used in medicines and to make dyes, plastics, and pesticides. Others are contained in asphalt used in road construction. They can also be found in substances such as crude oil, coal, coal tar pitch, creosote, and roofing tar. They are found throughout the environment in the air, water, and soil. They can occur in the air, as vapors or attached to dust or ash particles, or as solids in soil or sediment.

(PAHs) from vehicle emissions; heavy metals, such as copper from brake pad wear and zinc from tire wear; dioxins as products of combustion; and mercury resulting from atmospheric deposition. All of these materials, and others, may be deposited on paved surfaces and rooftops as fine airborne particles, thus yielding stormwater runoff pollution that is unrelated to use of the convention, exhibition, and meeting facility. In addition, during operations the project could contribute specific pollutants including sediments, nutrients, oil and grease, organics, and trash that can be washed into the combined sewer system. These pollutants can all affect water quality.

The project site is almost entirely covered by impervious surfaces and would continue to be under the proposed project. In accordance with San Francisco's Stormwater Ordinance (Article 4.2 of the *San Francisco Public Works Code*) and Stormwater Design Guidelines, the project sponsor would be required to achieve the standards specified in LEED® SS6.1 (Stormwater Design: Quantity Control) to minimize the flow and volume of stormwater into the combined sewer system. For the project site, this standard specifies that the project sponsor must implement a stormwater management plan that results in a 25 percent decrease in the peak rate and total volume of stormwater runoff from the two-year 24-hour design storm, compared to existing conditions.

Accordingly, the project sponsor would be required to incorporate low-impact design (LID) techniques into the design and to implement stormwater BMPs to reduce the flow rate and volume of stormwater entering the combined sewer system. As discussed in the Project Description, the project sponsor would achieve the necessary reduction in stormwater flows by collecting and treating stormwater runoff for onsite reuse. Capturing the rainwater for reuse would also reduce the amount of stormwater pollutants that would otherwise be discharged to the combined sewer system. Peak stormwater discharge rates would also be reduced, which would lessen the effects on combined sewer discharges.

The Stormwater Control Plan for the project would describe the rainwater collection system and any other BMPs that would be implemented to achieve the specified reduction in stormwater flows as well as a plan for post-construction operation and maintenance of the BMPs. Specifically, the plan would include the following elements:

- Site characterization
- Design and development goals
- Source controls

Treatment BMPs

- Site plan
- Site design

- Comparison of design to established goals
- Operations and maintenance plan

The Stormwater Control Plan must be reviewed and stamped by a licensed landscape architect, architect, or engineer. The SFPUC would review the plan and certify compliance with the Stormwater Design Guidelines, and would inspect stormwater BMPs once they are constructed. Any issues noted by the inspection must be corrected before the Certificate of Occupancy can be issued for the building. Following occupancy, the owner would be responsible for completing an annual self-certification inspection, and must submit completed checklists and maintenance logs for the year to the SFPUC. In addition, the SFPUC would inspect all stormwater BMPs every third year and any issues identified by either inspection must be resolved before the SFPUC could renew the certificate of compliance.

With implementation of stormwater control measures as required by San Francisco's Stormwater Ordinance (Article 4.2 of the *San Francisco Public Works Code*) and Stormwater Design Guidelines, implementation of the proposed project would contribute to a decrease in stormwater flows from the project site relative to existing conditions.

Changes in Groundwater Discharges. As described in the Project Description, Moscone annually pumps between 12 and 18 million gallons of groundwater produced during dewatering to the combined sewer, and the annual average discharge volume is 15.1 million gallons. Under the proposed project, new exhibit hall space would be constructed in the unexcavated area beneath Howard Street to create contiguous below ground exhibit space. The outer footprint of the below ground structures would not be substantially enlarged or deepened. Based on this, it is unlikely that there would be any substantial changes in groundwater dewatering requirements under the proposed project, and the volume of groundwater discharges to the combined sewer system would remain similar to existing conditions. Therefore, there would be no effect on combined sewer discharges if the groundwater produced during dewatering were not used on site.

However, under the proposed project, the groundwater that is currently pumped for dewatering would be treated on-site and reused for non-potable purposes, such as landscape irrigation, toilet flushing, street sweeping, or firefighting under the City's voluntary non-potable water program described above. With discontinuation of dewatering discharges to the combined sewer and reuse of the groundwater produced during dewatering for non-potable purposes, average discharges to the combined sewer would be reduced by at approximately 15.1 million annually and this would result in a reduction in combined sewer discharges.

Net Impact on Combined Sewer Discharges. Based on the above discussion, there would be a negligible increase in wastewater flows under the proposed project and this increase would be at least partially offset by the mandated 25 percent reduction the peak rate and total volume of stormwater runoff from the project site in compliance with San Francisco's Stormwater Ordinance and Stormwater Design Guidelines. Therefore, there would not likely be a substantial effect on the frequency or duration of combined sewer discharges. Further, reuse of the approximately 15.1 million gallons of groundwater produced during permanent dewatering for non-potable purposes would result in a net reduction of wastewater discharges to the combined sewer system by an average of 11.7 million gallons per year when the addition of 3.4 million gallons per year of wastewater is considered. This would result in a reduction in combined sewer discharges compared to existing conditions. Therefore, implementation of the proposed project would result in *less-than-significant* water quality impacts related to violation of water quality standards or degradation of water quality associated with changes in combined sewer discharges into the Bay.

Exceedance of Storm System Capacity and Additional Sources of Polluted Runoff

As discussed above, in accordance with the San Francisco's Stormwater Ordinance and the Stormwater Design Guidelines, the peak rate and volume of stormwater discharged from the site would be reduced by 25 percent relative to existing conditions. Further, the only outside features constructed under the project would be the expanded Moscone North and South buildings, and these would not constitute a

new source of stormwater pollutants. Capture and reuse of rainwater as a stormwater control would also reduce the amount of stormwater pollutants discharged to the combined sewer system. Therefore, the project would not contribute runoff water which would exceed the capacity of an existing or planned stormwater drainage system or provide substantial additional sources of polluted runoff, and impacts related to these topics would be *less than significant*.

Mitigation: None required.

Impact HY-2: The proposed project would not 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. (Less than Significant)

As discussed in the Project Description, Moscone annually pumps between 12 and 18 million gallons of groundwater produced during dewatering to the combined sewer, and the annual average discharge volume is 15.1 million gallons. Although additional groundwater dewatering would be required temporarily during construction, this dewatering would not deplete groundwater supplies because the dewatering would be temporary, the Downtown San Francisco Groundwater Basin is not used as a potable water supply, and there are no plans for development of this basin for groundwater production. As discussed in Impact HY-1, the amount of permanent groundwater dewatering would not be expected to substantially increase once the project is constructed because the footprint of the below ground facilities would not be substantially enlarged or deepened.

Project implementation would not interfere with groundwater recharge because the project site is almost completely covered with impervious surfaces under existing conditions and would continue to be under the proposed project. Given groundwater is not used as a potable water supply, there are no plans for development of the basin for groundwater production, and there would be no net increase in impervious surfaces, impacts related to the depletion of groundwater resources and interference with groundwater recharge would be *less than significant*.

Mitigation: None required.

Impact HY-3: The proposed project would not alter the existing drainage pattern of the area in a manner that would result in substantial erosion, siltation, or flooding on- or off-site. (Less than Significant)

The project site does not include any existing streams or water course that could be altered or diverted, and there are no surface impoundments, wetlands, natural catch basins, or settling ponds within the project site. Therefore, there would be no impact related to alteration of drainage patterns by altering the course of a stream in a manner that would cause erosion or flooding on or off-site.

Currently, surface water runoff from the project site is conveyed to the combined sewer system. As discussed in Impact HY-1 and in the Project Description, the project would capture rainwater and reuse it on-site to comply with stormwater flow reductions required by San Francisco's Stormwater Design

Guidelines. Street changes under the proposed project would only include only minor modifications to the pedestrian crossing and the planned changes would not substantially affect the flood carrying capacity of Howard Street.

Compliance with the Stormwater Design Guidelines would reduce the quantity and rate of stormwater runoff to the City's combined sewer system, decreasing the potential for erosion and flooding, and would result in a *less-than-significant* impact.

Mitigation: None required.

Impact C-HY: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would not result in a considerable contribution to cumulative impacts on hydrology and water quality. (Less than Significant)

Impacts resulting from the proposed project are limited to potential water quality impacts on the Eastern Drainage Basin of the combined sewer system and central San Francisco Bay as well as adverse effects on groundwater resources of the Downtown Groundwater Basin. Therefore, the geographic scope of potential cumulative impacts on water quality encompasses central San Francisco Bay and the Downtown Groundwater Basin.

Water Quality Standards, Degradation of Water Quality, and Storm Sewer Capacity

Erosion and Use of Hazardous Materials During Construction and Groundwater Dewatering Discharges. As described in Impact HY-1, construction activities associated with the proposed project could degrade water quality as a result of increased soil erosion and associated sedimentation as well as an accidental release of hazardous materials. Discharges of dewatering effluent from excavated areas could also adversely affect water quality. However, these discharges would flow into San Francisco's combined sewer system and would be subject to the requirements of Article 4.1 of the San Francisco Public Works Code (supplemented by SFDPW Order No. 158170), which incorporates and implements the SFPUC's NPDES permit and the federal CSO Control Policy for discharges from the combined sewer system. The cumulative projects within the vicinity and throughout San Francisco that would also include discharges to the combined sewer system would be subject to the same regulatory requirements, and adherence to the SFPUC's NPDES permit stipulations would ensure compliance with water quality objectives. Therefore, cumulative impacts related to degradation of water quality would be *less than significant*.

Combined Sewer Overflows During Operation and Storm Sewer Capacity. As discussed in Impact HY-1, implementation of the proposed project would be expected to result in an 11.7 million gallons per year net decrease in wastewater flows to the combined sewer system through minimizing wastewater flows in accordance with San Francisco's Green Building Code and discontinuation of dewatering discharges. The stormwater runoff peak rate and total discharge volume would also be reduced by implementation of stormwater control measures in compliance with San Francisco's Stormwater Ordinance and Stormwater Design Guidelines. Other development projects in the City would also be required to minimize wastewater flows and reduce stormwater flows in accordance with the same regulatory requirements. The net effect of

these projects on combined sewer discharges would depend on the relative volume of wastewater increases and stormwater decreases. However, the project would not have a cumulatively considerable contribution to any increase in combined sewer discharges because of the net 11.7 million gallons per year reduction in wastewater discharges and additional decrease in stormwater flows that would be achieved. Therefore, the project's contribution to combined sewer overflows and sewer capacity would not be cumulatively considerable and this impact would be *less than significant*. Similarly, the proposed project and all of the cumulative projects would be required to decrease the peak rate and total stormwater flow to the combined sewer system in accordance with the City's Stormwater Design Guidelines, and cumulative impacts related to exceedance of storm sewer capacity and additional sources of stormwater pollutants would be *less than significant*.

Depletion of Groundwater Resources

The proposed project and many of the cumulative projects would require groundwater dewatering, and groundwater pumping under the proposed project, in combination with other groundwater pumping in the vicinity, could result in a cumulatively significant impact from the depletion of groundwater resources. However, as discussed in Impact HY-2, the project would not result in the depletion of groundwater resources because any effects of dewatering would be temporary in nature, and groundwater levels would return to normal once dewatering has stopped. Further, the Downtown San Francisco Groundwater Basin is not used as a potable water supply, and there are no plans for development of this basin for groundwater production. Therefore, the proposed project's contribution to cumulative impacts related to groundwater depletion would not be cumulatively considerable (*less than significant*).

Mitigation: None required.

Торі	cs:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
15.	HAZARDS AND HAZARDOUS MATERIALS— Would the project:					
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?					
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			\boxtimes		
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			\boxtimes		
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?					

Тор	ics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?					
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?					\boxtimes
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			\boxtimes		
h)	Expose people or structures to a significant risk of loss, injury or death involving fires?			\boxtimes		

The project site is not located within an airport land use plan area or in the vicinity of a private airstrip. Therefore, initial study Topics E.15(e) and E.15(f) are not applicable.

Impact HZ-1: The proposed project would not create a significant hazard through routine transport, use, or disposal of hazardous materials. (Less than Significant)

Regulatory Framework for Hazardous Materials Handling

Several articles of the *San Francisco Health Code* implemented by the SFDPH address the handling of hazardous materials, extremely hazardous materials, and hazardous wastes:

- Article 21 of the *San Francisco Health Code* provides for safe handling of hazardous materials in the City. It requires any person or business that handles, sells, stores, or otherwise uses specified quantities of to keep a current certificate of registration and to implement a hazardous materials business plan. A special permit is required for underground storage tanks (USTs). This article also incorporates state tank regulations.
- Article 21A of the *San Francisco Health Code* provides for safe handling of federally regulated hazardous, toxic, and flammable substances in the City, requiring businesses that use these substances to register with SFDPH and prepare a Risk Management Plan that includes an assessment of the effects of an accidental release and programs for preventing and responding to an accidental release. (While chlorine would be used under the proposed project and is identified as a regulated substance in accordance with Article 21A, the quantity stored would be less than the threshold quantity of 2,500 pounds, therefore this article does not apply to the proposed project.)
- Article 22 of the *San Francisco Health Code* provides for safe handling of hazardous wastes in the City. It authorizes SFDPH to implement the state hazardous waste regulations, including authority to conduct inspections and document compliance.

Impacts Related to Hazardous Materials Use

Operation and maintenance of the existing Moscone Center involves the use of common types of hazardous materials, such as cleaners, disinfectants, and chemical agents required to maintain the sanitation of commercial bathrooms and food preparation areas.¹⁶⁵ These commercial products are labeled to inform users of potential risks and to instruct them in appropriate handling procedures. Various chemicals, including degreasers, lubricants, oils, kerosene, diesel, coolants, paints, thinners, sealants, adhesives, resins, refrigerants, water treatment (for the cooling towers), batteries, and compressed gasses are also used for building maintenance.

The facility currently manifests organic solids, liquids, alkaline solutions, halogenated organic compounds, solvent mixtures, and waste oil for off-site disposal.¹⁶⁶ These materials are commonly associated with maintenance activities. In addition, vendors that currently use the facilities use photo-processing chemicals during conventions, and manifest these materials for off-site disposal. These waste disposal practices would be expected to continue following completion of the proposed project. There have been no documented spills or releases associated with generation of these wastes.

Currently, most of the hazardous materials at the convention center are stored in a paint shop and maintenance shop located along the western perimeter of the Moscone South exhibit halls, as well as at Moscone North where chemicals associated with the cooling towers are stored.¹⁶⁷ The expanded facilities (including the expanded Moscone North and South facilities above-ground and exhibition halls below grade) would include the use of the same types of common hazardous materials and generate the same types of hazardous wastes, but somewhat greater amounts would be required. Vendors utilizing the expanded space may also use hazardous materials or generate hazardous wastes specific to their business. Groundwater reused at the site for non-potable purposes would be treated by ultraviolet (UV) disinfection or ozone disinfection. Small amounts of chlorine could be used to provide residual treatment of the water.

To ensure the safe handling of these materials, the project sponsor and future exhibitors would continue to comply with the requirements of the City's hazardous materials handling requirements specified in Article 21 of the *San Francisco Health Code*. In accordance with this article, the facility's Certificate of Registration and Hazardous Materials Business Plan on file with the SFDPH would be revised to reflect the increased quantities of hazardous materials used. The Hazardous Materials Business Plan includes chemical inventories, a program for reducing the use of hazardous materials and generation of hazardous wastes, site layouts, a program and implementation plan for training all new employees and annual training for all employees, and emergency response procedures and plans which provides for safe handling of hazardous materials, and also allows emergency responders to safely respond to a chemical emergency at the facility, if one were to occur. Vendors would also be required to submit a Certificate of Registration at a minimum if they use hazardous materials above threshold quantities specified in

¹⁶⁵ SMG, Moscone Center Hazardous Chemical Communication Program. February 27, 2013.

¹⁶⁶ Northgate Environmental Management, Inc. Phase I Environmental Site Assessment, Moscone Center North and South, 747 and 750 Howard Street, San Francisco, California. March 21, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E.

¹⁶⁷ Ibid.

Article 21 (500 pounds, 55 gallons, or 200 cubic feet for compressed gasses). Any hazardous wastes produced would continue to be managed in accordance with Article 22 of the *San Francisco Health Code*.

The facility currently stores diesel to supply emergency generators at both Moscone North and South. There are two 500-gallon above-ground storage tanks at Moscone North and one 6,000-gallon above-ground storage tank at Moscone South.¹⁶⁸ Both tanks include secondary containment, and there is a Ni-Cad battery pack for the Moscone South generator. Under the proposed project, there would be no change in the use of diesel fuel or the battery pack used to supply emergency generators.

Compliance with the *San Francisco Health Code*, which incorporates state and federal requirements, would minimize potential exposure of site personnel and the public to any accidental releases of hazardous materials or waste and would also protect against potential environmental contamination. In addition, transportation of hazardous materials is well regulated by the California Highway Patrol and the California Department of Transportation. Therefore, the potential impacts related to the routine use, transport, and disposal of hazardous materials associated with implementation of the project would be *less than significant*.

Mitigation: None required.

Impact HZ-2: The proposed project would be constructed on a site identified on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Excavation could also require the handling of contaminated soil and groundwater, potentially exposing workers and the public to hazardous materials, or resulting in a release of hazardous materials into the environment during construction. (Less than Significant)

Based on historic land uses, the presence of earthquake fill, and existing contamination at the site (discussed below), workers and the public could be exposed to hazardous material during construction, and previously unidentified USTs may be encountered during excavation. Soil and groundwater could also require special handling/disposal procedures. Following construction, workers could potentially be exposed to any hazardous materials left in place. Site conditions related to the potential presence of hazardous materials and previously identified USTs are described below, along with regulatory requirements that would be required and would ensure that workers, site occupants and visitors, and the public do not experience adverse effects related to hazardous materials exposure.

Discussion of Existing Conditions

Previous Site Uses. The proposed project site has a long history of industrial and commercial land uses prior to the initial development of the Moscone Center that began in 1981.¹⁶⁹ Based on Sanborn Maps reviewed for the Phase I Environmental Site Assessment (ESA) completed for the project, historic land uses at the site and in the immediate vicinity since 1887 that could have involved the use of hazardous materials include launderettes; a copper and wire shop; wood and coal yards; a tin shop; a soda water factory; a

¹⁶⁸ Ibid.

¹⁶⁹ Ibid.

cleaning, soldering, and storage yard for kerosene cans; a veterinary stable; a junk yard; an electric shop; machine shops; paint shops; metal works; a printer; an iron warehouse; a wagon factory; a dairy; a lithography shop; a wire products factory; two gasoline service stations; auto repair shops; an auto parking facility with a fuel island; a paper company; a meat market; a dry battery manufacturer; an iron and bronze shop and engraving shop; and a brass foundry. Also, the environmental database review conducted for the Phase I ESA indicates that five dry cleaning facilities were situated at the property between 1930 and 1966.

The buildings within large portions of the project site were demolished sometime between 1970 and 1974 and replaced with parking or vacant lots. Automobile parking and a car wash were located in the southeast portion of the site in 1974. Moscone South was constructed in 1981 and the Esplanade Building was constructed in 1989. Moscone North was constructed in 1991, along with pedestrian tunnels and truck access routes that connect the north and south facilities beneath Howard Street.

Underground Storage Tanks. The Moscone Center previously used two 10,000-gallon USTs for the storage of diesel to fuel emergency generators.¹⁷⁰ One of the USTs failed a leak test in 1989. As a result the Moscone Center is identified in the Leaking Underground Storage Tank (LUST) database as well as in environmental databases identifying sites with historic USTs. Environmental investigations conducted between 1989 and 1995 identified total petroleum hydrocarbons as diesel (8,800 milligrams per kilogram [mg/kg]), toluene (0.08 mg/kg), ethylbenzene (0.37 mg/kg) and elevated levels of lead in the UST backfill materials and soil. Both of the diesel USTs, as well as some of the contaminated soil, were removed in 1993, but not all of the contaminated soil could be removed due to structural limitations related to the adjacent buildings. Groundwater was minimally affected by total petroleum hydrocarbons as diesel (70 micrograms per liter [μ g/L]) and toluene (0.05 μ g/L), but these compounds were not detected in the groundwater down gradient of the former UST location at the completion of the soil removal. Based on the findings of this investigation, the San Francisco Local Oversight Program issued a Remedial Action Completion Certificate on December 10, 2009.¹⁷¹

In addition, 12 historical 1,000-gallon USTs of unspecified uses and an additional UST were encountered during construction of Moscone North and were removed during construction. Soil excavated during construction contained elevated levels of petroleum hydrocarbons as gasoline, diesel, and oil (110,000 mg/kg, 64,000 mg/kg, and 130,000 mg/kg, respectively). Ethylbenzene (120 mg/kg) and xylene (33 mg/kg) were also detected in the soil, but no petroleum products or associated compounds were detected in groundwater samples. Soil was excavated to a depth of 40 feet for construction of the underground exhibit hall, at least 17 feet below the deepest UST encountered. At the completion of soil excavation, the only compounds detected were total petroleum hydrocarbons as diesel and oil (450 mg/kg and 4,000 mg/kg, respectively). Based on these results, the San Francisco Local Oversight Program issued a Remedial Action Completion Certificate regarding these 12 USTs on December 11, 2009.¹⁷²

¹⁷⁰ Ibid.

 ¹⁷¹ San Francisco Department of Public Health, Remedial Action Completion Certification, Underground Storage Tank
(UST) Case, Moscone Center, 747 Howard Street, San Francisco, LOP Case Number: 10523. December 10, 2009.

¹⁷² San Francisco Department of Public Health, Remedial Action Completion Certification, Underground Storage Tank (UST) Case, Moscone Center Expansion, 750 Howard Street, San Francisco, LOP Case Number: 10594. December 11, 2009.

Fill Materials. As discussed in Topic 13, "Geology and Soils," the site is underlain by up to 20 feet of artificial fill materials. The fill is primarily derived from dune sands, and fragments of brick, wood, asphalt, and concrete were encountered within the fill. Because fill materials in San Francisco commonly include industrial refuse and building debris from the 1906 earthquake, these materials commonly contain PAHs, heavy metals, oil and grease, and volatile organic compounds.¹⁷³

Surrounding Sites. The Phase I ESA prepared for the proposed project did not identify any sites in the vicinity of the proposed project that were considered to have the potential to affect soil or groundwater quality at the project site. However, the assessment concluded that there is the potential for regional degradation of groundwater quality given that there are 32 sites identified in the California ENVIROSTOR database within a 1-mile radius of the project site (this database includes sites with known contamination, or sites for which there may be a reason to investigate further); 152 sites identified in the LUST database within 0.5-mile (this database includes sites with leaking underground storage tanks); 23 historic dry cleaning facilities located within 1/8-mile; and 11 historic gasoline service stations within 1/8-mile.

Existing Soil Quality. Based on historic industrial uses of the project site that handled hazardous materials, as well as the presence of earthquake fill at the site, there is a high potential to encounter hazardous materials in the soil. A Phase II investigation, including the installation of six soil borings for soil sample collection (three in each of the planned excavation areas), was completed in July 2013.¹⁷⁴ For this analysis, the soil analytical results are compared to the following criteria that are applicable to the disposal of the soil and potential health risks associated with exposure to the soil:

- *Hazardous waste criteria adopted by the State of California (Title 22 of the California Code of Regulations, Section 66261.20, et seq.).* In accordance with these criteria, excavated soil would be classified as a hazardous waste if it contains a specified chemical at a total concentration greater than the State total threshold limit concentration (TTLC); a soluble concentration greater than the State soluble threshold limit concentration (STLC); a soluble concentration greater than federal toxicity regulatory levels using a test method called the toxicity characteristic leaching procedure (TCLP); or specified carcinogenic substances at a single or combined concentration of 0.001 percent.
- Environmental screening levels published by the Regional Water Quality Control Board.¹⁷⁵ Environmental Screening Levels (ESLs) are conservative estimates of safe levels of a chemical that a person could be exposed to in soil. If the concentration of a chemical in the soil is below the ESL, then it can be assumed that the chemical would not pose a health risk to a person. Because construction workers, site workers and residents would experience different exposures to soil, there are different ESLs for each of these receptors. In general, residents would be expected to have the longest exposure to soil and therefore residential ESLs are generally lower than construction or site worker screening levels, and are the most stringent of the three criteria. Typically, a site can be suitable for unrestricted land uses if the chemical concentrations in soil

 ¹⁷³ Volatile organic compounds are emitted as gases from certain solids or liquids, such as paints and lacquers, paint strippers, cleaning supplies, pesticides, building materials and furnishings, or office equipment (i.e., copiers and printers, correction fluids and carbonless copy paper, graphics and craft materials including glues and adhesives, permanent markers, and photographic solutions).
¹⁷⁴ Northgate Environmental Management, Inc. Phase II Soil and Groundwater Investigation, Moscone Center Expansion

¹⁷⁴ Northgate Environmental Management, Inc. Phase II Soil and Groundwater Investigation, Moscone Center Expansion Project, San Francisco, California. July 1, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E.

¹⁷⁵ California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater. Interim Final. November 2007, revised May 2008.

and groundwater are less than the residential ESL, but land use restrictions can be imposed on a property if the chemical concentrations exceed the commercial ESL, or another less stringent requirement. Therefore, the discussion of analytical results below compares available results to the residential ESL.

On the basis of the soil analytical results from the Phase II investigation, soil from the uppermost 3.5 feet of soil from the eastern excavation area could be classified as a California hazardous waste because the concentration of soluble lead was 33 milligrams per liter (mg/L), determined using California's waste extraction test methodology, which is greater than the STLC of 5.0 mg/L. Soil from below this depth in the eastern excavation area and from the entire western excavation area would not be classified as a hazardous waste because none of the total chemical concentrations detected exceeded California's TTLC and none of the soluble concentrations exceeded California's STLC or the federal TCLP level.

Volatile organic compounds were detected in only two soil samples (1,2,4-trimethylbenzene at 0.0055 mg/kg and naphthalene at 0.007 mg/kg), and each of these chemicals is a common component of either gasoline or diesel. Total petroleum hydrocarbons as diesel were detected in eight of the 16 soil samples analyzed at concentrations ranging from 1.0 to 20 mg/kg, and total petroleum hydrocarbons as oil were detected in ten of the 16 samples at concentrations ranging from 5.2 to 100 mg/kg. Several metals were detected in the soil samples. With the exception of arsenic and lead, none of the chemical concentrations detected in the soil samples exceeded ESLs established by the RWQCB for residential land uses, commercial land uses, or construction workers.

Ranging from 1.3 to 4.4 mg/kg, all of the detected arsenic concentrations exceeded the residential ESL of 0.39 mg/kg. However, these concentrations are less than the background concentration of 11 mg/kg in the San Francisco Bay Area¹⁷⁶ and would therefore not normally require remediation. At 310 mg/kg, only the lead concentration in one composite sample exceeded the residential ESL of 80 mg/kg, but this elevated lead concentration does not exceed the ESL of 320 mg/kg for commercial land uses and construction workers. This elevated lead level is associated with the shallow soil that would require disposal as a hazardous waste, as discussed in the preceding paragraph. Total petroleum hydrocarbons as gasoline, semivolatile organic compounds, polychlorinated biphenyls (PCBs), organochlorine pesticides, and asbestos were not detected in any of the soil samples.

Because the detected lead concentrations are all below the ESL for commercial land uses and construction workers, and all of the other detected chemical concentrations are below the residential ESLs or background levels, there would not be potential health risks associated with exposure to the soil, and the soil would be suitable for off-site re-use. Any soil with elevated lead levels would be disposed of off-site as a hazardous waste based on the soluble lead levels detected and would therefore not pose a health threat to site occupants and visitors because it would be removed from the site during construction and appropriately disposed of.

¹⁷⁶ Duverge, Dylan. Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region. December, 2011.

Existing Groundwater Quality. The Phase II investigation¹⁷⁷ also included the analysis of grab groundwater samples from four of the borings (two in each of the excavation areas). The analytical results for these samples are representative of the quality of the groundwater that would be discharged to the combined sewer system or reused at the site for non-potable purposes under the proposed project. For this analysis, the groundwater analytical results are compared to the following criteria to evaluate the suitability of the groundwater for discharge and also potential health risks to site occupants and visitors as a result of vapor intrusion:

- Discharge limitations specified in Article 4.1 of the San Francisco Public Works Code, as *supplemented by Order No.* 158170. Article 4.1 of the San Francisco Public Works Code and Order No. 158170 regulate the quantity and quality of discharges to the combined sewer system.
- *ESLs for Vapor Intrusion.*¹⁷⁸ Volatile organic compounds in groundwater can volatilize, and if present at high enough concentrations in the soil, can produce vapors that could affect indoor air quality, depending on the specific building design. Groundwater ESLs for vapor intrusion represent the level of volatile organic compounds that would not be expected to result in adverse vapor intrusion, regardless of the building design.

The groundwater samples were analyzed for total petroleum hydrocarbons as gasoline, diesel, and oil; volatile organic compounds; and metals. Total petroleum hydrocarbons as gasoline, diesel, and oil were not detected in the groundwater samples. Only three volatile organic compounds were detected (trichloroethene at 3.8 μ g/L, cis-1,2-dichloroethene at 0.53 μ g/L, and carbon disulfide at 13 μ g/L). The trichloroethene concentration is well below the ESL of 52 μ g/L for vapor intrusion and also below the discharge limitation of 500 μ g/L specified in Article 4.1 of the San Francisco Public Works Code as supplemented by Order No. 158170, but these criteria have not been established for cis-1,2-dichloroethene or carbon disulfide. While several dissolved metals were detected in the groundwater samples (arsenic, barium, chromium, cobalt, lead, mercury, molybdenum, nickel, and vanadium), none of the concentrations exceeded the Article 4.1 and Order No. 158170 discharge limitations.

As summarized in the Phase I ESA, a 2011 study conducted to evaluate the feasibility of using groundwater from building dewatering operations for non-potable uses found that groundwater samples collected from two of the four dewatering sumps at the Moscone Center contained two volatile organic chemicals (trichloroethene and cis-1,2-dichloroethene) as well as several metals (arsenic, barium, chromium, cobalt, copper, nickel, vanadium, and zinc). The detected levels were below ESLs established by the RWQCB for evaluating non-drinking water sources.

Regulatory Requirements for Site Investigation and Cleanup

The SFDPH provides oversight for the assessment and remediation of contaminated sites in the City and County of San Francisco under the Site Assessment and Mitigation Program. Types of sites managed under this program include sites subject to the Maher Program and sites affected by a release from a UST

¹⁷⁷ Northgate Environmental Management, Inc., Phase II Soil and Groundwater Investigation, op cit.

¹⁷⁸ California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater. Interim Final. November 2007, revised May 2008.

being addressed under the Local Oversight Program. The SFDPH also administers UST and facility closure requirements.

Maher Program. Article 22A of the *San Francisco Health Code* (also known as the Maher Ordinance) requires, prior to issuance of a building permit, that the project sponsor retain the services of a qualified professional to prepare a Phase I ESA that meets the requirements of *San Francisco Health Code* Section 22.A.6. The Phase I ESA would determine the potential for site contamination and level of exposure risk associated with the project. Based on that information, the project sponsor may be required to conduct soil and/or groundwater sampling and analysis. Where such analysis reveals the presence of hazardous substances in excess of state or federal standards, the project sponsor is required to submit a site mitigation plan (SMP) to SFDPH or other appropriate state or federal agency(ies), and to remediate any site contamination in accordance with an approved SMP prior to the issuance of any building permit. For departments, boards, commissions and agencies of the City and County of San Francisco that authorize construction or improvements on land under their jurisdiction where no building or grading permit is required, the ordinance requires protocols be developed between that entity and SFDPH that will achieve the environmental and public health and safety goals of Article 22A.

Article 22A of the *San Francisco Health Code* applies to any site identified within the Maher area as well as any site that is:

- on a lot either currently or previously either zoned for or permitted for industrial use;
- within 150 feet of any of the elevated portions of U.S. Highway 101, Interstate 80 or Interstate 280;
- on a lot known or suspected by SFDPH to contain hazardous substances in the soil and/or groundwater; or
- on a lot known or suspected by SFDPH to contain or to be within 100 feet of an underground storage tank.

The project would be subject to Article 22A because it is located on a site that has been permitted for an industrial use and there are suspected underground storage tanks in the project vicinity.

Local Oversight Program. Under the Local Oversight Program, the SFDPH provides oversight for sites that have experienced a release from a UST, pursuant to Title 23 of the California Code of Regulations, Chapter 16. Under this program, the State Water Resources Control Board provides regulatory guidance and also reviews, comments on, and approves site assessment reports, feasibility studies, and work plans; reviews monitoring data to evaluate the effectiveness of the remediation strategy; and upon completion of remediation, issues a letter or other document that certifies that the cleanup goals have been met.

UST and Facility Closure. Article 21 of the *San Francisco Health Code* addresses closure of USTs and other hazardous materials handling facilities. To close a facility (including USTs), a closure plan must be prepared that identifies how the need for future maintenance of the facility will be eliminated; how the threat to the environmental and public health and safety will be eliminated, and how all hazardous materials in the facility will be removed and appropriately disposed of. The plan must be submitted to the City for approval prior to closure.

This article also requires that soil from the UST excavation, and possibly the groundwater, be sampled. Upon completion of closure, a final report documenting UST removal activities and any residual contamination left in place must be submitted to the City. Upon approval of this report, the City would issue a Certificate of Completion. If a release were indicated, the site owner would be required to assess the extent of any contamination and conduct a site remediation, as needed, in compliance with the SFDPH Local Oversight Program requirements. The SFDPH could approve abandonment of the UST in place if removal were infeasible.

Impacts Related to Exposure to Hazardous Materials in Soil and Groundwater

Closure of previously unidentified USTs. As discussed above, previously unidentified USTs were discovered during construction of Moscone North. Based on historic use of the proposed project site for a number of industrial uses, there is also the potential to encounter previously unidentified USTs during construction of the expanded exhibit areas. Without proper precautions, workers and the public could be exposed to petroleum products potentially remaining in the USTs or in the surrounding soil.

If a previously unidentified UST were encountered, the project sponsor would be required to close the UST in accordance with Article 21 of the *San Francisco Health Code*. This article would require a closure plan identifying appropriate requirements for disposition of any remaining hazardous materials in the tank and the tank itself. The closure plan would be submitted to the City for approval prior to removal of the UST. Soil from the UST excavation, and possibly the groundwater, would also be sampled in accordance with Article 21. Upon completion of closure, a release or contamination report would be submitted to SFDPH if a release were indicated on the basis of visual observations or sampling, and a final report documenting tank removal activities and any residual contamination left in place would be submitted to SFDPH. Upon approval of this report, SFDPH would issue a Certificate of Completion. If a release were indicated, the project sponsor would be required to submit a corrective action plan, including a community health and safety plan, to SFDPH and the RWQCB, and remediation would be abandoned in place if removal were infeasible. Implementation of the measures required in accordance with Article 21 of the *San Francisco Health Code* would ensure that hazardous materials impacts associated with encountering previously unidentified USTs would be *less than significant*.

Construction within contaminated materials. As discussed above, the project sponsor has conducted a Phase I ESA to describe historic uses of the project site, and implemented a Phase II soil and groundwater quality investigation. Because the detected lead concentrations are all below the ESL for commercial land uses and for construction workers, and all of the other detected chemical concentrations are below the residential ESLs or background levels, there would not be potential health risks associated with exposure to the soil, and the soil would be suitable for off-site re-use based on the sampling conducted to date.

Additionally, the proposed project site is subject to Article 22A of the *San Francisco Health Code*. The Phase I ESA has been prepared for the project in accordance with Article 22A and complies with its requirements for a site history report. The Phase II investigation also generally complies with the requirements for a subsurface soil and groundwater investigation, but several analyses required by Article 22A were not conducted, including pH, cyanide, and methane. Accordingly, the SFDPH may

require additional sampling and analysis prior to construction. To enable SFDPH to make this determination, the project sponsor has submitted a Maher Application to the SFDPH in accordance with Article 22A, and the application is currently under review. Upon its review of the Phase I and II reports, the SFDPH will either issue a no further action letter or require additional investigation.

If the additional investigation reveals the presence of hazardous substances in excess of state or federal standards, the project sponsor would be required to submit a site mitigation plan (SMP) to SFDPH or other appropriate state or federal agency(ies), and to remediate any site contamination in accordance with an approved SMP prior to the issuance of the building permit. The proposed project would be required to remediate potential contamination in accordance with Article 22A. Thus, the proposed project would not result in a significant hazard to the public or environment from site contamination and the proposed project would result in a *less than significant* impact related to construction within contaminated materials.

Disposal of contaminated materials. As discussed above, the uppermost 3.5 feet of soil from the eastern excavation area could be classified as a California hazardous waste because the concentration of soluble lead in the shallow composite soil sample from this area was 33 mg/L (determined using California's waste extraction test methodology), which is greater than the STLC of 5.0 mg/L. Further, if previously unidentified USTs are encountered, the tanks and associated soil would require off-site disposal. However, as the generator of the hazardous wastes, the project sponsor would be required to follow state and federal regulations for manifesting the wastes, using licensed waste haulers, and disposing the materials at a permitted disposal or recycling facility. With compliance with these regulatory requirements, impacts related to disposal of hazardous wastes would be *less than significant*.

As noted in Topic 13, "Geology and Soils," the depth to groundwater at the project site is about 20 to 24 feet below ground surface. During construction of the proposed facility, groundwater produced by dewatering would be discharged to the combined sewer system in compliance with Article 4.1 of the *San Francisco Public Works Code* as supplemented by Order No. 158170. As discussed above, the groundwater quality meets the discharge limitations of Article 4.1 and Order No. 158170, and would therefore not require treatment other than to remove sediments. Impacts related to discharge of the groundwater produced during construction-related dewatering would be *less than significant* with compliance with the specified discharge limitations.

Moreover, once construction of the expanded facilities is completed, groundwater produced during longterm dewatering would be captured and reused for non-potable uses as described in the Project Description. Reuse of this water in accordance with San Francisco's voluntary non-potable water program (described in Topic 14, "Hydrology and Water Quality)," would further ensure that impacts related to the long-term discharge of groundwater would be *less than significant*.

Mitigation: None required.

Impact HZ-3: Demolition and renovation of the exhibit halls would expose workers and the public to hazardous building materials including asbestos-containing materials, lead-based paint, polychlorinated biphenyls (PCBs), bis(2-ethylhexyl) phthalate (DEHP), and mercury, or result in a release of these materials into the environment during construction. (Less than Significant with Mitigation)

As described in the Project Description, the Esplanade Ballroom support building and additional Esplanade facilities would be demolished to allow for construction of the proposed facilities, including new underground exhibit hall space and the new Esplanade Expansion Building. In addition, a portion of the South Lobby building would be demolished to allow for construction of the expanded Moscone South Building. The Gateway Ballroom (below the existing Moscone South lobby) and Hall E (below the existing Moscone North lobby) would be reconfigured into exhibit space.

The Moscone South building was constructed in 1981, the Esplanade Building was constructed in 1989, and the Moscone North building was constructed in 1991.¹⁷⁹ Although these buildings were constructed after the manufacture of asbestos-containing building materials was banned in the 1970s, existing stocks of these materials were allowed to be sold until they were used up. Similarly, while the manufacture of lead-based paints was banned in 1978, existing supplies continued to be used until the stocks were used up and lead-based paint continued to be used in some industrial applications. Therefore, there is the potential for these materials to be present in the structures that would be demolished or renovated under the proposed project. Other hazardous building materials that could be present include electrical equipment containing PCBs; fluorescent light ballasts containing PCBs or bis(2-ethylhexyl) phthalate (DEHP); and fluorescent light tubes containing mercury vapors.

If these materials were present, workers and the public could be exposed to hazardous building materials if they were not abated prior to demolition or renovation. However, as discussed below, there is a well-established regulatory framework for the abatement of asbestos-containing materials and lead-based paint, and impacts related to exposure to these hazardous building materials would be less than significant with compliance with regulatory requirements. Impacts related to exposure to other hazardous building materials could be significant, as discussed below.

Asbestos-Containing Materials. An asbestos and lead-based paint survey was conducted for the portion of the Esplanade Building that would be demolished under the proposed project.¹⁸⁰ The survey identified a total of approximately 17,100 square feet of asbestos-containing materials, including black tar within the mechanical crawl space at the east end of the South Lobby area; floor tile and mastic in the mezzanine level substation and corridor; and white terrazzo flooring in the stairwells at levels 1 through 4. In addition, the survey identified 7,500 batting clip mastics in the west end of the mezzanine level plan room that are asbestos-containing. The survey reports that there could be a vapor barrier under the basement level concrete slab and under ceramic tiled floors within the restrooms and janitor closets, and this barrier could contain asbestos. There could also be below-ground transite (asbestos cement) piping and valves servicing

¹⁷⁹ Northgate Environmental Management, Inc. Phase I Environmental Site Assessment, op. cit.

¹⁸⁰ North Tower Environmental, Inc. Asbestos and Lead-Based Paint Survey Report, Moscone Center, Esplanade Building Pre-Demolition, 747 Howard Street, San Francisco, California. March 25, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E.

the building that could contain asbestos. These materials could not be accessed as part of the survey, but should be sampled prior to demolition to determine their asbestos content if encountered. The South Lobby building, Gateway Ballroom, and Hall E have not been surveyed for asbestos-containing materials.

Section 19827.5 of the *California Health and Safety Code* requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. The BAAQMD is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified of any demolition or renovation project that involves the removal of 100 square feet or more of asbestos-containing materials 10 days in advance of the work.

Notification includes the names and addresses of operations and persons responsible; description and location of the structure to be demolished/altered including size, age, and prior use; the approximate amount of friable asbestos that would be removed or disturbed; the scheduled starting and completion dates of demolition or abatement; the nature of the planned work and methods to be employed; the procedures to be employed to meet BAAQMD requirements; and the name and location of the waste disposal site to be used. Approved methods for control of asbestos-containing materials during abatement include adequate wetting of all asbestos-containing materials and providing containment with a negative air pressure ventilation system to prevent migration of asbestos-containing materials. BAAQMD randomly inspects asbestos removal operations. In addition, BAAQMD will inspect any removal operation when a complaint has been received.

The local office of the State Occupational Safety and Health Administration (Cal/OSHA) must be notified of asbestos abatement to be carried out. Asbestos abatement contractors must follow state regulations contained in 8CCR1529 and 8CCR341.6 through 341.17 where there is asbestos-related work involving 100 square feet or more of asbestos-containing material. Asbestos removal contractors must be certified as such by the Contractors Licensing Board of the State of California. The owner of the property where abatement is to occur must have a Hazardous Waste Generator Number assigned by and registered with the Office of the California Department of Health Services in Sacramento. The contractor and hauler of the material are required to file a Hazardous Waste Manifest which details the hauling of the material from the site and the disposal of it. Pursuant to California law, the San Francisco Department of Building Inspection (DBI) would not issue the required permit until the applicant has complied with the notice and abatement requirements described above.

Accordingly, the project sponsor would ensure that the South Lobby building, Gateway Ballroom, and Hall E are surveyed for asbestos-containing materials prior to demolition or renovation, and would provide BAAQMD with notification of any planned demolition or renovation activities a minimum of 10 days prior to these activities. The project sponsor would retain a certified asbestos removal contractor to completely remove all asbestos-containing materials prior to demolition or renovation using BAAQMD-approved methods, and would also retain a licensed waste hauler to legally dispose of the removed materials. Implementation of the required procedures in accordance with the legal requirements described above, already established as a part of the permit review process, would ensure that any

potential impacts due to demolition or renovation of structures with asbestos-containing materials would be *less than significant*.

Lead-based Paint. 17 CCR Section 35033 defines lead-based paint as paint that contains 1.0 milligram of lead per square centimeter of paint, or 5,000 mg/kg of lead. The asbestos and lead-based paint survey conducted for the portion of the Esplanade building that would be demolished under the proposed project determined that the yellow paint on the loading docks is lead-based paint.¹⁸¹ The ceramic tile glazing on tiles in the administration office restrooms, kitchen, and restrooms in the kitchen are also lead-based. All other painted surfaces on the interior and exterior of the building also contain detectable lead, but at concentrations less than 1.0 milligrams per square centimeter.

Section 3426 of the *San Francisco Building Code*, Work Practices for Lead-Based Paint on Pre-1979 Buildings and Steel Structures, applies to the exterior of all buildings on which original construction was completed prior to 1979 (which are assumed to have lead-based paint on their surfaces, unless demonstrated otherwise through laboratory analysis) and to any steel structures with lead-based paint, such as the Moscone Center. Therefore, demolition of any exterior building features such as metal bumpers painted with the yellow lead-based paint must comply with Section 3426 if the total amount of disturbance would be greater than 100 square feet. Regarding building interiors, this section of the building code applies only to the interior of residential buildings, hotels, and childcare centers, and would therefore not apply to demolition of the building interior under the proposed project.

Section 3426 of the San Francisco Building Code requires specific notification and work standards, and identifies prohibited work methods and penalties. (The reader may be familiar with notices commonly placed on residential and other buildings in San Francisco that are undergoing re-painting. Generally affixed to a drape that covers all or portions of a building, these notices are a required part of the Section 3426 notification procedure.) The notification requirements include notification of DBI and posting of required signs. Prior to the commencement of work, the responsible party must provide written notice to the Director of DBI of the address and location of the project; the scope of work, including specific location; methods and tools to be used; the approximate age of the structure; anticipated job start and completion dates for the work; whether the building is residential or nonresidential, owner-occupied or rental property; the dates by which the responsible party has fulfilled or will fulfill any tenant or adjacent property notification requirements; and the name, address, telephone number, and pager number of the party who will perform the work. The responsible party must also post notices informing the public and adjacent property owners of the work and also restricting public access to the work area, or provide specific notice to adjacent property owners. Section 3426 also contains provisions regarding inspection and sampling for compliance by DBI, enforcement, and penalties for non-compliance with the requirements of the ordinance.

The specified performance standards include establishment of containment barriers at least as effective at protecting human health and the environment as those in the U.S. Department of Housing and Urban Development Guidelines (the most recent Guidelines for Evaluation and Control of Lead-Based Paint

¹⁸¹ Ibid.

Hazards), and identification of practices that may not be used in disturbance or removal of lead-based paint. Any person performing work subject to the ordinance shall, to the maximum extent possible, protect the ground from contamination during exterior work and make all reasonable efforts to prevent migration of lead paint contaminants beyond containment barriers during the course of the work. Clean-up standards require the removal of visible work debris, including the use of a High Efficiency Particulate Air Filter (HEPA) vacuum following interior work.

Demolition or renovation of other structures that include lead-containing materials could result in exposure of workers and the public to lead. However, these activities would be subject to the Cal/OSHA Lead in Construction Standard (8 CCR Section 1532.1). This standard requires development and implementation of a lead compliance plan when materials containing lead would be disturbed during construction. The plan must describe activities that could emit lead, methods that will be used to comply with the standard, safe work practices, and a plan to protect workers from exposure to lead during construction activities. Cal/OSHA would require 24-hour notification if more than 100 square feet of materials containing lead would be disturbed. For activities disturbing the yellow lead-based paint described above, the project sponsor would also be required to comply with Section 3426 of the San Francisco Building Code if more than 100 square feet of lead-based paint were disturbed, although notification under the Lead in Construction Standard could satisfy the requirements of the building code.

Implementation of procedures required by Section 3426 the *San Francisco Building Code* and Lead in Construction Standard (8 CCR Section 1532.1) would ensure that potential impacts of demolition or renovation of structures with lead-based paint would be *less than significant*.

Other Hazardous Building Materials. Other hazardous building materials that could be present within the portions of the Moscone Center that would be demolished or renovated include electrical transformers that could contain PCBs, fluorescent light ballasts that could contain PCBs or DEHP, and fluorescent light tubes that could contain mercury vapors. Disruption of these materials could pose health concerns for construction workers if not properly handled or disposed of, a significant impact. However, implementation of **Mitigation Measure M-HZ-3**, **Hazardous Building Materials Abatement**, would require that the presence of such materials be evaluated prior to demolition or renovation and, if such materials were present, that they be properly handled during removal and building demolition or renovation. This would reduce the potential impacts of exposure to these hazardous building materials to a *less-than-significant* level.

Mitigation Measure M-HZ-3: Hazardous Building Materials Abatement

The project sponsor shall ensure that any area of the Moscone Center planned for demolition or renovation is surveyed for hazardous building materials including PCB-containing electrical equipment, fluorescent light ballasts containing polychlorinated biphenyls (PCBs) or bis(2-ethylhexyl) phthalate (DEHP), and fluorescent light tubes containing mercury vapors. These materials shall be removed and properly disposed of prior to the start of demolition or renovation. Light ballasts that are proposed to be removed during renovation shall be evaluated for the presence of PCBs and in the case where the presence of PCBs in the light ballast cannot be verified, they shall be assumed to contain PCBs, and handled and disposed of as such, according to applicable laws and regulations.

Any other hazardous building materials identified either before or during demolition or renovation shall be abated according to federal, state, and local laws and regulations.

Level of Significance after Mitigation: Implementation of Mitigation Measure M-HZ-3 would reduce impacts related to exposure hazardous building materials under the proposed project to a *less-than-significant* level.

Impact HZ-4: Implementation of the proposed project would not result in adverse effects related to hazardous emissions or handling of acutely hazardous materials within one-quarter mile of an existing school. (Less than Significant)

Bessie Carmichael Middle School is located within one-quarter mile of the proposed project. The State of California defines extremely hazardous materials in Section 25532 (2)(g) of the Health and Safety Code. Construction of the proposed project would use only common hazardous materials such as paints, solvents, cements, adhesives, and petroleum products (such as asphalt, oil, and fuel), and none of these materials is considered extremely hazardous. Further, operation of the expanded Moscone Center would not involve the use of extremely hazardous materials. There would be a *less-than-significant* impact.

Mitigation: None required.

Impact HZ-5: Implementation of the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan or expose people or structures to a significant risk of loss, injury or death involving fires. (Less than Significant)

The proposed project would increase the number of employees at the Moscone Center by 28, and could increase the number of daily visitors by up to 4,200.¹⁸² The increased number of employees and visitors to the expanded Moscone Center could contribute to congestion if an emergency evacuation of the greater Downtown area were required. However, Section 12.202(e)(1) of the *San Francisco Fire Code* requires that all owners of high-rise buildings (taller than 75 feet), such as the expanded Moscone South structure, "shall establish or cause to be established procedures to be followed in case of fire or other emergencies. All such procedures shall be reviewed and approved by the chief of division." Additionally, project construction would have to conform to the provisions of the *Building Code* and *Fire Code*, which require additional life-safety protections for high-rise buildings and the final building plans for the expanded facilities would be reviewed by the San Francisco Fire Department (as well as DBI) to ensure conformance with the applicable provisions, including development of an emergency procedure manual and an exit drill plan.

Although not "adopted" by legislative action, the City has a published Emergency Response Plan, prepared by the Department of Emergency Management as part of the City's Emergency Management Program,

¹⁸² Adavant Consulting, Memorandum RE: Moscone Center Expansion Project – Estimation of Travel Demand, January 9, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E.

which also includes plans for hazard mitigation and disaster preparedness and recovery.¹⁸³ The Emergency Response Plan identifies hazards to which San Francisco is particularly susceptible as earthquake, hurricane, tsunami, flood, winter storm, and act of terrorism, including use of chemical, biological, radiological, nuclear, and explosive weapons. The Emergency Response Plan complies with several relevant state and federal directives for emergency planning, including the California Standardized Emergency Management System and the Incident Command System. The Plan includes sections on operations, including management and procedures; staffing, operations, and logistics regarding the City's emergency operations center; and mutual aid involving other agencies. The Emergency Response Plan assigns responsibilities for disaster planning, operations (including fire and rescue, law enforcement, human services, infrastructure, transportation, communications, and community support), and logistics, as well as finance and administration, to City agencies and departments. The Emergency Response Plan also identifies volunteer agencies, such as the American Red Cross, that are integral to disaster response efforts.

The Emergency Response Plan contains 16 "annexes" (similar to appendices), consistent with a federally established framework, that cover topics including firefighting, public works and engineering, mass casualty care, and earthquakes, among numerous others. The Earthquake Annex, in particular, sets forth planning assumptions for a series of earthquakes of varying magnitudes on different faults, and sets forth procedures for assessment of damage and injuries, and operational response and strategies in the event of a major earthquake.

Operation of the expanded Moscone Center would increase the number of on-site employees and also the number of visitors to the center that would be subject to a potential disaster, including a major earthquake or any of the other hazards identified in the Emergency Response Plan. With regard to earthquake hazards, in particular, the project site, like other parts of San Francisco and the Bay Area, is subject to ground shaking from potentially large earthquakes on the San Andreas and Hayward faults, as well as on other faults in the region as discussed in Topic 13, "Geology and Soils." The project site is also subject to stronger groundshaking intensity than some other parts of the City because it is built on fill materials. However, the expanded facilities would be subject to more stringent building and structural standards than the structures that are being replaced. New employees and visitors would be relatively safer than under existing conditions. As discussed under Topic 13, Geology and Soils, impacts related to seismic groundshaking would be *less than significant*.

The Moscone project would be required to meet the life safety requirements of the Building and Fire Codes; therefore, the proposed project would not obstruct implementation of the City's Emergency Response Plan, nor would it necessarily interfere with emergency evacuation planning.

Further, the project would be constructed in a developed area of San Francisco, which lacks an "urbanwildland interface" and where fire, medical, and police services are available and provided. The existing street grid provides ample access for emergency responders and egress for event attendees and workers,

¹⁸³ San Francisco Department of Emergency Management, City and County of San Francisco Emergency Response Plan, December 2009. Available at: http://www.sfdem.org/Modules/ShowDocument.aspx?documentid=1154. Reviewed September 9, 2011.

and the proposed project would neither directly nor indirectly alter that situation. Therefore, the proposed project would not directly or indirectly result in the additional exposure of persons to fire risk.

Compliance with the life safety requirements of the *San Francisco Building Code* and *Fire Code* through the City's ongoing permit review process and implementation of the Emergency Response Manual and exit drill plan, would ensure that impacts related to interference with emergency response or evacuation plans as well as potential fire hazards would be *less than significant*.

Mitigation: None required.

Impact C-HZ-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would not result in a considerable contribution to cumulative impacts related to hazardous materials. (Less than Significant)

Hazardous materials impacts related to the project could result from use of hazardous materials, conducting construction activities within potentially contaminated soil and groundwater, and demolition of structures that contain hazardous building materials. These impacts would be primarily restricted to the project area and immediate vicinity; therefore, the geographic scope for cumulative impacts related to hazards includes the project area and immediate vicinity.

Use of Hazardous Materials

As discussed in Impact HZ-1, the proposed project could involve an increase in the use of hazardous materials and generation of hazardous wastes during operation. Similarly, most of the cumulative projects could also include an increase in the use of hazardous materials and generation of hazardous wastes. However, the proposed project and all reasonably foreseeable cumulative projects would comply with Articles 21, 21A, and 22 of the *San Francisco Health Code* which would minimize potential exposure of site personnel and the public to any accidental releases of hazardous materials or waste and would also protect against potential environmental contamination. With implementation of these regulatory requirements, cumulative impacts related to the use of hazardous materials and generation of hazardous wastes would be *less than significant*.

Exposure to Hazardous Materials in Soil and Groundwater

There is a high potential for soil and groundwater contamination in the project vicinity based on historic land uses and the presence of earthquake fill. There are also many previously unidentified USTs in the area as a result of previous land uses. As discussed in Impact HZ-2, the Phase II investigation conducted for the proposed project site found that a portion of the soil excavated could be characterized as a hazardous waste and would require legal disposal, but that none of the chemical constituents exceeded residential ESLs or background levels. In addition, the proposed project and many of the cumulative project site and for cumulative, reasonably foreseeable future projects would be subject to the regulatory requirements discussed in Impact HZ-2, including Articles 21 and 21A of the *San Francisco Health Code* and the Local Oversight Program. Because each project would need to assess the potential for soil and groundwater contamination to occur, and implement requirements in compliance with the Health Code

for any unacceptable risks identified in accordance with these regulatory requirements, cumulative impacts related to exposure to hazardous materials in soil and groundwater would be *less than significant*.

Hazardous Building Materials

As discussed in Impact HZ-3, hazardous building materials would be encountered during demolition of the Esplanade Ballroom support building, additional Esplanade facilities, and a portion of the South Lobby building as well as during reconfiguration of the Gateway Ballroom and Hall E. Based on the age of many buildings in the south of Market area, many cumulative projects that include demolition and renovation could also encounter hazardous building materials. However, abatement of asbestos-containing and lead-containing materials would be subject to the well-established regulatory requirements discussed in Impact HZ-3. With implementation of these regulatory requirements, cumulative impacts related to encountering asbestos-containing and lead-based materials would be *less than significant*.

As for the proposed project, many cumulative projects could encounter other hazardous building materials during demolition or renovation, including electrical transformers that could contain PCBs, fluorescent light ballasts that could contain PCBs or DEHP, and fluorescent light tubes that could contain mercury vapors. The regulatory framework for handling these materials is less-well established, and disruption of these materials could pose health concerns for construction workers if not properly handled or disposed of. However, such effects would be project-specific impacts that would not be likely to combine with other impacts to result in cumulative effects, and the project's contribution to any cumulative impacts related to hazardous building materials would not be cumulatively considerable (*less than significant*).

Interference with an Adopted Emergency Response Plan or Emergency Evacuation Plan

The Central SoMa Plan would implement changes to allowed land uses and building heights to promote a greater mix of uses while also emphasizing office uses in the central portion of the plan area, allowing the area to accommodate additional jobs and residential uses. Like the proposed project, cumulative projects in the area would be subject to life safety requirements of the Building and Fire Codes. With implementation of these regulatory requirements, cumulative impacts related to interference with an adopted emergency response plan or emergency evacuation plan would be *less than significant*.

Mitigation: None required.

Торі	ics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
16.	MINERAL AND ENERGY RESOURCES— Would the project:					
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				\boxtimes	
b)	Result in the loss of availability of a locally- important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?					
c)	Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?					

Impact ME-1: The proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. (No Impact)

The project site is mapped by the California Geologic Survey as either MRZ-1 or MRZ-4, indicating that substantial mineral resources do not occur at the site.¹⁸⁴ Therefore, construction and operation of the proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. There would be *no impact*.

Mitigation: None required.

Impact ME-2: The proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. (No Impact)

There are no mineral resources identified at the project site and it is not an important mineral resource recovery site. The *San Francisco General Plan* does not identify any areas of important mineral resources in San Francisco. There would be *no impact*.

Mitigation: None required.

¹⁸⁴ California Department of Conservation, Division of Mines and Geology (CDMG), 1987. Mineral Land Classification: Aggregate Materials in the San Francisco-Monterey Bay Area, Special Report 146, Part II. Available online at: https://archive.org/stream/minerallandclass00stin#page/n5/mode/2up, accessed January 14, 2014.

Impact ME-3: The proposed project would not encourage activities that result in the use of large amounts of fuel, water, or energy, or use these resources in a wasteful manner. (Less than Significant)

The proposed project would include expansion of existing uses, which would consume incrementally more energy that under existing conditions. These expanded uses would not result in the use of large amounts of fuel, water, or energy in the context of energy use throughout the City and region. The Greenhouse Gas analysis includes a description of energy-conservation measures that would be implemented or continued under the proposed project.

The project's energy demand would be typical for a development of this scope and nature and would comply with current State and local codes concerning energy consumption, including Title 24 of the California Code of Regulations, enforced by DBI. The proposed project would also be require to comply with the City of San Francisco green building ordinance for municipal buildings, as outlined in Chapter 7 of the Environment Code.¹⁸⁵

The project site is served by existing utility systems, and it would not require a major expansion of power facilities. As stated in the Utilities analysis, the project would be served by adequate water supplies. In addition, the project site is located in a developed urban area. The area is served by the SFMTA. Use of this transit system by employees and convention attendees would reduce the amount of energy expended in private automobiles.

Therefore, the energy demand associated with the proposed project would result in a *less-than-significant* impact.

Mitigation: None required.

Impact C-ME: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative mineral and energy impacts. (Less than Significant)

The geographic scope for potential cumulative mineral resources impacts encompasses the aggregate minerals in the South San Francisco Bay Production-Consumption Region. Similar to the project area, the project vicinity is mapped by the California Geologic Survey as either MRZ-1 or MRZ-4, indicating that substantial mineral resources do not occur at the site.¹⁸⁶ As stated above, the project site is not designated as a statewide-, regionally-, or locally-important mineral resource recovery site, and the proposed project would result in no impact to mineral resources. Therefore, the project would not contribute to any cumulative impact to mineral resources.

¹⁸⁵ City and County of San Francisco, Department of Building Inspection, May 31, 2013. Green Building Ordinance website. Available online at: http://sfdbi.org/index.aspx?page=268, accessed November 11, 2013.

¹⁸⁶ California Department of Conservation, Division of Mines and Geology (CDMG), 1987. Mineral Land Classification: Aggregate Materials in the San Francisco-Monterey Bay Area, Special Report 146, Part II. Available online at: https://archive.org/stream/minerallandclass00stin#page/n5/mode/2up, accessed January 14, 2014.

The geographic scope for potential cumulative impacts to energy resources impacts encompasses the SFPUC water and power supply system. SFPUC supplies the City and County of San Francisco as well as others in the region with water and power. Similar to the proposed project, projects within the vicinity or the region would require the use of fuel, water, or energy.

Like the proposed project, cumulative projects in the area would be required to comply with the California Green Building Standards Code at a minimum and would also be subject to the San Francisco green building ordinance, which is more stringent. Because these building codes encourage sustainable construction practices related to planning and design, energy efficiency, and water efficiency and conservation, energy consumption would be expected to be reduced compared to conditions without such regulations. Therefore, cumulative impacts related to wasteful use of energy resources would be *less than significant*.

Mitigation: None required.

Торі	cs:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
17.	AGRICULTURE AND FOREST RESOURCES: In dete environmental effects, lead agencies may refer to the Ca (1997) prepared by the California Dept. of Conservation farmland. In determining whether impacts to forest ress lead agencies may refer to information compiled by the state's inventory of forest land, including the Forest and and forest carbon measurement methodology provided Would the project	ermining whe alifornia Agri n as an option ources, incluo California D d Range Asse in Forest Pro	ther impacts to ag cultural Land Eva al model to use ir ling timberland, a epartment of Fore ssment Project an otocols adopted by	gricultural ress aluation and S a assessing im are significant estry and Fire d the Forest L y the Californi	ources are s ite Assessm pacts on ag environme Protection egacy Asse ia Air Reso	significant nent Model griculture and ental effects, regarding the essment project; urces Board.—
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?					
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?				\boxtimes	
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)) or timberland (as defined by Public Resources Code Section 4526)?					
d)	Result in the loss of forest land or conversion of forest land to non-forest use?				\boxtimes	
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or					

forest land to non-forest use?

Impact AG-1: Construction and operation of the proposed project would not (a) convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; (b) conflict with existing zoning for agricultural use, or a Williamson Act contract; (c) conflict with existing zoning for or cause rezoning of forest land or timberland; (d) result in the loss of forest land or conversion of forest land to non-forest use; or (e) involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use. (No Impact)

The project site is located within an urban area in the City and County of San Francisco. The California Department of Conservation's Farmland Mapping and Monitoring Program identifies the site as *Urban and Built-Up Land*, which is defined as "…land [that] is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes."¹⁸⁷

The project site contains no Prime Farmland, Unique Farmland, Farmland of Statewide Importance, forest, or timberlands; does not support agricultural or timber uses; is not zoned for agricultural or timber uses;¹⁸⁸ and is not under a Williamson Act contract.¹⁸⁹ The project site is designated as "urban land" by the United States Department of Agriculture Natural Resources Conservation Services.¹⁹⁰

The project would not displace existing farmland or forest land. There would be *no impact*.

Mitigation: None required.

Impact C-AG: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative agricultural resource or forestry impacts. (No Impact)

The geographic scope for potential cumulative agricultural resources impacts encompasses land uses in the vicinity of the Moscone Center. The area generally includes the Central South of Market area, bounded by Market Street to the north, Sixth Street to the west, Second Street to the east, and Townsend Street to the south. Similar to the project area, the project vicinity does not include any agricultural or forestry/timberland resources. Neither the proposed project nor any of the nearby projects would result in conversion of farmland or forest land to non-farm or non-forest use, nor would any of the proposed developments conflict with existing agricultural or forest use or zoning for these uses. Therefore, the proposed project in combination with other projects would not result in cumulative impacts to such resources. There would be *no impact*.

¹⁸⁷ California Department of Conservation, Division of Land Resource Protection (DLRP), Bay Area Region Important Farmland 2010, published July 2013. Available online at ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/regional/2010/ bay_area_fmmp2010.pdf. Accessed October 11, 2013.

¹⁸⁸ San Francisco Planning Department, Zoning Map, available online: http://www.sf-planning.org/index.aspx?page=1569, accessed February 12, 2013.

¹⁸⁹ California Department of Conservation ibid.

¹⁹⁰ United States National Resources Conservation Service. Web Soil Survey, website: http://websoilsurvey.sc.egov.usda.gov/ App/HomePage.htm, United States Department of Agriculture, accessed December 30, 2013.

Mitigation: None required.

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
18.	MANDATORY FINDINGS OF SIGNIFICANCE— Would the project:					
a)	Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?					
b)	Have impacts that would be individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)					
c)	Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?		\boxtimes			

The proposed project could result in adverse impacts to the environment with respect to transportation and circulation and shadow. These topics will be addressed in the EIR. Mitigation measures have been included in this Initial Study to reduce potential impacts related to cultural resources, air quality, and hazardous materials to a less-than-significant level.

During construction of the proposed project, emissions would exceed thresholds for criteria air pollutants, as well as temporarily add new sources of toxic air contaminants (TACs) to areas of the City that are already adversely affected by poor air quality, resulting in cumulatively considerable contribution to air quality impacts. Implementation of **Mitigation Measure M-AQ-1: Construction Emissions Minimization** would reduce construction-period emissions and emissions of TACs, such that the project would result in a less-than-cumulatively considerable contribution to these impacts.

Regarding the potential to eliminate important examples of the major periods of California history or prehistory, ground-disturbing construction activity within the project area could adversely affect the significance of archeological resources under CRHR Criterion 4 (information potential) by impairing the ability of such resources to convey important scientific and historical information. This effect is considered a substantial adverse change in the significance of an historical resource and is considered to be a significant impact under CEQA. Implementation of **Mitigation Measure** M-**CP-2a** requires the development of an archeological testing plan, monitoring, and evaluation, and would reduce potential impacts to archeological resources to a *less-than-significant* level.

For all other topics that are analyzed in this Initial Study, the proposed project would not have cumulatively considerable impacts, as discussed under each applicable environmental topic. Cumulative transportation and circulation impacts, as well as cumulative shadow impacts, are identified in this Initial Study as potentially significant; however, these topics will be the subject of further analysis in the EIR.

Regarding adverse effects on human beings, the proposed project's construction activities would generate toxic air contaminants, including diesel particulate matter, that would expose sensitive receptors to substantial pollutant concentrations. Implementation of **Mitigation Measure M-AQ-1: Construction Emissions Minimization** would reduce this impact to a less-than-significant level. Also, the proposed project would be constructed on a site identified on a list of hazardous materials sites, and excavation could potentially expose workers and the public to hazardous materials. Implementation of **Mitigation Measure M-HZ-3: Hazardous Building Materials Abatement** would reduce this impact to a less-than-significant level.

F. MITIGATION MEASURES AND IMPROVEMENT MEASURES

Mitigation Measure M-CP-2a: Archeological Testing, Monitoring, Data Recovery and Reporting

Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archaeological consultant from the Planning Department ("Department") pool of qualified archaeological consultants as provided by the Department archaeologist. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure and with the requirements of the project archeological research design and treatment plan (Archaeological Research Design/Treatment Plan for the Moscone Center Expansion Project, September, 2013), at the direction of the Environmental Review Officer (ERO). In instances of inconsistency between the requirement of the project archeological research design and treatment plan and of this archeological mitigation measure, the requirements of this archeological mitigation measure shall prevail. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5 (a)(c).

Consultation with Descendant Communities. On discovery of an archeological site¹⁹¹ associated with descendant Native Americans, the Overseas Chinese, or other descendant group an appropriate representative¹⁹² of the descendant group and the ERO shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to consult with ERO regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the Final Archaeological Resources Report shall be provided to the representative of the descendant group.

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

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

- C) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or
- D) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

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

¹⁹¹ The term "archeological site" is intended here to minimally include any archeological deposit, feature, burial, or evidence of burial.

¹⁹² An "appropriate representative" of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission and in the case of the Overseas Chinese, the Chinese Historical Society of America. An appropriate representative of other descendant groups should be determined in consultation with the Department archeologist.

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

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

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

• *Field Methods and Procedures.* Descriptions of proposed field strategies, procedures, and operations.

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

Human Remains and Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

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

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Environmental Planning division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.
Mitigation Measure M-CP-2b: Interpretation

Mitigation Measure M-CP-2b, Interpretation, calls for a qualified archeological consultant to prepare and submit a plan for post-recovery interpretation of resources. Implementation of an approved program of interpretation under Mitigation Measure M-CP-2b would preserve and enhance the ability of the resource to convey its association with historic events under California Register of Historic Resources Criterion 1 (Events), as well as explain its importance under Criterion 4.

Mitigation Measure M-AQ-1: Construction Emissions Minimization.

- A. Construction Emissions Minimization Plan. Prior to issuance of a construction permit, the project sponsor shall submit a Construction Emissions Minimization Plan (Plan) to the Environmental Review Officer (ERO) for review and approval by an Environmental Planning Air Quality Specialist. The Plan shall detail project compliance with the following requirements:
 - 1. All off-road equipment greater than 25 hp and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements:
 - a) Where access to alternative sources of power are available, portable diesel engines shall be prohibited;
 - b) All off-road equipment shall have:
 - i. Engines that meet or exceed either U.S. Environmental Protection Agency (USEPA) or California Air Resources Board (ARB) Tier 3 off-road emission standards, *and*
 - ii. Engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS).¹⁹³
 - c) Exceptions:
 - i. Exceptions to A(1)(a) *may* be granted if the project sponsor has submitted information providing evidence to the satisfaction of the ERO that an alternative source of power is limited or infeasible at the project site and that the requirements of this exception provision apply. Under this circumstance, the sponsor shall submit documentation of compliance with A(1)(b) for onsite power generation.
 - ii. Exceptions to A(1)(b)(ii) *may* be granted if the project sponsor has submitted information providing evidence to the satisfaction of the ERO that a particular piece of off-road equipment with an ARB Level 3 VDECS is: (1) technically not feasible, (2) would not produce desired emissions reductions due to expected operating modes, (3) installing the control device would create a safety hazard or impaired visibility for the operator, or (4) there is a compelling emergency need to use off-road equipment that are not retrofitted with an ARB Level 3 VDECS and the sponsor has submitted documentation to the ERO that the requirements of this exception provision apply. If granted an exception to A(1)(b)(ii), the project sponsor must comply with the requirements of A(1)(c)(iii).

¹⁹³ Equipment with engines meeting Tier 4 Interim or Tier 4 Final emission standards automatically meet this requirement, therefore a VDECS would not be required.

iii. If an exception is granted pursuant to A(1)(c)(ii), the project sponsor shall provide the next cleanest piece of off-road equipment as provided by the step down schedules in Table 9.

Compliance Alternative	Engine Emission Standard	Emissions Control
1	Tier 3	ARB Level 2 VDECS
2	Tier 3	ARB Level 1 VDECS
3	Tier 3	Alternative Fuel*

TABLE 9 OFF-ROAD EQUIPMENT COMPLIANCE STEP-DOWN SCHEDULE

How to use the table: If the requirements of (A)(1)(b) cannot be met, then the project sponsor would need to meet Compliance Alternative 1. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 1, then Compliance Alternative 2 would need to be met. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 2, then Compliance Alternative 3 would need to be met.

* Alternative fuels are not a VDECS.

- 2. The project sponsor shall require the idling time for off-road and on-road equipment be limited to no more than two minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment. Legible and visible signs shall be posted in multiple languages (English, Spanish, Chinese) in designated queuing areas and at the construction site to remind operators of the two minute idling limit.
- 3. The project sponsor shall require that construction operators properly maintain and tune equipment in accordance with manufacturer specifications.
- 4. The Plan shall include estimates of the construction timeline by phase with a description of each piece of off-road equipment required for every construction phase. Off-road equipment descriptions and information may include, but is not limited to: equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. For VDECS installed: technology type, serial number, make, model, manufacturer, ARB verification number level, and installation date and hour meter reading on installation date. For off-road equipment using alternative fuels, reporting shall indicate the type of alternative fuel being used.
- 5. The Plan shall be kept on-site and available for review by any persons requesting it and a legible sign shall be posted at the perimeter of the construction site indicating to the public the basic requirements of the Plan and a way to request a copy of the Plan. The project sponsor shall provide copies of Plan to members of the public as requested.
- B. *Reporting.* Quarterly reports shall be submitted to the ERO indicating the construction phase and offroad equipment information used during each phase including the information required in A(4). In addition, for off-road equipment using alternative fuels, reporting shall include the actual amount of alternative fuel used.

Within six months of the completion of construction activities, the project sponsor shall submit to the ERO a final report summarizing construction activities. The final report shall indicate the start and end dates and duration of each construction phase. For each phase, the report shall include detailed

information required in A(4). In addition, for off-road equipment using alternative fuels, reporting shall include the actual amount of alternative fuel used.

C. *Certification Statement and On-site Requirements.* Prior to the commencement of construction activities, the project sponsor must certify (1) compliance with the Plan, and (2) all applicable requirements of the Plan have been incorporated into contract specifications.

Mitigation Measure M-HZ-3: Hazardous Building Materials Abatement

The project sponsor shall ensure that any area of the Moscone Center planned for demolition or renovation is surveyed for hazardous building materials including PCB-containing electrical equipment, fluorescent light ballasts containing polychlorinated biphenyls (PCBs) or bis(2-ethylhexyl) phthalate (DEHP), and fluorescent light tubes containing mercury vapors. These materials shall be removed and properly disposed of prior to the start of demolition or renovation. Light ballasts that are proposed to be removed during renovation shall be evaluated for the presence of PCBs and in the case where the presence of PCBs in the light ballast cannot be verified, they shall be assumed to contain PCBs, and handled and disposed of as such, according to applicable laws and regulations. Any other hazardous building materials identified either before or during demolition or renovation shall be abated according to federal, state, and local laws and regulations.

G. DETERMINATION

On the basis of this Initial Study:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

tonija Wise for

Sarah B. Jones Environmental Review Officer for

John Rahaim Director of Planning

DATE Jailuary 22, 7014

H. INITIAL STUDY PREPARERS

Planning Department, City and County of San Francisco Environmental Planning Division 1650 Mission Street, Suite 400 San Francisco, CA 94103 Environmental Review Officer: Sarah Jones Senior Environmental Planner: Jessica Range Environmental Planner: Elizabeth Purl Archeologist: Randall Dean

Office of the City Attorney City Hall Room 234 1 Dr. Carlton B. Goodlett Place San Francisco, CA 94102

EIR Consultants

Environmental Science Associates 550 Kearny Street, Suite 800 San Francisco, CA 94104

Geier & Geier P.O. Box 5054 Berkeley, CA 94705

Fehr & Peers 332 Pine Street, Fourth Floor San Francisco, CA 94104 Adavant Consulting 200 Francisco Street, Second Floor San Francisco, CA 94133

Square One Productions 1736 Stockton Street, Studio 7 San Francisco, CA 94133 DEPARTMENT OF TRANSPORTATION 111 GRAND AVENUE P. O. BOX 23660 OAKLAND, CA 94623-0660 PHONE (510) 286-6053 FAX (510) 286-5559 TTY 711

February 19, 2014

Ms. Elizabeth Purl Planning Department City and County of San Francisco 1650 Mission Street San Francisco, CA 94103

Dear Ms. Purl:

Moscone Center Expansion Project - Notice of Preparation

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the Moscone Center Expansion project. The following comments are based on the Notice of Preparation. As lead agency, the City and County of San Francisco (City) is responsible for all project mitigation, including any needed improvements to State highways. The project's fair share contribution, financing, scheduling, and implementation responsibilities as well as lead agency monitoring should be fully discussed for all proposed mitigation measures and the project's traffic mitigation fees should be specifically identified in the environmental document. Any required roadway improvements should be completed prior to issuance of project occupancy permits.

Traffic Impact Study

The environmental document should include an analysis of the impacts of the proposed project on State highway facilities in the vicinity of the project including on and off-ramps, and mainline operations on Interstates 80 and 280. Please ensure that a Traffic Impact Study (TIS) is prepared providing the information detailed below:

- 1. Information on the project's traffic impacts in terms of trip generation, distribution, and assignment. The assumptions and methodologies used in compiling this information should be addressed. The study should clearly show the percentage of project trips assigned to State facilities. A comparison table of trip generation between ITE's trip generation methodology and SF-CHAMP model is also desired.
- 2. Current Average Daily Traffic (ADT) and AM, Midday, PM, Saturday and Sunday peak hour volumes on all significantly affected streets, highway segments and intersections.
- 3. Schematic illustration and level of service (LOS) analysis for the following scenarios: 1) existing, 2) existing plus project, 3) cumulative and 4) cumulative plus project for the roadways and intersections in the project area.



Flex your power! Be energy efficient!

SFVAR011 SCH#2014012050

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Ms. Elizabeth Purl/City and County of San Francisco February 19, 2014 Page 2

- 4. A timeline of foreseeable development projects within the vicinity of the proposed project and traffic generation.
- 5. Calculation of cumulative traffic volumes should consider all traffic-generating developments, both existing and future, that would affect the State highway facilities being evaluated.
- 6. Transportation Demand Management strategies along with an implementation schedule to accommodate the phasing of the proposed project.
- 7. Proposed and planned regional and local transportation capital and operational improvements information to accommodate growth within the project area. This may include references to transportation studies/assessments and neighborhood/community plans including the Waterfront Transportation Assessment and Railyard Boulevard Feasibility Study.
- 8. The procedures contained in the 2010 update of the Highway Capacity Manual should be used as a guide for the analysis. We also recommend using the Department's "Guide for the Preparation of Traffic Impact Studies"; it is available on the following web site: http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf.
- 9. Mitigation measures should be identified where plan implementation is expected to have a significant impact. Mitigation measures proposed should be fully discussed, including financing, scheduling, implementation responsibilities, and lead agency monitoring.

We encourage the City to coordinate preparation of the study with our office, and we would appreciate the opportunity to review the scope of work.

We look forward to reviewing the TIS, including Technical Appendices, and environmental document for this project. Please send two copies to the address at the top of this letterhead, marked ATTN: Yatman Kwan, Mail Stop #10D.

Should you have any questions regarding this letter, please call Yatman Kwan, AICP of my staff at (510) 622-1670.

Sincerely.

Den

ERIK ALM, AICP District Branch Chief Local Development - Intergovernmental Review

c: State Clearinghouse



EDMUND G. BROWN JR. GOVERNOR STATE OF CALIFORNIA GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH STATE CLEARINGHOUSE AND PLANNING UNIT



JAN 3 0 2014

CITY & COUNTY OF S.F.

Notice of Preparation

January 22, 2014

To: Reviewing Agencies

Re: Moscone Center Expansion Project SCH# 2014012050

Attached for your review and comment is the Notice of Preparation (NOP) for the Moscone Center Expansion Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead <u>Agency</u>. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Elizabeth Purl City and County of San Francisco 1650 Mission Street, Suite 400 San Francisco, CA 94103

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely, The life green

Scott Morgan Director, State Clearinghouse

Attachments cc: Lead Agency

Document Details Report State Clearinghouse Data Base

SCH# Project Title Lead Agency	2014012050 Moscone Center Expansion Project San Francisco, City and County of	
Туре	NOP Notice of Preparation	
Description	Increase the gross square footage of the Moscone Convention Center by approximately 306,000 sf. New construction would be primarily above grade both north and south of Howard Street. The expanded Moscone North structure would be approximately 54 feet in height and the Moscone South structure would be approximately 95 feet in height. Additional space would be created by excavating in two locations under Howard Street and expanding the existing below-grade exhibition halls that connect the Moscone North and South buildings. The proposed project would create a total of approximately 580,000 sf of contiguous exhibition space. The proposed project would also reconfigure the existing adjacent bus pick-up and drop off facilities and create two pedestrian bridges spanning Howard Street.	
Lead Agend	cy Contact	
Name	Elizabeth Purl	
Agency	City and County of San Francisco	
Phone email	415 575 9028 Fax	
Address	1650 Mission Street, Suite 400	
City	San Francisco State CA Zip 94103	
Project Loc	cation	
County	San Francisco	
City	San Francisco	
Region		
Cross Streets	Mission, Howard, Folsom, Third, Fourth	
Lat / Long	37° 47' 3" N / 122° 24' 5" W	
Parcel No.	3723/115, 3734/091	
Township	Range Section Base	
Proximity t	o:	
Highways	I-80, US 101	
Airports		
Railways	BART, Caltrain, Muni	
Waterways	San Francisco Bay, Mission Creek	
Schools	Bessie Carmichael	
Land Use	Downtown Commercial Support C-3-5, 340-1 Height and Bulk District	
Project Issues	Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Growth Inducing; Landuse; Cumulative Effects	
Reviewing Agencies	 Resources Agency; Department of Conservation; Office of Historic Preservation; Department of Parks and Recreation; San Francisco Bay Conservation and Development Commission; Department of Water Resources; Department of Fish and Wildlife, Region 3; Native American Heritage Commission; Public Utilities Commission; California Highway Patrol; Caltrans, District 4; Air Resources Board; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 2 	

<i>Mail to:</i> State Clearinghouse, F For Hand Delivery/Street Addi	P.O. Box 3044, Sacramento, C ress: 1400 Tenth Street, Sacra	CA 95812-3044 (916) 445-0613 imento, CA 95814	SCH #
Project Title: Moscone Cente	r Expansion Project		
Lead Agency: San Francisco P	lanning Department	Contact Person	Elizabeth Purl
Mailing Address: 1650 Mission	Street, Suite 400	Phone: (415) 5	575-9028
City: San Francisco		Zip: 94103 County: San F	Francisco
Project Location: County:Sar Cross Streets: Mission, Howard,	Francisco Folsom, Third, Fourth	City/Nearest Community: San Fra	ancisco Zip Code: 94103
Longitude/Latitude (degrees, mini	utes and seconds): 37 • 47	·03 ″N/ 122 •24 ·05 ″v	V Total Acres: 19.05
Assessor's Parcel No.: 3723/115,	3734/091	Section: Twp.:	Range: Base:
Within 2 Miles: State Hwy #:	I-80, US 101	Waterways: San Francisco Bay, M	lission Creek
Airports:		Railways: BART, Caltrain, Muni	Schools: Bessie Carmichael
Document Type.	Draft FIR	NEPA: 🗍 NOL OI	her: Dioint Decument
CEQA: NOP Early Cons Neg Dec Mit Neg Dec Local Action Type: General Plan Undate	Supplement/Subsequent EIF Prior SCH No.) Dther:	EA EA FONSI- AN 22 20	Annexation
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CEQA: NOP Early Cons CEQA: Action Type C General Plan Update General Plan Amendment General Plan Element Community Plan Development Type: Residential: Units Office: Sq.ft. Commercial:Sq.ft. 306,000 Industrial: Sq.ft. Educational: Recreational: Water Facilities:Type	Supplement/Subsequent Elf Prior SCH No.) Dther:	A M 22 20 Fonst- Fons- Fonst- Fonst- Fonst- Fonst- Fonst- Fons	Annexation Annexation Annexation Annexation Redevelopment Coastal Permit n, ctc.) MWMGD
CEQA: NOP Early Cons CEQA: Neg Dec Mit Neg Dec Mit Neg Dec Cocal Action Type: General Plan Update General Plan Update General Plan Amendment General Plan Element Community Plan Development Type: Residential: Units Office: Sq.ft. Commercial:Sq.ft. General:Sq.ft. Educational: Recreational: Water Facilities:Type Project Issues Discussed in	Supplement/Subsequent Elf Prior SCH No.) Dther: Dther: Master Plan Planned Unit Developme: Site Plan Acres Acres Employees Acres Bubble Employees Employees MGD	BFTE Mining: Minera Power: Type Waste Treatment: Type Waste Treatment: Type Use Performance BFTE Mining: Minera Other:	Annexation Annexation Annexation Annexation Redevelopment Coastal Permit n, ctc.) MW MGD

would be primarily above grade both north and south of Howard Street. The expanded Moscone North structure would be approximately 54 feet in height and the Moscone South structure would be approximately 95 feet in height. Additional space would be created by excavating in two locations under Howard Street and expanding the existing below-grade exhibition halls that connect the Moscone North and South buildings. The proposed project would create a total of approximately 580,000 square feet of contiguous exhibition space. The proposed project would also reconfigure the existing adjacent bus pick-up and drop off facilities and create two pedestrian bridges spanning Howard Street.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCII number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

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 Phil Crader

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CEQA Tracking Center
Department of Pesticide
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CEQA Coordinator

scн# 2014012050

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RWQCB 2 Environmental Document Coordinator San Francisco Bay Region (2)

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> RWQCB 6V Lahontan Region (6) Victorville Branch Office

Colorado River Basin Region (7)

Santa Ana Region (8)

San Diego Region (9)

	Other	
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Conservancy

NATIVE AMERICAN HERITAGE COMMISSION 1550 Harbor Blvd., Suite 100 West Sacramento, CA 95691 (916) 373-3710 (916) 373-5471 FAX

January 23, 2014

Elizabeth Purl City and County of San Francisco 1650 Mission Street, Suite 400 San Francisco, CA 94103



CITY & COUNTY OF S.F.

PLANNING DEPARTMENT

MFA

RE: SCH# 2014012050 - Moscone Center Expansion Project

Dear Ms. Purl:

The Native American Heritage Commission has reviewed the above mentioned NOP. To adequately assess and mitigate project-related impacts on archaeological resources, the Commission recommends the following actions be required:

- 1. Contact the appropriate Information Center for a record search. The record search will determine:
 - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
 - If any known cultural resources have already been recorded on or adjacent to the APE.
 - If the probability is low, moderate, or high that cultural resources are located in the APE.
 - If a survey is required to determine whether previously unrecorded cultural resources are present.
- 2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
 - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- 3. Contact the Native American Heritage Commission for:
 - A Sacred Lands File Check. Requests must be made in writing with the County, Quad map name, township, range and section.
 - A list of appropriate Native American Contacts for consultation concerning the project site and to assist in the mitigation measures.
- 4. Lack of surface evidence of archeological resources does not preclude their subsurface existence.
 - Lead agencies should include in their mitigation plan provisions for the identification and evaluation
 of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA)
 §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a
 culturally affiliated Native American, with knowledge in cultural resources, should monitor all
 ground-disturbing activities.
 - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
 - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5 (e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

If you have any questions, please contact me at (916) 373-3713.

Sinderely, Debbie Pilas-Treadway Environmental Specialist III

CC: State Clearinghouse

Alisa Moore

From:	Jones, Sarah
Sent:	Saturday, February 22, 2014 4:35 PM
То:	Purl, Elizabeth
Subject:	FW: Initial Study (IS) for Moscone Center Expansion Project. Case No.: 2013.0154E
Attachments:	OCII's Response to Moscone Initial Study.pdf
Importance:	High

From: Bereket, Immanuel
Sent: Friday, February 21, 2014 3:39 PM
To: Jones, Sarah
Cc: Zermani, Denise
Subject: Initial Study (IS) for Moscone Center Expansion Project. Case No.: 2013.0154E

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

RE: Initial Study (IS) for Moscone Center Expansion Project Case No.: 2013.0154E

Dear Ms. Jones:

Thank you for the opportunity to review and comment on the Initial Study ("IS") prepared for the Moscone Center Expansion Project (the "Proposed Project"). The Proposed Project is of interest to the Office of Community Investment and Infrastructure, the Successor Agency to the Redevelopment Agency of the City and County of San Francisco, ("OCII and/or the "Successor Agency"), since we own a significant portion of the project site and surrounding properties. The Successor Agency has some concerns about the Proposed Project.

Enclosed, you'll find our comments to the Initial Study. We trust your agency will consider and address our comments in the Draft EIR. Please send us copies of all future project level documents, including Mitigation Monitoring and Reporting Program (MMRP) for the project, CEQA findings and, if applicable, statement of Overriding Considerations.

Regards,

Immanuel Bereket Associate Planner

Enclosure:

Office of Community Investment and Infrastructure (Successor to the San Francisco

Redevelopment Agency)

One South Van Ness Avenue San Francisco, CA 94103 415.749.2400



EDWIN M. LEE, Mayor

Christine Johnson, Chair Mara Rosales, Vice-Chair Theodore Ellington Marily Mondejar Darshan Singh Tiffany Bohee, Executive Director

February 21, 2014

108-008.14-151

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

RE: Initial Study (IS) for Moscone Center Expansion Project Case No.: 2013.0154E

Dear Ms.Jones:

Thank you for the opportunity to review and comment on the Initial Study ("IS") prepared for the Moscone Center Expansion Project (the "Proposed Project"). The Proposed Project is of interest to the Office of Community Investment and Infrastructure, the Successor Agency to the Redevelopment Agency of the City and County of San Francisco, ("OCII and/or the "Successor Agency"), since we own a significant portion of the project site and surrounding properties. The Successor Agency has some concerns about the Proposed Project, which we have listed below.

Property Ownership: Section A, page 1, inaccurately describes the City and County of San Francisco (the "City") as the sole owner of the Moscone Center. Please note that OCII and the City currently share ownership of the Moscone Center. OCII currently owns Moscone North and leases it to the City¹, but under Redevelopment Dissolution Law, California Health and Safety Code §§ 34170 et seq., has proposed transferring this asset to the City.² OCII believes the Proposed Project may impact its property and built improvements including (1) the children's garden on CB-3, (2) the café building adjacent to the carousel, (3) the existing pedestrian bridge spanning Howard Street, (4) OCII's management office, and (5) the southern end of CB-2 (OCII owns all of the land, open space, and built improvements on CB-2, except for the Metreon building) ("OCII Property"). OCII wishes to confirm that its two café spaces on this block are not part of the Proposed Project; however, the open space between the two cafes may be impacted by the Proposed Project.

¹ The City is planning to pay off all outstanding bonds for Moscone North in July 2014, and is also hoping to pre-pay all deferred rental payments under the lease at the same time. According to the terms of the lease between the City and OCII, OCII has an enforceable obligation to transfer ownership of Moscone North to the City when the bonds and lease payments have been paid in full. See Attachment 1 for additional details about OCII/City ownership interests in Block 3723 ("CB-2") and Block 3734 ("CB-3").

² Oversight Board Resolution No. 12-2013 (November 25, 2013). Construction of the Proposed Project will most likely commence before the transfer of OCII Property to the City.

Please revise text to clearly characterize ownership of record and the relationship between OCII and the City and County of San Francisco where the Proposed Project is concerned.

Construction Schedule: Section A, page 3, states that "project implementation would occur using a coordinated, phased construction schedule that would maintain Moscone's convention operations during the construction period." We understand that the project sponsors are working with Yerba Buena Gardens users to coordinate schedules and minimize construction impacts but the draft EIR should fully evaluate construction related impacts to all users particularly users of OCII Property.

Proposed Pedestrian Bridge: Section A, page 12, Initial Study the project proposes two new pedestrian bridges that would span Howard Street. One of the proposed bridges would replace the existing Howard Street pedestrian bridge. Removal, reconstruction, demolition and physical alteration of the structure would require review and consent by the Commission on Community Investment and Infrastructure (the "OCII Commission"), if transfer to the City has not occurred.

Carousel Café Building: Additionally, OCII's carousel café building across from the carousel and Garden's management office would be removed when OCII's existing Howard Street pedestrian bridge is demolished (although, the City has indicated that it plans to relocate these buildings to larger spaces elsewhere in Yerba Buena Gardens). The carousel café is subject to an operating agreement between OCII and the Children's Creativity Museum and is a revenue source for Children's Creativity Museum and replacement of the project's economic impact on the Children's Creativity Museum and replacement of the café and Garden's management office.

Landscaping: Section A, page 16 and Section E12, PAGE 128, simply provides a definition of trees of significance, and the removal thereof, and concludes that no impact will occur because no heritage trees will be disturbed. However, we believe that the draft EIR should clearly identify all plant species to be removed and replaced from OCII Property. Specifically, the plans appear to remove a number of trees from the children's playground area. The draft EIR should list names, sizes and location of all plant species to be removed, and to be replaced. Additionally, OCII would like to ensure that any plants installed do not have invasive roots and are suitable for container planting and/or planting on the rooftop surface of the Moscone Center.

Recreational/open space: Section E9, PAGE 113, states that although "new employees or an increased number of visitors may utilize parks and recreational spaces in the vicinity of the proposed project, the increased use would likely be minimal as the employees' and visitors' main destination would be the proposed project site." We believe the draft EIR should include a cumulative analysis on impacts on park/recreational use due to the proposed expansion and any temporary or permanent changes to the total square footage of open space.

Mid-Block Pedestrian Access: The Project proposes a mid-block pedestrian passageway along the southern edge of the proposed South Hall, connecting Third

Street to the existing Children's Garden. This passageway would impact OCII's leasehold interest in the Children's Garden and expose the Children's Garden to increased foot traffic. Although OCII plans to remain involved in design conversations with Children's Gardens users and the City, OCII would like further studies to evaluate possible security issues to the Children's Garden and ways to mitigate those issues.

Approvals Required: Please note that the proposed expansion of the Moscone Center is a major, complex undertaking that affects vast amounts of OCII Property spread above and below ground on CB-2 and CB-3. As mentioned above, all changes to OCII Property requires consent from the OCII Commission until it is transferred to the City.

At the direction of the OCII Commission, and in the spirit of intergovernmental coordination, OCII will work with the project sponsors on the project design and requests a meeting with the Planning Department prior to preparation and release of a draft EIR to discuss OCII's concerns about the projects as outlined above.

Thank you for the opportunity to comment on the IS. We request that the Draft EIR consider and address our comments. Please send us copies of all future project level documents, including Mitigation Monitoring and Reporting Program (MMRP) for the project, CEQA findings and, if applicable, statement of Overriding Considerations.

Regards,

Tiffany Bohee Executive Director

Attachment 1: Commission Memorandum dated February 4, 2014

Attachment 1

Commission Memorandum dated February 4, 2014

MEMORANDUM

TO:	Community	Investment and Infrastructure Commissioners
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- FROM: Tiffany Bohee Executive Director
- SUBJECT: Workshop on the proposed Moscone Convention Center expansion project and its impact on Successor-Agency owned property in Yerba Buena Gardens

EXECUTIVE SUMMARY

The purpose of this workshop is to update the Commission on the status of the proposed expansion of the Moscone Convention Center (the "Moscone Center"), present the new schematic design, and explain how it will impact property owned by the Office of Community Investment and Infrastructure ("OCII" or the "Successor Agency"), the successor to the former San Francisco Redevelopment Agency (the "SFRA"). Because OCII still owns built improvements impacted by the Moscone Center expansion project (the "Expansion Project"), the Commission must approve (in coming months) any changes to those built improvements. Construction is scheduled to start later this year.

In March 2013, staff from OCII and the City and County of San Francisco (the "City") presented the Expansion Project in its very early conceptual design phase to the Commission and explained the complex OCII/City property ownership interests at Yerba Buena Gardens. For reference, a copy of the Memorandum from the March workshop is attached (see Attachment 1, Commission Memorandum dated March 5, 2013).

OCII and the City currently share ownership of the Moscone Center, which spans large portions of a two-block area of Yerba Buena Gardens known as Central Block Two ("CB-2") and Central Block Three ("CB-3), in the former Yerba Buena Center Redevelopment Project Area. CB-2 and CB-3 are shown on Attachment 2 – Map of Yerba Buena Gardens. The Agency acquired all the real property on CB-2 and CB-3 – including the Moscone Center properties – with federal urban renewal funds in the 1960s and 1970s. The SFRA issued lease revenue bonds to finance the construction and improvements associated with the Moscone Center, which was built in phases on CB-2 and CB-3 between 1979 and 1992 as the need for additional convention space grew. See Attachment 1 for historical background on development of the Moscone Center.

As described in detail in the following section, the proposed Expansion Project would add up to 358,000 square feet to the existing Moscone Center above and below ground. Approximately 123,000 of that would be below ground on CB-2 and CB-3 to create contiguous exhibition spaces. Above-ground, about 235,000 square feet of space will be added including expanded lobbies and multi-purpose space, new meeting and circulation space, and a new ballroom stretching over the new south lobby.

Community concerns have centered on (1) overall building heights and massing of the project, (2) impacts on OCII's children's garden (including a new mid-block walkway), (3) impacts on the restaurant spaces on CB-2, (4) the proposal to replace the existing bridge with a new pedestrian bridge over Howard Street, and (5) the economic impact on OCII's cultural operators on CB-2 and CB-3. As a result, the City has undertaken extensive community outreach to surrounding neighbors, businesses and affected parties and the design team has made significant improvements to the project, as described in detail below.

DISCUSSION

OCII Properties Impacted by the Expansion Project

OCII owns some of the built improvements on CB-2 and CB-3 that will be impacted by the Expansion Project. As such, the Commission must approve (in coming months) any changes to those built improvements. The built improvements that OCII owns that will be impacted by the Expansion Project include:

- Moscone North Until this property is transferred to the City, the Commission will need to approve changes to Moscone North in compliance with the lease between the City and OCII. Under that lease, Moscone North automatically transfers to the City when the existing bonds and deferred rental payments are paid in full. This could happen anytime between July 2014 and 2018;
- The children's garden on CB-3;
- The café building adjacent to the carousel;
- The pedestrian bridge spanning Howard Street; and
- The southern end of CB-2. OCII owns all of the land and improvements on CB-2, except for the Metreon building. Therefore, any changes to the open spaces around Samovar Tea Lounge and B Restaurant require the Commission's approval, as well as any proposal to remove the bridge and property management office.

The Proposed Expansion Project

The Expansion Project would add up to 358,000 square feet to the existing Moscone Center above and below ground. Approximately 123,000 square feet of this additional space would be created by excavating and expanding the existing below-grade exhibition halls that connect the Moscone North and South buildings under Howard Street to create up to 580,000 square feet of contiguous exhibition space below-grade.

Above-grade, the Expansion Project would construct about 235,000 square feet of space, including expanded lobbies and multipurpose space for Moscone North (approximately 28,000 square feet) and Moscone South (approximately 54,000 square feet), and about 153,000 square feet of new meeting and circulation space, which includes about 50,000 square feet for a new ballroom stretching over the new south lobby, replacing the ballroom administration building at the corner of Howard and Third Streets. See Attachment 3 for Expansion Project Design Renderings.

In addition to adding new square footage, the project architects – Skidmore, Owings and Merrill – have included in their design proposals to:

widen the sidewalks along Howard, Third and Fourth Streets;

- create a new garden area facing south toward Howard Street between Samovar Tea Lounge and B Restaurant on CB-2;
- create new plazas behind Samovar Tea Lounge and beside the southern landing of the new western bridge on CB-2;
- improve the existing children's learning garden and sundial garden on CB-3;
- construct a new mid-block alley, or "paseo," from Third Street between Howard and Folsom into the existing children's garden on CB-3. The paseo provides emergency egress from the ballrooms and exhibition spaces, allows access to the children's garden from Third Street, and creates new retail, concession and artistic spaces along the paseo; and,
- construct two new pedestrian bridges across Howard Street: (1) a glass enclosed eastern bridge that would connect Moscone North and South and allow accredited Moscone Center attendees to walk from meeting rooms above ground to exhibition space beneath Yerba Buena Gardens, and (2) a western bridge that would replace the existing pedestrian bridge with a wider, open air extension of the park that allows public access from Yerba Buena Gardens to the children's facilities and creates a more open arrival on to CB-3.

On CB-2, the Expansion Project would not affect OCII's esplanade open space areas, the "Sister Cities" garden, the Martin Luther King Jr. Memorial, or the Yerba Buena Center for the Arts buildings. The Expansion Project would affect OCII's two café spaces (currently occupied by Samovar Tea Lounge and B Restaurant) by creating new garden and plaza areas between the two restaurants. The design team's primary focus has been on the architectural design of the convention center and the children's gardens on CB-3. As a result, the impacts on the two café spaces are still being evaluated. At this time, it is not clear how significant the impacts will be (i.e., visibility of the café spaces and signage from Howard, etc.) on the cafés. Additionally, OCII's Yerba Buena Gardens property management office may need to be relocated to make way for the proposed new western bridge.

On CB-3, the Expansion Project would not affect OCII's ice rink and bowling center, the child development center, the Children's Creativity Museum ("CCM") buildings, and the children's play circle. The Expansion Project would affect the open space areas and improvements surrounding the children's gardens, including the removal of the learning garden, sundial garden, and a walkway lined with trees near Moscone's south lobby. OCII's carousel café building across from the carousel would be removed when OCII's existing Howard Street pedestrian bridge is demolished. The carousel café is subject to an operating agreement between OCII and CCM and is a revenue source for CCM.

The City is planning to replace and enhance OCII assets on CB-2 and CB-3 during construction and is working with OCII staff and community stakeholders on those plans.

Community Concerns

The project design team has been working closely with Yerba Buena Gardens community stakeholders over the last year to address their concerns about the Expansion Project. The community's concerns are listed below along with the expansion team's response:

1. Building Heights and Massing

Issue: While some stakeholders have requested more height along Third Street, others believe that the new building on CB-3 is too large, will have negative impacts on the children's gardens

(views, shadows, and wind, etc.), and goes against the original agreement with community stakeholders for an underground convention center.

City Response: In order to minimize the impact of the new building the Moscone design team has (1) reduced its height and massing, (2) selected the design that minimizes wind and shadow effects on the esplanade grassy area on CB-2, the children's playground, and the Yerba Buena Center for the Arts theater entry plaza on Howard Street, (3) maximized all available square footage below grade to create a contiguous floor plate by relocating existing meeting rooms and repurposing space dedicated to back of house operations, (4) reduced the overall interior square footage, (5) increased the new building's exterior transparency and (6) stepped back the façade from the children's gardens.

2. Impacts on the Children's Gardens

Issue: Discussions have centered on the design of the new paseo mentioned above and how to ensure security at the children's gardens given the additional foot traffic and the paseo's proximity to the children's gardens. Discussions have also focused on the future size and location of the learning garden and sundial garden, which will be removed during construction.

City Response: The Moscone team has (1) improved the design and security of the paseo from Third Street through lighting, landscaping, programming, grade changes and gates that create security for park users while managing safe access for pedestrians transiting through the gardens, and (2) designed options for either returning the children's learning garden and sundial garden to their current size and location or, after conversations with gardens' users, moving them into the sunlight, creating a new flexible event lawn space, new tot lot, new public seating location and improved fern dell.

3. Moscone North Lobby Expansion

Issue: Stakeholders are concerned about impacts to the visibility of OCII's two restaurant spaces from Howard Street, and how the proposed new garden and plaza areas between the two restaurants (proposed as part of the Moscone North lobby expansion) will impact the views from inside the restaurants.

City Response: In response to comments the design team has abandoned plans to add a second story behind the two restaurants in favor of a smaller extension on the first floor plus a pergola above the restaurants and new enclosed pedestrian circulation. Although plans for this portion of the Expansion Project are still in the early stages of development, the design team believes that expanding the public open space and creating new kiosk opportunities between the two restaurants overlooking Howard Street, a new public plaza at sidewalk level beneath Samovar, and improving restaurant signage will provide better restaurant connectivity to and visibility from Howard Street than exists today.

4. Construction of a New Western Bridge

Issue: Stakeholders are concerned about proposals to remove the current pedestrian bridge, OCII's property management/programming office, which includes the security monitoring room and CCM's carousel café building to make room for the new western bridge.

City Response: The design team is proposing to (1) expand the pedestrian bridge across Howard Street to better integrate the gardens on CB-2 and CB-3 and create a new public plaza that highlights the carousel and CCM from Howard Street, (2) replace the carousel café building with a larger café space in the new Moscone Center building on CB-3, which will have better visibility from Howard Street, and (3) design around the management/programming office without removing it from its current location.

5. Economic Impacts to OCII's Cultural Operators

Issue: Stakeholders are concerned that Yerba Buena Center for the Arts and CCM may lose business during construction due to street closures, noise, and other construction-related activities.

City Response: The construction is being phased to mitigate impacts to Samovar Tea Lounge, B Restaurant, and the Yerba Buena Center for the Arts by coordinating with and around planned programming and not shutting down any operations during construction.

Community Outreach

The design team has undertaken extensive community outreach to surrounding neighbors, businesses, park users and affected parties and has engaged the services of a local public affairs firm to assist in ongoing comprehensive outreach. Additionally, in consultation with District 6 Supervisor Jane Kim, the Mayor's Office, and OCII, a 16-member Strategic Advisory Group ("SAG") comprised of diverse local stakeholders has been established to advise the expansion team on the design and mitigation of impacts throughout the approvals process. As part of the outreach effort, a website has been created (www.MosconeExpansion.com) to keep members of the public informed and engaged in the planning, design, and construction process, and alert people to upcoming meetings.

In addition to regular SAG meetings, the design team has facilitated dozens of meetings and working sessions in recent months with directly impacted gardens users, convention clients, restaurants and arts groups as well as adjacent residents and other stakeholders, including the South of Market Child Care Center, Yerba Buena Alliance, the Yerba Buena Community Benefit District, Yerba Buena Center for the Arts, Yerba Buena Arts and Events, CCM, the Office of Supervisor Jane Kim (District 6), OCII staff, Paramount Apartments, Museum Park, TODCO, MJM Management Group, B Restaurant, Samovar Tea Lounge, St. Regis Residences, Millennium Partners, Westfield, the San Francisco Chamber of Commerce, SPUR, Mission Hiring Hall, Local 510, Local 16, the Hotel Council, and convention meeting planners. As a result, the design team has made significant improvements to the project, including those described above in response to community stakeholder concerns.

Local Hire Projections

As a publicly bid contract under City law, the Expansion Project will have a mandatory 25% local hire requirement (i.e., San Francisco residents) with no less than 25% of project hours in each trade performed by disadvantaged workers as required by San Francisco Administrative Code Chapter 6. According to an independent study by Jones Lang LaSalle, the Expansion Project would generate 3,480 permanent jobs (e.g., exhibitors, restaurant workers, hotel staff, etc.) through fiscal year 2022 plus an additional 3,407 construction jobs between 2014 and 2018.

NEXT STEPS

The proposed expansion of the Moscone Center is a major, complex undertaking that affects vast amounts of property spread above and below ground on two blocks. As a result, OCII staff plans to present additional workshops on this matter to the Commission in the next few months that focus on specific aspects of the project, such as the children's garden design, the Moscone North lobby expansion and its impact on the CB-2 cafes, and the new western bridge design.

The following chart shows an estimated schedule for key Expansion Project milestones and assumes that OCII will transfer ownership of Moscone North to the City in the summer of 2014:

January 2014	Publication of a "Notice of Preparation" of an Environmental Impact Report ("EIR"). Comments due by 5:00 p.m. on February 21, 2014.
April 2014	Publication of a Draft EIR, initiating a 45-day public comment period with an anticipated public hearing in May 2014.
July 2014	Certification of the Final EIR by the City's Planning Department.
July 2014	Moscone North bonds paid in full. Ownership of Moscone North transfers from OCII to the City, provided all deferred rental payments have been paid to OCII in full.
Winter 2014	Commission approval for work on OCII-owned property
Winter 2014	Construction starts
July 2018	Construction completed

(Originated by Denise Zermani, Development Specialist, and Adam Van de Water, Project Manager, Office of Economic and Workforce Development)

Tiffany Bohee Executive Director

Attachment 1: Attachment 2: Attachment 3: Commission Memorandum dated March 5, 2013 Map of Yerba Buena Gardens Expansion Project Design Renderings

Attachment 1

Commission Memorandum dated March 5, 2013

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MEMORANDUM

TO: Community Investment and Infrastructure Commissioners

FROM: Tiffany Bohee

Executive Director

SUBJECT: Workshop on the proposed Moscone Convention Center expansion project and its impact on Successor-Agency owned property in Yerba Buena Gardens; former Yerba Buena Center Redevelopment Project Area

EXECUTIVE SUMMARY

The convention facilities at the Moscone Center span large portions of a two-block area of Yerba Buena Gardens known as Central Block Two ("CB-2") and Central Block Three ("CB-3), in the former Yerba Buena Center Redevelopment Project Area. CB-2 and CB-3 are shown on Attachment 1 – Map of Yerba Buena Gardens. The former San Francisco Redevelopment Agency (the "Agency") issued lease revenue bonds to finance the construction and improvements associated with the Moscone Center. The bonds were secured by leases with the City and County of San Francisco (the "City").

The Moscone Center complex was built in phases on CB-2 and CB-3 between 1979 and 1992 (as described below), as the need for additional convention space grew. The Agency acquired all the real property on CB-2 and CB-3 – including the Moscone Center properties – with federal urban renewal funds in the 1960s and 1970s. Today, the Successor Agency to the Redevelopment Agency, commonly known as the Office of Community Investment and Infrastructure ("OCII"), and the City share ownership of the Moscone Center. See Attachment 2 – Map of Moscone Center's Ownership Interests, which illustrates the City's and the OCII's shared ownership above and below ground.

Now, the City is set to expand the Moscone Center complex again. In February 2013, the San Francisco Board of Supervisors unanimously approved funding for the expansion project, which is described later in this memorandum. The proposed expansion is needed to keep Moscone competitive with other public convention centers that offer larger and more contiguous exhibition spaces with more flexible meeting and ballroom spaces. Without the expansion, Moscone is predicted to lose \$2 billion in future revenue as competitor markets build larger, more contiguous exhibition spaces with more flexible meeting and ballroom spaces.

The expansion project would add approximately 353,000 square feet to the existing Moscone Center above and below ground on CB-2 and CB-3. It will create contiguous exhibition spaces and increase the amount of flexible meeting and ballroom spaces throughout the Moscone Center. Additionally, the proposed design will improve Moscone's civic presence on Howard Street by creating an iconic and architecturally significant arrival experience. The expansion project would not affect Yerba Buena Gardens on CB-2 or the OCII's children's facilities (the ice skating/bowling centers, museum, playground, etc.) on CB-3.

The City has undertaken extensive community outreach to surrounding neighbors, businesses and affected parties and has engaged the services of a local public affairs firm to assist in ongoing comprehensive outreach. It also will follow the City's mandatory local hire policies for construction of the expansion project, which is expected to start in late 2014 and finish in 2018.

Next steps include (1) possible Commission and/or Oversight Board approval of changes to the OCII's property if the proposed Moscone renovation expands onto the OCII's properties, and (2) submittal to the Commission, the Oversight Board, and the State Department of Finance, pursuant to redevelopment dissolution law, of a long-range property management plan in which the OCII must identify the future use and disposition of all OCII-owned properties.

BACKGROUND

As mentioned above, the convention facilities at the Moscone Center span large portions of CB-2 and CB-3. Between 1979 and 1988, the Agency issued lease revenue bonds to finance the construction and improvements associated with the Moscone Center on land owned by the Agency. The bonds, which were paid off and/or refunded over the years, are secured by leases with the City. The following summarizes the development of the Moscone Center on CB-2 and CB-3 since 1979 and the current property ownership interests between the OCII and the City.

- The Original Moscone South. In 1981, the first section of Moscone South was completed. It was primarily an underground structure spanning the length and width of CB-3, except for an above-ground lobby facing Howard Street and a few stairwell structures, ramp walls, and landscaping features (the "Original Moscone South"). The Original Moscone South was owned by the Agency and leased to the City under a 1979 Project Lease. In 2011, the City paid the bonds in full, and pursuant to the 1979 Project Lease, the Agency transferred this property to the City. The City's Moscone property is shown on Attachment 2.
- The CB-3 Rooftop Surface. Construction of the Original Moscone South resulted in a rooftop surface suitable for development ("CB-3 Rooftop Surface"). The CB-3 Rooftop Surface was divided into two development sites: (1) one site was for the City's first expansion of Moscone Center (also known as Moscone North), which is defined below, and (2) another site was for the Agency's children's facilities (i.e., the Children's Creativity Museum formerly known as Zeum, the nearby playground, the bowling and ice skating center, and the childcare center) (the "Children's Facilities"). The rooftop surface containing the Children's Facilities was subject to a series of leases/subleases between the City and the Agency. Today, the City owns this portion of the CB-3 Rooftop Surface and the OCII leases it from the City to run the Children's Facilities. The OCII continues to own the buildings and other improvements that comprise the Children's Facilities located on the CB-3 Rooftop Surface.
- The First Expansion (Enlarged Moscone South and New Moscone North). In 1992, the final section of Moscone South (i.e., the building with the esplanade ballroom and administrative offices) was finished on a portion of the CB-3 Rooftop Surface. To

finance the construction, the Agency issued bonds and entered into another lease with the City as security for the bonds (the "1988 Project Lease"). The premises under the 1988 Project Lease includes (1) the esplanade ballroom and administration building on CB-3 ("Enlarged Moscone South"), and (2) an above-ground lobby on the CB-2 side of Howard Street; an underground portion of Howard Street connecting the Moscone buildings on both sides of Howard Street; and an expansive underground section of CB-2 ("Moscone North"). The OCII continues to own and lease this property to the City. However, in July 2014, the City expects to pay the bonds in full and the OCII will transfer the property to the City in accordance with the terms of the 1988 Project Lease. The OCII's Moscone property is shown on Attachment 2.

DISCUSSION

Now, the City is set to expand the Moscone Center complex again. In February 2013, the San Francisco Board of Supervisors unanimously approved the creation of the Moscone Expansion District¹ ("MED") and the issuance of \$507 million in Certificates of Participation to fund the expansion. The proposed expansion is needed to keep Moscone competitive with other public convention centers that offer larger and more contiguous exhibition spaces with more flexible meeting and ballroom spaces. Although Moscone has expanded on average every 11 years to keep up with demand (including Moscone West), it risks losing up to \$2 billion in foregone revenue if the rentable square footage is not increased again. Without the expansion, Moscone is predicted to lose future revenue as competitor markets build larger, more contiguous exhibition spaces with more flexible meeting and ballroom spaces. The expansion project allows the City to recover approximately \$734 million of this future revenue through a phased construction schedule that keeps Moscone in continuous revenue-generating operation.

The Moscone expansion project sponsor is a partnership between the MED board of directors and the City's conventions facilities division (the "Project Sponsor").

Proposed Moscone Center Expansion Project (the "Expansion Project")

The Expansion Project would add approximately 353,000 square feet to the existing Moscone Center. Approximately half of this additional space would be created by excavating and expanding the existing below-grade exhibition halls that connect the Moscone North and South buildings under Howard Street to create up to 580,000 square feet of contiguous exhibition space. Above grade, the project would construct expanded lobbies and multipurpose space for Moscone North (approximately 39,000 square feet) and Moscone South (approximately 92,000 square feet, including a new 40,000-square-foot ballroom, with a multipurpose terrace above), and replace the Esplanade Ballroom administration building at the corner of Howard and Third Streets with 116,000 square feet of additional lobby, meeting, circulation and ballroom space.

¹ The MED imposes a long-term assessment on San Francisco hotels in order to help fund the expansion

project.

In addition to adding new rentable square footage, the project architects – Skidmore, Owings and Merrill – seek to create an iconic sense of arrival that enhances Moscone's civic presence on Howard Street. As such, the project proposes two new, glass-enclosed pedestrian bridges connecting the upper levels of the new Moscone North and Moscone South buildings. One bridge would provide Moscone attendees access between the meeting rooms at the expanded Esplanade building and Yerba Buena Gardens. The other bridge would be a dual use bridge with glass-enclosed and open-air spans. The open-air portion would provide improved public access from Yerba Buena Gardens to the Children's Facilities and the enclosed portion would give Moscone attendees access to meeting rooms in Moscone South. Under this proposal, the existing pedestrian bridge would be demolished once the new bridges are built. These proposed additions and changes will help to frame the main public arrival space between the two new buildings, provide enhanced circulation for Moscone convention attendees, and reduce on-street congestion all while maintaining full-time elevated public access across Howard Street from Yerba Buena Gardens on CB-2 to the Children's Facilities on CB-3.

The Expansion Project would not affect Yerba Buena Gardens, the Sister Cities Garden, the Martin Luther King Jr. Memorial, the Yerba Buena Center for the Arts buildings, the existing restaurants Samovar Tea Lounge and B Restaurant (all on CB-2), or the Children's Facilities on CB-3. However, the Expansion Project may impact all or a part of the Children's Learning Garden, which is tucked next to the administrative portion of the esplanade building. Specific impacts on this area will be defined during future Expansion Project design phases.

Community Outreach

The Project Sponsor has undertaken extensive community outreach to surrounding neighbors, businesses and affected parties and has engaged the services of a local public affairs firm to assist in ongoing comprehensive outreach. Additionally, in consultation with Supervisor Kim, the Mayor's Office and OCII, the Project Sponsor has established a 16-member community advisory board comprised of diverse local stakeholders to advise the Project Sponsor on the expansion design and mitigation of impacts throughout the approvals process. As part of this effort, the Project Sponsor has launched a website (www.MosconeExpansion.com) to keep members of the public informed and engaged in the planning, design, and construction process, alert people to upcoming meetings, and broadcast other items of interest.

Local Hire Projections

As a publicly bid contract under City law, the Expansion Project will have a mandatory 30 percent local hire (i.e. San Francisco resident) requirement with no less than 25 percent of project hours in each trade performed by disadvantaged workers (as required by San Francisco Administrative Code Chapter 6). According to an independent study by Jones Lang LaSalle, the Expansion Project would generate 3,480 permanent end-use jobs (e.g., exhibitors, restaurant workers, hotel staff, etc.) through fiscal year 2022 plus an additional 3,407 construction jobs between 2014 and 2018. Additionally, the 1988 Project Lease requires the City to follow its own local hiring policies.

NEXT STEPS

Moscone Expansion

The following chart is an estimated schedule of key Expansion Project milestones.

Spring 2013	Beginning of the environmental review process	
July 2014	Moscone North bonds paid in full. Ownership of Moscone North transfers from OCII to the City	
Winter 2014	Construction starts and continues intermittently around existing Moscone reservations	
2018	Completion of construction	

Future Commission/Oversight Board Actions

The 1988 Project Lease requires OCII approval of alterations or improvements to Moscone North. If for some unexpected reason, ownership in Moscone North does not transfer to the City before construction begins, then the OCII Commission will need to approve changes to Moscone North in compliance with the 1988 Project Lease. Additionally, any expansion onto the OCII's surrounding Yerba Buena Gardens property will require the approval of both the OCII Commission and the Oversight Board.

Finally, as mentioned to the Commission in previous memoranda, redevelopment dissolution law requires the OCII to "address the use or disposition of all of the [Agency-owned] properties" in a long-range property management plan. California Health and Safety code §34191.5(c) (2). Staff will be drafting a long-term disposition and/or retention strategy for property it owns (including Yerba Buena Gardens and Moscone North). This plan is subject to various requirements regarding future use and ownership of the property. The long-term property management plan will be submitted to the Commission for its review and to the Oversight Board and the State Department of Finance for their approval, as required under state dissolution law. The proposed property management plan will come before the Commission for its review at a later date.

(Originated by Denise Zermani, Development Specialist, Adam Van de Water, Office of Economic and Workforce Development, and Brook Mebrahtu, Department of Public Works)

Blee Riffany Bohee

Executive Director

Attachment 1: Attachment 2: Map of Yerba Buena Gardens Map of Moscone Center's Ownership Interests

YERBA BUENA GARDENS



Moscone Center's Ownership Interests

Above Ground

Below Ground







MOSCONE EXPANSION PROJECT FEBRUARY 04, 2014

OCII COMMISSION PRESENTATION





2

EXISTING

MODEL VIEWS OF EXISTING VS. PROPOSED

PROPOSED



SITE PLANS

3



PROPOSED CHILDREN'S PLAYGROUND

EXISTING CHILDREN'S PLAYGROUND

CHILDREN'S PLAYGROUND SITE PLANS


EXISTING

VIEW LOOKING SOUTH FROM 3RD & HOWARD STREET



PROPOSED

EXISTING

VIEW LOOKING EAST FROM 4TH & HOWARD STREET



6



7

PROPOSED

EXISTING

VIEW LOOKING NORTH FROM CHILDREN'S PLAYGROUND



PROPOSED

EXISTING

VIEW LOOKING NORTHWEST FROM CHILDREN'S PLAYGROUND

8



PROPOSED

EXISTING

VIEW LOOKING NORTH FROM PEDESTRIAN BRIDGE



The Yerba Buena Neighborhood Consortium

c/o 230 Fourth St. San Francisco, CA 94107 A Council of the Yerba Buena Neighborhood's Residents and Community Organizations

Sarah B. Jones San Francisco Planning Department 1650 Mission St. #400 San Francisco, CA 94103

RE: Moscone Center Expansion Project 2013.0154E EIR Scoping Comments – Part 1

As the City is aware, TODO and the Yerba Buena Neighborhood Consortium take the MEP and its EIR with absolutely the greatest possible seriousness. The two key issues from our 40-year Yerba Buena Neighborhood perspective are pedestrian safety impacts and impacts on Yerba Buena Gardens. There are also local noise and air quality issues of consequence.

The current NOP would result in an EIR that is incomplete or legally insufficient in several critical aspects.

1. Projections of Total Attendance

A critical metric in assessing the MEP's Pedestrian Safety Impacts is of course the total of convention attendance used to evaluate potential environmental impacts.

First, regarding total attendee trips, the NOP relies on the 1/14/14 Estimate of Travel Demand by Avant Consulting. That Memo states the projected increase in trips is based on the overall increase of additional MEP "exhibit space," which is appropriate, but Avant does not make clear if that is the 42% increase in Total space (625,600 to 888,300) or some other % factor. This must be clarified now prior to the NOP comment deadline. The Memo's comments that actual growth is not likely to be that great per Moscone Management are rhetorical and highly debatable – for as the Memo notes elsewhere, the MEP will enable Large conventions to be substituted for Small conventions in the future. And since the prime objective of Moscone Management is to maximize attendance for the benefit of the City's Visitor Industry, it is reasonable to assume it will maximize this strategy in the future as much as it practically can.

Second, also regarding total attendee trips, the assumption of the Base Year total attendance to use as the starting point for applying this growth factor is of course crucial. Here the Memo uses the average Moscone attendance for the last 11 years. <u>But</u>

this is an arbitrary methodology and wrong for the purpose of an EIR. As the Memo notes, national economic conditions have very significant impacts on actual convention attendance, and in the last 11 years two anomalous national events strongly impacted attendance – the post-9/11 contraction of the Visitor Industry in 2002-03, and the Great Recession of 2008-11. Thus the average annual attendance proposed as the base year by the Memo – 925,969 - is about the same as annual attendance during the Great Recession period. But the data also show that peak attendance – and hence the true capacity of Moscone Center today – was 1,279,000 in 2007-08 when the national economy was expanding. That was 38% more than the Memo's proposed base year! While CEQA allows some reasonable adjustment to projected use levels, setting a base year factor at such a huge discount to known and proven capacity and experienced convention demand is certainly legally inadequate, even if not intended to knowingly understate potential impacts. Because of course it is that capacity and only that capacity that truly sets a cap on environmental impacts of the MEP – not varying economic conditions. Yes, maximum attendance will occur only in years of economic growth – but certainly there will be such years, this will happen, and then those impacts will actually occur. The EIR must evaluate those elevated levels of impacts (evlauating a range of minimum/maximum would be appropriate, honest, and useful). In addition, 2012-13 Moscone attendance data is not included although it should be available by now, and that up to date information must be included in the EIR itself later this year.

Third, the Memo limits all its analysis to Moscone Center travel demand only. This clearly fails to address the cumulative impacts of other events that occur frequently in Yerba Buena Gardens at essentially the same location. The NOP does not make clear what data is being utilized for that additional cumulative travel demand from YBG events. This must be clarified now prior to the NOP comment deadline.

2. Projections of Pedestrian Travel Trips and Loads

First, estimating the modal split of Moscone attendee trips is clearly a crucial metric for the EIR's evaluation of MEP impacts on Pedestrian Safety. Here the Memo cites as its only factual experience data source "estimates provided by the Moscone Center operator," which estimates only 30% of the trips are via the "walk" mode. But this "estimate" document is not included in the Appendix and so its validity cannot be reviewed or commented upon. <u>This document must be provided for public review now prior to the NOP comment deadline</u>.

Second, the "auto" and "other" modes are projected to account for 15% of Moscone attendee trips combined. "Other" includes transit. <u>But the Memo fails to note and factor</u> into the data the obvious fact that all such trips necessarily also include a final short "walk" trip to the Moscone Center entrances from those nearby garages, transit stops, etc.! Which means the actual "walk" travel demand on the very local pedestrian routes adjacent to Moscone Center is at least 45% of attendance – 50% greater. <u>Thus any</u> evaluation of MEP impacts on pedestrian safety in the local Yerba Buena Neighborhood based simply on the 30% modal Walk split will be legally inadequate.

Third, the Memo projects that "each event attendee would generate three trips to and from the Moscone Center [per day]." But for pedestrian travel this omits the clearly observable short distance walks a very large % of attendees also make during the day

on public sidewalks between the Moscone North/South/West entrances, and also adjacent convention support hotels such as the Marriott, W, and others. Thus the actual numbers of pedestrians trips on local sidewalks is greater than just 3 trips per day times 45% of all attendees. These actual more intensive patterns of convention attendee local pedestrian travel must be fully evaluated for the EIR to be legally adequate.

Fourth, the Memo applies an 85% factor against any such projected trip demand for the purpose of "design capacity," presumably – there is no clear statement – including pedestrian impacts. This would be flagrantly legally inadequate. The absolutely crucial real life pedestrian safety impact of Moscone Center that the MEP will certainly further exacerbate in number are the crush pedestrian loads that occur episodically during large and very large conventions, exceeding the physical capacity of local pedestrian routes. As a matter of law, this is directly analogous to flooding in river systems – no EIR involving development in such settings would dare ignore the realities and impacts of episodic flooding, even if rare. Yet here the Memo apparently assumes this is not relevant to "design" capacity, even though it actually occurs dozens of days a year now. Any EIR analysis that fails to fully and accurately evaluate such "crush loads" in both the Settings and Impacts of the MEP, and thus fails to include Mitigations to sufficiently address those impacts, will be absolutely unacceptable to our organizations.

Fifth, in recent years Moscone Center has begun to host "mega-conventions" – Oracle World and Dreamforce – that expand convention activity space to include Howard Street and facilities in Yerba Buena Gardens for 8-10 event days per year. <u>These events are in an impact class by themselves</u>, and there is in fact no limit on how many such <u>events can occur in future – there could be many more in the future</u>. Thus the MEP EIR must include a "worst case" evaluation of such mega-convention impacts and the additional Mitigation measures to be deployed when they do occur, especially regarding Pedestrian Safety impacts when the local sidewalks become virtually impassable for much of the day.

Sixth, it is established law that Safety impacts on identifiably vulnerable subpopulations must be evaluated for projects such as the MEP. In the case of Pedestrian Safety it is beyond question that the elderly and persons with disabilities have significantly greater vulnerability. But there is no demographic data in the NOP – as there certainly must be in the EIR – regarding this especially vulnerable population – how many live in the Neighborhood and thus are so impacted. But it is readily available. As of December 2013, 780 elders live in the TODCO Group's four apartment complexes with 577 total housing units in the Yerba Buena Neighborhood, 174 (22%) of whom have physical or developmental disabilities. Extrapolating those stats to also include the other 888 senior housing units in the other four senior residences in the YBN, the total senior population is about 1,980, of whom about 435 are especially vulnerable persons with disabilities. And this does not include the numbers of additional elders living in YBN market rate housing.

Finally, with regard to the general question of MEP impact analysis of all Pedestrian Safety impacts, aside from the methodology matters discussed above the NOP "punts" by merely noting that there will be a detailed "transportation impact study" as part of

the EIR itself, and notes that the impacts may be "potentially significant," (Initial Study 4.f et al) resulting in possible Mitigation measures yet to be identified.

That lack of any detail on this complex topic is understandable at this point. But then in the NOP's ultimate "Mandatory Findings of Significance" discussion, the NOP presumes that those impacts will somehow be "Less Than Significant With Mitigations Incorporated." That is clearly an illegitimate premature conclusion, since those MEP impacts have not yet been determined by the forthcoming "study" and their Mitigation measures have not yet even been identified, let alone evaluated by the EIR. The NOP cannot leap to that optimistic conclusion <u>at this time</u> with no factual foundation for it whatsoever, and so instead 18.c of the Initial Study must be checked as a "Potentially Significant Impact," consistent with 4.f.

3. Noise and Air Quality Impacts

The authors of the NOP lack local knowledge of everyday Moscone Center operations. The entire discussions of both Air Quality and Noise completely omit the biggest local such problem we all live with – the convention shuttle buses.

During large and very large conventions during the day dozens of contracted buses shuttling attendees to their hotels and special event venues queue on either/both Folsom Street between Third/Fourth (directly across the street from TODCO's Mendelsohn House) and/or on Howard Street adjacent to Moscone West (directly across the street from TODCO's Woolf House). These queues can last hours at a time. The bus operators are supposed to turn off their motors while waiting, in compliance with Moscone Center Management policy, but they often do not. The resulting impacts are the noxious bus exhaust fumes which blow downwind across the street toward those senior housing living units, and especially the low-frequency rumbling motor noise that permeates the area and is disturbingly audible even inside the adjacent apartments with their windows shut. Again, this can go on for hours at a time.

As the Memo notes, the MEP will increase the numbers of shuttle buses overall, and thus very likely increase these local bus queue Air Quality and Noise impacts. And in this case the effective Mitigation Measure is clearly identifiable – Moscone Management needs to post a staff person at such queues whenever they are permitted to ensure the bus operators comply with Management policy and turn off their motors while waiting – this is not being done now.

Sincerely,

John Elberling President/CEO, TODCO Manager, Yerba Buena Consortium LLC



The Yerba Buena Neighborhood Consortium

c/o 230 Fourth St. San Francisco, CA 94107 A Council of the Yerba Buena Neighborhood's Residents and Community Organizations

Sarah B. Jones San Francisco Planning Department 1650 Mission St. #400 San Francisco, CA 94103

February 4, 2014

RE: Moscone Center Expansion Project 2013.0154E EIR Scoping Comments – Part 2

As the City is aware, TODCO and the Yerba Buena Neighborhood Consortium take the MEP and its EIR with absolutely the greatest possible seriousness. The most critical aspect of the MEP for all Central City residents and many San Franciscans are its impacts on Yerba Buena Gardens. Yerba Buena Gardens is a civic treasure and by any standard of co-equal civic importance with Moscone Center. Any diminution of its quality, amenity, and usability as a result of the MEP would be absolutely unacceptable. The Children's Garden on CB-3 is adjacent to the main part of the above-grade MEP project, and is thus most at issue.

The NOP totally ignores the potentially significant impacts of the MEP on the Gardens. It discusses only how the MEP might increase demand for recreation facilities overall. In particular topic 9.c "Physically degrade existing recreational resources" is <u>not</u> discussed at all, and is merely checked "Less than significant impact."

This is beyond legally inadequate, this "don't talk about it" NOP is knowingly deceptive.

In fact, as clearly evidenced in the most recent January 2014 presentation MEP Plans:

- Approximately 6,000 sq ft of the Children's Garden now occupied by its Allee, Sundial Lawn, and Learning Garden is proposed to be taken by the MEP for its new buildings and their legally required fire exit route (the so-called "Paseo").
- In compensation, approximately 2,500 sq ft of the existing fire exit route of the Esplanade Ballroom is proposed to be added to the Children's Garden, thus resulting in a net 3,500 sq ft <u>reduction</u> in the overall size of the Children's Garden.
- In addition, the MEP's proposed new West Bridge over Howard Street and adjacent circulation route changes as now configured would **reduce the much**

needed outdoor seating area adjacent to the Carousel by about 1,000 sq. ft., thereby increasing the overall net <u>reduction</u> of the Children's Garden to 4,500 sq. ft.

- The MEP plans for the West Bridge area do include building a new street-level plaza adjacent to Howard Street of about 2,500 sq. ft. But this location is completely inappropriate for use by children and families. Its amenity will be dominated by the high levels of street noise that are much less apparent at the upper Gardens Carousel level. And its usage will be dominated by convention attendees going to and from the Moscone South entrance including the peak "crush" pedestrian loads that occur episodically in this location. Functionally detached totally from the nearby Carousel, there is absolutely no reason for families to ever use this space and it cannot legitimately be alleged to be an "addition" to the Children's Garden open space.
- The MEP proposes several new access routes to the Children's Garden: the aforementioned "Paseo" from Third Street, a new relocated and expanded stairway from Howard Street, a new second ADA ramp from Howard Street, and a new relocated and expanded West Bridge from the Esplanade. Whatever the value of these various improvements to circulation, the substantial areas they consume are not functional usable Gardens spaces and cannot accurately be identified as such by the EIR. In particular, the second ADA ramp from Howard Street is redundant, only 150 ft. away from the current ADA ramp route at the Carousel, yet it would eliminate about 1000 sq. ft. of the Carousel seating area which actually needs to be enlarged, not diminished. And it would only improve ADA access for people coming from Moscone Center itself almost never families since ALL other users of the Children's Gardens have more direct ADA access routes elsewhere.

All these factors must be documented <u>in full detail</u> and discussed by the MEP EIR, and for these reasons alone Topic 9.c must be checked "Potentially significant impact."

This would lead to a full evaluation of potential Mitigations as well, which the NOP now omits. And in fact the January MEP plans do indicate one potential Mitigation for Children's Garden impacts – possible upgrades to several areas of the existing Garden to relocate the Learning Garden and add new activity areas in underutilized existing locations.

But the most direct and sufficient potential Mitigation – **to add as much useable new open space to the Children's Garden as the MEP takes away** – has yet been considered by the MEP. <u>It must be</u>.

The evident location to make up the 4,500 sq ft net loss of Children's Garden open space is to **expand - not reduce** - the outdoor seating area adjacent to the Carousel at its above grade level instead of building a street level plaza in that area as the MEP proposes. This would be done in conjunction with improved access from Howard St., incorporating either the existing West Bridge or a new West Bridge. This could also include expansion of the existing cafe at this location, which proved to be too small to be economically feasible, that was intended to meet the snack needs of families using the Gardens, an important amenity – kids get hungry!

There are additional issues of potential MEP shadow and urban design impacts on the Children's Garden. Those will be discussed in Part 3 of these Comments regarding Project Alternatives.

Finally, and perhaps most disconcerting of all is the statement in the NOP that: "... the Project would not result in the construction of recreational facilities that would themselves have a physical environmental impact." This is wrong on its face – in fact the MEP is clearly proposing to construct alterations to the Children's Garden and other portions of Yerba Buena Gardens as noted above, including a new West Bridge. In order to be built, all these alterations – including the potential additional Mitigation described above – must be covered by the MEP EIR evaluation. **This is essential**, because otherwise they would have to wait for a subsequent later environmental review process in order to actually be built. Either the MEP is trying to "pull a fast one" by appearing to promise Gardens improvements it actually won't deliver as part of its construction, or the NOP authors overlooked this essential CEQA procedural detail.

John Elberling President/CEO TODCO Manger, Yerba Buena Consortium LLC

LOSS OF USABLE GARDENS OPEN SPACE

EXISTING GARDEN AREAS PROPOSED TO BE REMOVED FROM GARDEN USE

PROPOSED NEW MOSCONE USE

PROPOSED NEW CIRCULATION

PROPOSED NEW GARDEN USE



-7,000 SF LOSS OF USABLE GARDENS OPEN SPACE +2,500 SF NEW USABLE GARDENS OPEN SPACE

-4,500 SF NET LOSS USABLE GARDENS OPEN SPACE



The Yerba Buena Neighborhood Consortium

c/o 230 Fourth St. San Francisco, CA 94107 A Council of the Yerba Buena Neighborhood's Residents and Community Organizations

Sarah B. Jones San Francisco Planning Department 1650 Mission St. #400 San Francisco, CA 94103

February 4, 2014

RE: Moscone Center Expansion Project 2013.0154E EIR Scoping Comments – Part 3

As the City is aware, TODCO and the Yerba Buena Neighborhood Consortium take the MEP and its EIR with absolutely the greatest possible seriousness. The most critical aspect of the MEP for all Central City residents and many San Franciscans are its impacts on Yerba Buena Gardens. Yerba Buena Gardens is a civic treasure and by any standard of co-equal civic importance with Moscone Center. Any diminution of its quality, amenity, and usability as a result of the MEP would be absolutely unacceptable. The Children's Garden on CB-3 is adjacent to the main part of the above-grade MEP project, and is thus most at issue.

In view of this, it is stunning that NO proposed evaluation of Project Alternatives is included the MEP NOP whatsoever. Since CEQA requires evaluation of Project Alternatives – and not just the "No Project" Alternative – this omission is incomprehensible.

In addition to the currently proposed January 2014 MEP design and the No Project Alternative, two other Alternatives can be readily identified for evaluation in the EIR:

• A Basic Project Alternative. The initial proposals for the MEP in October 2012 were based on the "Objectives of Project Sponsor" to create a single more efficient below grade Exhibit Hall - a 60,000 sq. ft. net new "functional" space increase - which necessitated relocating the below-grade meeting rooms and support facilities into a new above-ground building at the southwest corner of Third and Howard Streets -110,000 sq ft of new construction. Some additional new Meeting Rooms space were included in that new building. For this Basic Alternative, unlike the October 2012 concept, the existing North and South Lobbies would remain essentially unchanged from today except for interior adjustments. So its total new MEP space would be 170,000 sq. ft., compared to the 253,000 "functional" space increase in the January 2014 MEP proposal.

• A One Story South Lobby Expansion Alternative. This would be essentially the MEP design as proposed as late as April 2013. In addition the Basic expansion described above, it includes reconstruction and expansion of the North and South Lobbies, with also the addition of a second floor Ballroom/Exhibit Space on the South Lobby and a new East Pedestrian Bridge over Howard Street. Depending on the amount of Meeting Room Space in the new Third/Howard Building, this Alternative would add about 45,000 sq. ft. of "functional" new space, for a total of 215,000 sq. ft. A variant with an even taller corner building could provide more new "functional" space, potentially matching the total new space overall as the proposed January 2014 MEP design. However such a taller building variant would need additional Shadow/Climate impact analysis. (A rough depiction of this possible Alternative is attached, also noting the potential for the roof of the new Ballroom to be an open Terrace to be utilized on occasions as tented outdoor special event space.)

From the community perspective, the key differences among these Alternatives are: (1) reduced overall Pedestrian Travel/Safety Impacts (see NOP Comments Part 1); (2) reduced Impacts on the amenity and usability of the Children's Garden. It is evident that the Basic Project Alternative would have the minimum such impacts, while the proposed January 2013 design would have the maximum impacts. **Shadow impacts on the Children's Garden are the most direct, determined by the height and location of vertical expansion of the South Lobby in each Alternative,** and can be readily evaluated.

Thanks to the gutting of CEQA's urban design requirements last year by legislation pushed by the real estate development industry, "urban design" Aesthetic impacts no longer are legally required to be evaluated in the MEP EIR. **But that notwithstanding**, the City Master Plan conformance approval requirements for the MEP do necessitate that these be evaluated, especially regarding impacts on Yerba Buena Gardens.

Clearly the construction of a much taller structure above the South Lobby will impact the "character" of the Children's Garden open spaces beyond direct Shadow Impacts. Its existing open skyscape/cityscape to the north will be walled off, resulting in a much more closed-in character to the space that may make it less attractive for user groups. That would be a terrible MEP outcome in real life. This is judgment that civic decision makers must make as part of the MEP approval process, and evaluation of the Basic and One Story Alternatives described above is necessary for that process to be valid.

For these several reasons, the MEP EIR must include full evaluation of the two additional Project Alternatives described above.

John Elberling President/CEO TODCO Manger, Yerba Buena Consortium LLC Children's Playground VIEW A Moscone Expansion Project EIR Alternatives

EXISTING CONDITIONS



Children's Playground VIEW A Moscone Expansion Project EIR Alternatives

ONE-LEVEL EXPANSION PROJECT

Ballroom adjacent to play area + Meeting rooms moved to corner



Children's Playground VIEW A Moscone Expansion Project EIR Alternatives

TWO-LEVEL EXPANSION PROJECT

Ballroom + Meeting rooms adjacent to play area



Children's Playground VIEW B Moscone Expansion Project EIR Alternatives

EXISTING CONDITIONS



Children's Playground VIEW B Moscone Expansion Project EIR Alternatives

ONE-LEVEL EXPANSION PROJECT

Ballroom adjacent to play area + Meeting rooms moved to corner



Children's Playground VIEW B Moscone Expansion Project EIR Alternatives

TWO-LEVEL EXPANSION PROJECT

Ballroom + Meeting rooms adjacent to play area



ONE-LEVEL EXPANSION PROJECT

Ballroom adjacent to play area + Meeting rooms moved to corner



TWO-LEVEL EXPANSION PROJECT

Ballroom + Meeting rooms adjacent to play area





Alternative Scheme – 2ND LEVEL PLAN



Alternative Scheme – 3ND LEVEL PLAN



Alternative Scheme – 4th LEVEL PLAN



The Yerba Buena Neighborhood Consortium

c/o 230 Fourth St. San Francisco, CA 94107 A Council of the Yerba Buena Neighborhood's Residents and Community Organizations

Sarah B. Jones San Francisco Planning Department 1650 Mission St. #400 San Francisco, CA 94103

February 21, 2014

RE: Moscone Center Expansion Project 2013.0154E EIR Scoping Comments – Part 4

As the City is aware, TODCO and the Yerba Buena Neighborhood Consortium take the MEP and its EIR with absolutely the greatest possible seriousness. The most critical aspect of the MEP for our Yerba Buena Neighborhood's residents – especially its 2000+ senior/mobility impaired residents – are the significant impacts of large Moscone conventions and special events on the pedestrian capacity and safety of its sidewalks.

Part 1 of our Scoping Comments transmitted on January 29 addressed the issues regarding the methodology of evaluating these impacts. This Comment describes several potential Mitigation Measures for any such impacts that – among any and all others – must be evaluated by the MEP EIR, as a matter of legal adequacy, so that the ultimate City decision makers have the ability to include them as part of the MEP to mitigate pedestrian capacity and safety impacts if they so determine in their best judgment.

We need to note, based on our extensive participation in over three decades of Yerba Buena/Moscone Center EIR proceedings, that our #1 historic problem is the willful refusal of EIR authors to include and fully and fairly evaluate potential mitigation measures proposed by community stakeholders in draft EIR's. Thus leaving their late submission as DEIR comments as the only means to introduce them into the EIR process, with an almost inevitable negative Response based on superficial or cursory evaluation by the authors. **That is not a good faith process, and this time with regard to the MEP we will not accept it as legally adequate proceedings per CEQA.** This time, after 30 years of operation, the City needs to finally resolve ALL issues of cumulative pedestrian capacity and safety in our Yerba Buena Neighborhood resulting from the Moscone Convention Center complex.

- A. <u>Generalized Mitigation Measures</u>
 - 1. An Alternative High-Capacity Pedestrian Route Between Moscone Center and Market Street. To partially redirect large numbers of Moscone

convention attendees away from Fourth Street sidewalks and thus reduce their impacts there, a second convenient and well-identified "Eastside Route" would be established between the Howard Street lobbies and Market. It would utilize the existing wide eastern walkway through the Yerba Buena Gardens Esplanade adjacent to Center for the Arts on CB2 and the existing Jessie Square/Yerba Buena Lane walkways on CB1. To make this work, what is missing today are (a) convenient Moscone lobby exits/entrances to the Gardens' eastern walkway, (b) a readily apparent signalized Mission Street pedestrian crossing between CB1 and CB2 where the eastern walkway reaches Mission Street, and (c) directional signage to guide conventioneers to this route on Market, Mission, and Howard Streets and in-between locations.

While this Alternative Route exists in theory today, it is totally unused. Just to find it requires local knowledge, as it is completely unmarked. And it requires a lateral movement between the Gardens' eastern walkway and the existing Mission Street crosswalk to Yerba Buena Lane via either a narrow path along the Esplanade or Mission Street's standard width southside sidewalk, neither of which is an intuitive route.

2. Wider Sidewalks and Mid-Block Crossings

The draft Central SOMA Plan also now in initial EIR Scoping process includes wider sidewalks, corner bulb-outs, and new mid-block pedestrian crossing conceptually throughout the Yerba Buena Neighborhood. While this is welcome, their actual construction would not be a required Mitigation Measure for the MEP. Thus the MEP EIR must specify as Mitigation Measures the specific sidewalk locations to be widened/bulb-out and the mid-block crossings to be installed as part of the MEP itself.

3. Sidewalk Management Plan

We have proposed development of a Sidewalk Management Plan for the YBN to the City as part of our potential settlement terms for our pending 706 Mission Street Project CEQA litigation. Its purpose would be to optimize sidewalk pedestrian capacity and safety while also addressing all other practical needs. This concept is now being refined by the respective City agencies involved. Because these ongoing discussions are confidential, we include the SMP in this Scoping Comment by reference only – the concept now being finalized is readily available to DCP internally.

The potential MEP Mitigation Measure would be the actual implementation of such a Sidewalk Management Plan in the YBN.

4. Traffic Lights, Signage Improvements, And Senior Zone

The existing stoplights and signage through the YBN are a confusing and incomplete mess for everyone. Despite decades of requests by TODCO and the Consortium, the City still has not installed "red arrows" on the signals where dangerous right turns on red are now prohibited. That is an absolutely

essential potential Mitigation Measure. Once-existing "Pedestrian Crossing" yellow signs were removed years ago and never replaced, they need to be installed at every crosswalk. That is an absolutely essential potential Mitigation Measure. State law now enables the City to designate the YBN as a "Senior Zone" with signed 25 mph speed limits and increased fines. That is an absolutely essential potential Mitigation Measure.

As a general concept, complete reconstruction of the traffic lights and signage at the YBN's six major streets intersections surrounding Moscone Center would be the optimum Mitigation Measure. And they are also incredibly ugly.

5. <u>Traffic Control Officers</u>

At our urging, an adopted Mitigation Measure for the Moscone West Project was utilization of Traffic Control Officers by Moscone Center during major conventions, funded by Moscone Center. But its implementation since then has been ineffective. Basically, **the TCO's fail to perform their duties effectively due to lack of proper supervision** by ... (we cannot determine "who is in charge" supposedly).

The Yerba Buena Community Benefit District now has the legal and organizational capacity to contract and properly supervise these TCO services instead, still funded by Moscone Center. That new approach needs to be evaluated as a potential Mitigation Measure.

B. Specific Location Improvements

There are three existing "bottleneck" locations on Fourth Street sidewalks that are by far and undeniably the most constricted and most dangerous situations today during large Moscone Center conventions and special events. **These "bottlenecks" MUST be fixed as part of the MEP – a mandatory Mitigation Measure – without waiting for any subsequent planning process such as the Central SOMA Plan.**

1. Fourth Street Eastside Sidewalk Between Howard and Mission Streets

This is the block adjacent to the Metreon complex. Its sidewalk capacity was sharply reduced last year by installation of restaurant seating at two locations, and is also narrowed by a large auto drop-off cut-in zone. Its capacity is generally constrained by many other fixtures at other locations as well.

This sidewalk must be widened– one current traffic lane – for its entire length to increase its pedestrian capacity and safety. Any future auto drop-off/loading cut-in should be provided only if all the other fixtures, tables, etc. are also relocated so that it does not actually cause any practical reduction in pedestrian capacity as it does now.

2. Fourth Street Eastside Sidewalk Between Mission and Market Streets

This is the block adjacent to the Marriott Hotel and Ross Store. Its sidewalk capacity is practically reduced by the pedestrian congestion at the Marriott entrance/taxi zone, and is especially narrow adjacent to the Ross Store because that sidewalk was never widened at all as part of the YBC Redevelopment Project. Its capacity is generally constrained by other fixtures at other locations as well.

This sidewalk must be widened – one current parking/drop off lane – for its entire length to increase its pedestrian capacity and safety.

3. Fourth Street Westside Sidewalk Between Mission and Market Streets

This is the block adjacent to the Downtown Community College and Fox Hardware. Its sidewalk capacity was sharply reduced several years ago by removal of a pedestrian arcade by the College to expand its lobby – the worst single bottleneck in the entire YBN today. Its capacity is generally constrained by many other fixtures at other locations as well.

This sidewalk adjacent to the Community College must be permanently widened – currently a right turn lane cut-in – to increase its pedestrian capacity and safety.

4. <u>Signalized Crosswalk at Fourth and Clementina Streets</u>

This will be the location of the new Yerba Buena MUNI Subway Station and also a new hotel, which will result in much increased cumulative pedestrian travel on the adjacent sidewalk from Howard Street, including convention attendees and workers, as well as new drop-off auto traffic for the hotel. The current crosswalk here is unmarked with only a stop sign for alleyway traffic.

A traffic light/crosswalk at this location, similar to that installed a few years ago at Minna and Fourth Streets, must be installed to eliminate conflicts with turning alleyway traffic for pedestrian safety.

Attached is a map diagram showing the locations of the Mitigation Measures described above as applicable.

John Elberling President/CEO TODCO Manger, Yerba Buena Consortium LLC

Moscone Center Project Pedestrian Mitigation Measures





The Yerba Buena Neighborhood Consortium

c/o 230 Fourth St. San Francisco, CA 94107 A Council of the Yerba Buena Neighborhood's Residents and Community Organizations

Sarah B. Jones San Francisco Planning Department 1650 Mission St. #400 San Francisco, CA 94103

February 21, 2014

RE: Moscone Center Expansion Project 2013.0154E EIR Scoping Comments – Part 2A

We are writing to update our Comment Part 2 of February 4th to clarify details of our proposed Alternatives based on the most recent design concepts provided by the MEP on February 6th.

The MEP Project is also proposing substantial renovations of the Children's Garden on CB3. The EIR must fully evaluate these proposed renovations in all regards, otherwise they could not be constructed as part of the overall MEP.

As a general comment, to date the MEP is mis-characterizing the current and proposed areas of the Children's Garden. Most of this area is either (a) "useable" open space where children, family, and others can actually engage in active / passive (sitting, reading, etc.) recreation, or (b) "circulation" space of pathways, ramps, stairs, and exit routes. There are also some separated landscaped areas.

In the February MEP design concept, some circulation areas are instead depicted as useable space, such as the "Paseo" MEP fire exit route, while some useable areas, such as the Carousel plaza area, are instead depicted as circulation space. This is game playing with words. Even more questionable is depiction of a street level South Lobby entry plaza at Howard Street as useable Gardens space. This is obviously a space that will be dominated by convention attendees – just like the sidewalk level plazas adjacent to Moscone West – and never used as part of the upper level Gardens by children/families.

EIR's dare not play games with words like that.

It is a much simpler and more accurate analysis to identify the existing Children's Garden useable areas that would be converted to other purposes by the MEP as now proposed – principally the so-called Paseo fire exit and the site of a proposed new access ramp from Howard Street – as well as the areas now proposed by the MEP to be

added to the Children's Garden in exchange – principally a portion of the existing Esplanade Ballroom fire exit, assuming it is not still required to remain clear without any obstructions to act as a fire exit too. This results in an overall reduction of useable Children's Garden open space of about 2,200 sq ft. A diagram depicting these losses/additions is attached. This should be the basis of the EIR's analysis of potential impacts on existing open space.

Alternatives for this component of the MEP must also be evaluated. Our proposed alternative would raise the Howard Street open space to the level of the Carousel plaza and thus make it a functional part of the Children's Garden. No new ramp would be required – there is an existing ramp from the Fourth/Howard Streets corner now – and the existing elevator would not be removed as now proposed by the MEP (which would itself violate the Americans With Disabilities Act), although it could be relocated. This Alternative would result in an overall net increase in useable open space for the Children's Garden. A rough diagram depicting this Alternative is attached – the MEP design team can prepare a more polished "proposed" Alternative design for the EIR.

John Elberling President/CEO TODCO Manger, Yerba Buena Consortium LLC

LOSS OF USABLE GARDENS OPEN SPACE PER MOSCONE EXPANSION PROJECT PROPOSAL

EXISTING GARDEN AREAS PROPOSED TO BE **REMOVED FOR MEP CIRCULATION**PROPOSED NEW MOSCONE USE (NOT COUNTED TOWARDS USABLE GARDENS OS)
PROPOSED NEW CIRCULATION
PROPOSED NEW GARDEN USE



-7,000 SF LOSS OF USABLE GARDENS OPEN SPACE

+3,800 SF NEW USABLE GARDENS OPEN SPACE

TODCO Group | February 2014

-3,200 SF NET LOSS USABLE GARDENS OPEN SPACE

COMMUNITY-PROPOSED GARDENS OPEN SPACE





The Yerba Buena Neighborhood Consortium

c/o 230 Fourth St. San Francisco, CA 94107 A Council of the Yerba Buena Neighborhood's Residents and Community Organizations

Sarah B. Jones San Francisco Planning Department 1650 Mission St. #400 San Francisco, CA 94103

February 21, 2014

RE: Moscone Center Expansion Project 2013.0154E EIR Scoping Comments – Part 3A

We are writing to update our Comment Part 3 of February 4th to clarify details of our proposed Alternatives based on the most recent design concepts provided by the MEP on February 6th.

In addition to the currently proposed February 2014 MEP design – a Three Story South Lobby Vertical Expansion for the portion of the building adjacent/relative to the Children's Playground (plus a street level fourth floor lobby on Howard Street) and the No Project Alternative, two other Alternatives can be readily identified for evaluation in the EIR:

- A Basic Project Alternative. The initial proposals for the MEP in October 2012 were based on the "Objectives of Project Sponsor" to create a single more efficient below grade Exhibit Hall a 60,000 sq. ft. net new "functional" space increase which necessitated relocating the below-grade meeting rooms and support facilities into a new above-ground building at the southwest corner of Third and Howard Streets -110,000 sq ft of new construction. Some additional new Meeting Rooms space were included in that new building. For this Basic Alternative, unlike the October 2012 concept, the existing North and South Lobbies would remain essentially unchanged from today except for interior adjustments. So its total new MEP space would be 170,000 sq. ft., compared to the 253,000 "functional" space increase in the February 2014 MEP proposal.
- A Two Story South Lobby Vertical Expansion Alternative for the portion of the building adjacent/relative to the Children's Playground (plus a street level third floor lobby on Howard Street) with a Three Story Meeting Room Building at the Corner of Third/Howard Streets. This would be essentially the MEP design as proposed as late as April 2013. In addition the Basic expansion described above, it includes reconstruction and expansion of the North and
South Lobbies, with also the addition of a second level Ballroom/Exhibit Space on the South Lobby and a new East Pedestrian Bridge over Howard Street. Depending on the amount of Meeting Room Space in the new Third/Howard Building, we estimate this Alternative would add about 45,000 sq. ft. of "functional" new space, for a total of 215,000 sq. ft. The MEP can provide a more definitive space total.

A Two Story South Lobby Vertical Expansion Alternative for the Ballroom
portion of the building adjacent/relative to the Children's Playground (plus a
street level third floor lobby on Howard Street) with a Four Story
Ballroom/Meeting Room Building at the Corner of Third/Howard Streets (plus
Mezzanine level if/where applicable). This would be the same as the Two/Three
Story Alternative above except for the addition of a Fourth floor of Meeting
Rooms in a taller Third/Howard Streets corner building to provide new
"functional" space equal to the total new space overall proposed in the February
2014 MEP design.

Attached are our rough visual depictions of the Two/Four Story Alternative, adapted from MEP graphics. The MEP can and must provide more polished design concept renditions for the EIR itself.

This last Alternative is our proposed "compromise design." It would include all the expansion space desired by the City, but its negative impacts on the Children's Playground would be significantly reduced compared to the City's proposal. Esthetically, its building mass on Howard Street would be broken into two visually articulated high/low elements instead of the monolithic "airport terminal" motif the City now proposes, which is far more appropriate for the the fine-grained CBD urban character of the Yerba Buena Gardens and Neighborhood.

John Elberling President/CEO TODCO Manger, Yerba Buena Consortium LLC

CHILDREN'S PLAYGROUND VIEW A

TWO/FOUR STORY ALTERNATIVE Ballroom adjacent to play area + Meeting rooms moved to corner



PROPOSED EXPANSION PROJECT Ballroom + Meeting rooms adjacent to play area



CHILDREN'S PLAYGROUND VIEW B

TWO/FOUR STORY ALTERNATIVE Ballroom adjacent to play area + Meeting rooms moved to corner



PROPOSED EXPANSION PROJECT



FACADE FROM HOWARD STREET

TWO/FOUR STORY ALTERNATIVE Ballroom adjacent to play area + Meeting rooms moved to corner



PROPOSED EXPANSION PROJECT Ballroom + Meeting rooms adjacent to play area



HOWARD AND 3RD STREET

TWO/FOUR STORY ALTERNATIVE Ballroom adjacent to play area + Meeting rooms moved to corner



PROPOSED EXPANSION PROJECT Ballroom + Meeting rooms adjacent to play area



HOWARD & 4TH STREET

TWO/FOUR STORY ALTERNATIVE Ballroom adjacent to play area + Meeting rooms moved to corner



PROPOSED EXPANSION PROJECT Ballroom + Meeting rooms adjacent to play area



4th LEVEL PLAN



HOWARD TERRACE

2nd LEVEL PLAN



TWO/FOUR STORY ALTERNATIVE FLOOR PLANS



February 4, 2014

Commission on Community Investment and Infrastructure Attn: Natasha A. Jones, Interim Commission Secretary Office of Community Investment and Infrastructure 1 South Van Ness Avenue, 5th Floor San Francisco, CA 94103

Chairperson Johnson:

The Yerba Buena Alliance has been convening with the Yerba Buena Gardens stakeholders to carefully consider and look at the implications of the Moscone expansion. The Alliance was formed 23 years ago to serve as the area's voice for neighborhood concerns and to work and engage with the community.

We have been working closely with those most affected by the Moscone expansion and today present still in draft form as it has not been approved by the Alliance board of directors, a rough draft of the community position. The Alliance feels confidently that the concerns outlined in this statement articulate the concerns of the Yerba Buena Gardens stakeholders. This position took many weeks of time and thoughtful consideration to present today and shows the amount of dedication the stakeholders have to the Yerba Buena.

As we move forward in the process, we want to stress we want to see the convention center be successful and thrive. We also want to maintain the integrity of the Yerba Buena Gardens and the many years of input and feedback given to get the Gardens to the place it is today. It's important for the City's economic engine to be strong, but also to hear the concerns of the impacts of the expansion, especially to the Children's facilities. We appreciate your thoughtful consideration of the community statement and your vision and leadership as we look at the importance of public open space and the Yerba Buena neighborhood.

Thank you,

Virginia Grandi Program Director

DRAFT POSITION PAPER: YERBA BUENA COMMUNITY STAKEHOLDERS POSITION REGARDING EXPANSION OF MOSCONE CENTER

Draft: 02/03/2014

PREAMBLE

After giving full consideration to the proposed Moscone Center's Expansion Project as presented to date, the Yerba Buena Community's primary objective is to ensure that no one use dominates Yerba Buena.

The Gardens and Cultural Facilities were built to be a permanent part of the City. Today, the gardens, cultural facilities, business enterprises, affordable housing, entertainment, childcare facilities and family amenities, and the convention center can and should coexist in a cohesive manner to continue to provide a superlative community amenity for Bay Area residents and visitors from around the world. Yerba Buena Gardens are highly acclaimed not only by a wide diversity of local residents and visitors by urban planners and cultural leaders around the world. It is successful because it was intentionally designed so that *no one use would be allowed to dominate the area.* As a result, Gardens, Cultural Facilities, Retail, Housing and the Convention Center successfully coexist, catalyze and cross-fertilize in this physically constrained urban area.

COMMUNITY POSITION

After fully considering the Moscone Center's Expansion Project proposals as presented to date, we have the following feedback.

- The primary priority is to ensure the original intention that no one use dominates Yerba Buena.
- We support the underground convention space expansion beneath Howard Street as it satisfies the original intention for a below ground convention center that does not dominate the neighborhood.
- We accept expansion of the North and South lobbies to Howard Street, so long as the access to and openness of the Gardens are not impaired.
- We do not support the addition of any new bridges or changes to the existing bridge that disrupt public access, circulation and, most importantly, the design integrity of the Gardens. The current proposal has the potential to position two new bridges as extensions of the convention center as opposed to key design elements that ease circulation and facilitate connection in the public realm.
- Visibility must be enhanced for all existing businesses and nonprofits. The current proposal has the potential to impair visibility and have negative

impact on operations.

- We believe that any above ground development of the convention center on the Garden blocks should be limited to the corner site of Third/Howard Streets and/or above the existing Esplanade Ballroom on Third Street, assuming environmental impacts from these proposals on the Gardens are minimal. Potential convention center expansion on the Third Street Moscone Garage site and the Fifth and Mission Garage site might also be considered. The proposal to build additional convention space in taller structures on top of the North and South lobbies creates significant and permanent impacts on the Gardens amenity.
- We advocate for an enhanced public realm with activation and pedestrian amenities on Howard Street.
- The Expansion Project must include desirable improvements to the Children's Garden to offset its remaining impacts there. In addition the Expansion Project must not impair the security of the garden and the children facilities. The new Children's Garden must continue to provide a safe and protected area for the children who use the facilities.
- All construction must be done in a manner that ensures seamless and uninterrupted operations for all events and performances in all existing cultural entities. Any impact, cancelation or disruptions from construction must be mitigated in a way that ensures the non profit entities do not experience loss of business or revenue.
- For the long term, the transfer of all of Yerba Buena Gardens from the Redevelopment Successor Agency (OCII) to a new entity established by the City must include the guarantee that any further expansion of Moscone Center not encroach any further into the Gardens and the cultural facilities.

BACKGROUND

Yerba Buena Gardens is the solution to a long and costly legal battle to resolve the need for a downtown public open green space and cultural venues for the use of the entire city. Yerba Buena Gardens was created as an integral part of an ongoing community process and settlement of a 10-year lawsuit that resulted in the Convention Center being put *underground,* in order for its impacts on the Gardens and Cultural Facilities to be minimized. A key agreement in the settling of the lawsuits and the master planning of Yerba Buena is that *no one use would be allowed to dominate the area.* Gardens, Cultural Facilities, Affordable Housing, Recreational Uses, Children and Family Uses, Commercial Uses and Convention Center would coexist in this physically constrained urban area.

The Gardens, were built to be a permanent part of the City. Today, they are highly acclaimed not only by a wide diversity of local residents as a superlative community amenity for the entire Bay Area but also by urban planners around the world.

CONVENTION CENTER EXPANSION

Contravening the original agreements, the Convention Center has already expanded several times, compromising the Gardens and Cultural Facilities with above-ground structures such as the Esplanade Ballroom, intrusive fire exits at sidewalk level, elimination of underground service access to the cultural buildings, and so on.

Today the Convention Center proposes to add a 150,000 square-foot aboveground expansion. Not only does the proposal violate the basic premise that the convention facilities would be constructed underground, but ongoing study has demonstrated that this will cause major damage to Yerba Buena Gardens.

The Yerba Buena community recognizes that the Convention Center generates economic and other benefits for the City and needs to be successful. The Convention Center management believes to maximize its success it periodically needs to expand. In addition to the currently proposed expansion, the documentation before us indicates that the Convention Center is looking 20 years out for further expansion.

SHARED MULTIPLE USE

We do not challenge that more convention space may be desirable or that in an ideal world, from the viewpoint of the Convention Center, it would all be contiguous. However, the Convention Center must realize it is located in a constrained urban area and must adhere to the original premise to share the space equitably with the other users so that no one use dominates.

During the years of initial planning and extended community dialogue, those who wanted dense commercial development championed an above-ground Convention Center. That concept was ultimately strongly rejected by the community and the City. The compromise agreed upon by the parties is the present Gardens plan that balances revenue-producing uses to support ongoing operations of the public Gardens and other amenities that make the neighborhood the special asset for the whole city and region that it has become.

CONCLUSION

Over the past months we have been happy to work with the Convention Center planners and appreciate their efforts to address our concerns. We continue to

have concern that the current proposed expansion of the Convention Center has the potential to dominate and have significant negative impact on the Yerba Buena Gardens site. We cannot support expansion that compromise the Gardens' openness, uses, views and community objectives. Therefore we ask the City, through the property owners of the site, the Office of Community Investment and Infrastructure, and ultimately the Planning Commission, to address the concerns we laid out above to ensure that we maintain the original intention that no one use dominate Yerba Buena Gardens.

Respectfully submitted on behalf of the following organizations pending final adoption by each organization's Board of Directors:

B Restaurant Children's Creativity Museum Millennium Partners MJM Management Group TODCO Development Group Yerba Buena Alliance Yerba Buena Center for the Arts Yerba Buena Community Benefit District Yerba Buena Gardens Child Development Center YBAE/Yerba Buena Gardens Festival Yerba Buena Skating and Bowling Center

Begin forwarded message:

From: John Alspach <<u>alspach.john@comcast.net</u>> Date: February 21, 2014 at 4:24:04 PM PST To: <<u>sarah.b.jones@sfgov.org</u>> Subject: Moscone Center Expansion

Ms. Jones,

I strongly support the proposed expansion of the Moscone Center as described in today's Chronicle.

Among its many benefits, it would substantially enhance the pedestrian experience along Third and Howard Streets, which presently is dismal.

Thank you.

John Alspach 550 Battery St. S.F. 94111

From:	Jones, Sarah
То:	Purl, Elizabeth
Subject:	FW: STOP THE CRIMINAL EXPANSION OF MOSCONE CENTER !!
Date:	Friday, February 21, 2014 8:52:47 AM

From: David Bertoldi <david@davidbertoldi.com> Sent: Friday, February 21, 2014 8:34 AM To: Jones, Sarah Subject: STOP THE CRIMINAL EXPANSION OF MOSCONE CENTER!!

Begin forwarded message:

From: Susan Colson <<u>sucolson@me.com</u>> Date: February 21, 2014 at 1:05:26 PM PST To: <<u>sarah.b.jones@sfgov.org</u>> Subject: Yerba Buena neighborhood and Moscone Expansion

Hello, Ms. Jones

I moved to San Francisco in the late 70's, when the hard-fought battle over the Yerba Buena neighborhood was being waged. I was so delighted to live in a city that would work so hard to expand and grow economically while fostering the preservation and nurturance of peoplescaled neighborhoods and culture. For many years, I have, along with so many other SF citizens and visitors, enjoyed the oasis that the Yerba Buena complex is today in downtown San Francisco. It is a gem of a spot, with natural and human-made beauty all around, incredible outdoor music as well as indoor theater and cultural performances. Just a few weeks ago, I was headed from Mission to Howard St on the elevated walkway near Samovar Tea when I came upon a group of senior citizens exercising together outdoors. That is a priceless activity, allowed by the scale and openness of the space.

Please find a way to meet the need for increased convention space without altering the footprint of the complex as it is today. A high glass box will alter the expansive and sunny Children's Center and the surrounding area, and that kind of space is all too rare in our cities.

Best, Susan

Susan Colson Organization Consultant 4018 Forest Hill Ave. Oakland CA 94602 (415)235-9215 <u>sucolson@me.com</u>

Begin forwarded message:

From: Robert Fitch <<u>rfitch@ccsf.edu</u>>
Date: February 21, 2014 at 3:35:05 PM PST
To: "sarah.b.jones@sfgov.org" <<u>sarah.b.jones@sfgov.org</u>>
Subject: Moscone Expansion

My name is Robert Fitch and I work for City College Disabled Students Programs and Services. The Yerba Buena Gardens Festival and the garden itself are extremely valuable resources for my students. To have a safe, clean, accessible space for meeting friends, sharing a picnic and enjoying music is very important for those who do not have other options. I really hope the City does not simply sell off this public asset to the highest bidder. The folks served by the Festival and the Garden are mostly San Francisco residents, tax payers, voters. Taking away this public space and the concert series would simply be one more attack on those with the fewest resources.

Robert Fitch

650 Lombard St

SF 94133

(415) 981-7249

Alisa Moore

From: Sent: To: Subject: Jones, Sarah Friday, February 21, 2014 8:02 AM Purl, Elizabeth FW: Moscone expansion

From: Ray Fontenot <<u>rfontenot@omic.com</u>> Sent: Friday, February 21, 2014 7:42 AM To: Jones, Sarah Subject: Moscone expansion

Dear Ms. Jones,

I think the expansion plan will be a benefit to San Francisco in several ways. First, the construction project itself will produce much needed jobs. Second, a larger and more contemporary convention center will increase the number of conventioneers and other tourists – which as you know San Francisco is totally dependent upon. More tourists help many of the businesses in the City as well. The new center will help San Francisco compete with more of the mid-level and larger convention centers around the nation – Chicago, Orlando, and New Orleans to name a few. I live in San Francisco and whole heartedly support this expansion.

Ray Fontenot Vice President, Underwriting Ophthalmic Mutual Insurance Company 655 Beach Street San Francisco, CA 94109 800-562-6642 ext.631 415-202-4631 415-771-7087 fax rfontenot@omic.com

OMIC is the largest insurer of ophthalmologists in America. Visit www.omic.com for more information about us.



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Begin forwarded message:

From: "J. Garland" <<u>emailmejg@aol.com</u>> Date: February 21, 2014 at 11:10:57 AM PST To: <<u>sarah.b.jones@sfgov.org</u>> Subject: Moscone Expansion

Hello,

I am writing to express my support of the Moscone expansion. I know it will add to the Convention Center's ability to draw more, as well as larger conventions. This in turn will add greatly to the local economy. My husband works at Moscone Convention Center a lot. I work at the War Memorial, which receives support from the hotel tax. I am sure that agreement can be reach and the outcome will be a source of pride. I believe that the neighborhood will change for the better. I am not saying the neighborhood groups should be ignored, I believe they should use this chance as a way to achieve larger goals for their community. Before Moscone Center was built, the area was full of rundown, cheap hotels like the Mars Hotel. Now there are places for local children to play, families to picnic & everyone to see entertainment for free. The area may physically change but something better can replace it. More can be added if people start dreaming now. Thank you.

Sincerely,

Jane Garland Building & Grounds Security S.F. War Memorial Performing Arts Center

?



From:	<u>Virginia Grandi</u>
To:	Purl, Elizabeth
Subject:	Fwd: Moscone Expansion comments
Date:	Friday, February 21, 2014 4:48:49 PM
Attachments:	OCII Moscone Workshop Cover Letter and Draft Community Position for workshop feedback 02.04.2014.pdf

Dear Ms. Purl:

The Yerba Buena Alliance is a community group for the Yerba Buena neighborhood, and the Alliance convened the stakeholders of the neighborhood and carefully crafted together this document about the concerns surrounding the Moscone expansion. I wanted to let you know that we submitted this letter to the OCII workshop on Moscone and as the Planning Department looks at the Moscone expansion, you can see the insight of this letter attached. The Alliance Board has not taken action on this letter and our board will be meeting in March. However, this letter I believe clearly articulates the concerns of the Yerba Buena Gardens Stakeholders and provides insight into the fears and concerns surrounding the Moscone expansion.

Thank you!

Virginia Grandi Yerba Buena Alliance 735 Market Street, 6th Floor San Francisco, CA 94103 415.541.0312 Alliance office phone 415.420-5323 (cell phone) No Fax, please scan and email pdf www.yerbabuena.org Facebook Twitter Pinterest Tumblr Instagram



February 4, 2014

Commission on Community Investment and Infrastructure Attn: Natasha A. Jones, Interim Commission Secretary Office of Community Investment and Infrastructure 1 South Van Ness Avenue, 5th Floor San Francisco, CA 94103

Chairperson Johnson:

The Yerba Buena Alliance has been convening with the Yerba Buena Gardens stakeholders to carefully consider and look at the implications of the Moscone expansion. The Alliance was formed 23 years ago to serve as the area's voice for neighborhood concerns and to work and engage with the community.

We have been working closely with those most affected by the Moscone expansion and today present still in draft form as it has not been approved by the Alliance board of directors, a rough draft of the community position. The Alliance feels confidently that the concerns outlined in this statement articulate the concerns of the Yerba Buena Gardens stakeholders. This position took many weeks of time and thoughtful consideration to present today and shows the amount of dedication the stakeholders have to the Yerba Buena.

As we move forward in the process, we want to stress we want to see the convention center be successful and thrive. We also want to maintain the integrity of the Yerba Buena Gardens and the many years of input and feedback given to get the Gardens to the place it is today. It's important for the City's economic engine to be strong, but also to hear the concerns of the impacts of the expansion, especially to the Children's facilities. We appreciate your thoughtful consideration of the community statement and your vision and leadership as we look at the importance of public open space and the Yerba Buena neighborhood.

Thank you,

Virginia Grandi Program Director

DRAFT POSITION PAPER: YERBA BUENA COMMUNITY STAKEHOLDERS POSITION REGARDING EXPANSION OF MOSCONE CENTER

Draft: 02/03/2014

PREAMBLE

After giving full consideration to the proposed Moscone Center's Expansion Project as presented to date, the Yerba Buena Community's primary objective is to ensure that no one use dominates Yerba Buena.

The Gardens and Cultural Facilities were built to be a permanent part of the City. Today, the gardens, cultural facilities, business enterprises, affordable housing, entertainment, childcare facilities and family amenities, and the convention center can and should coexist in a cohesive manner to continue to provide a superlative community amenity for Bay Area residents and visitors from around the world. Yerba Buena Gardens are highly acclaimed not only by a wide diversity of local residents and visitors by urban planners and cultural leaders around the world. It is successful because it was intentionally designed so that *no one use would be allowed to dominate the area.* As a result, Gardens, Cultural Facilities, Retail, Housing and the Convention Center successfully coexist, catalyze and cross-fertilize in this physically constrained urban area.

COMMUNITY POSITION

After fully considering the Moscone Center's Expansion Project proposals as presented to date, we have the following feedback.

- The primary priority is to ensure the original intention that no one use dominates Yerba Buena.
- We support the underground convention space expansion beneath Howard Street as it satisfies the original intention for a below ground convention center that does not dominate the neighborhood.
- We accept expansion of the North and South lobbies to Howard Street, so long as the access to and openness of the Gardens are not impaired.
- We do not support the addition of any new bridges or changes to the existing bridge that disrupt public access, circulation and, most importantly, the design integrity of the Gardens. The current proposal has the potential to position two new bridges as extensions of the convention center as opposed to key design elements that ease circulation and facilitate connection in the public realm.
- Visibility must be enhanced for all existing businesses and nonprofits. The current proposal has the potential to impair visibility and have negative

impact on operations.

- We believe that any above ground development of the convention center on the Garden blocks should be limited to the corner site of Third/Howard Streets and/or above the existing Esplanade Ballroom on Third Street, assuming environmental impacts from these proposals on the Gardens are minimal. Potential convention center expansion on the Third Street Moscone Garage site and the Fifth and Mission Garage site might also be considered. The proposal to build additional convention space in taller structures on top of the North and South lobbies creates significant and permanent impacts on the Gardens amenity.
- We advocate for an enhanced public realm with activation and pedestrian amenities on Howard Street.
- The Expansion Project must include desirable improvements to the Children's Garden to offset its remaining impacts there. In addition the Expansion Project must not impair the security of the garden and the children facilities. The new Children's Garden must continue to provide a safe and protected area for the children who use the facilities.
- All construction must be done in a manner that ensures seamless and uninterrupted operations for all events and performances in all existing cultural entities. Any impact, cancelation or disruptions from construction must be mitigated in a way that ensures the non profit entities do not experience loss of business or revenue.
- For the long term, the transfer of all of Yerba Buena Gardens from the Redevelopment Successor Agency (OCII) to a new entity established by the City must include the guarantee that any further expansion of Moscone Center not encroach any further into the Gardens and the cultural facilities.

BACKGROUND

Yerba Buena Gardens is the solution to a long and costly legal battle to resolve the need for a downtown public open green space and cultural venues for the use of the entire city. Yerba Buena Gardens was created as an integral part of an ongoing community process and settlement of a 10-year lawsuit that resulted in the Convention Center being put *underground,* in order for its impacts on the Gardens and Cultural Facilities to be minimized. A key agreement in the settling of the lawsuits and the master planning of Yerba Buena is that *no one use would be allowed to dominate the area.* Gardens, Cultural Facilities, Affordable Housing, Recreational Uses, Children and Family Uses, Commercial Uses and Convention Center would coexist in this physically constrained urban area.

The Gardens, were built to be a permanent part of the City. Today, they are highly acclaimed not only by a wide diversity of local residents as a superlative community amenity for the entire Bay Area but also by urban planners around the world.

CONVENTION CENTER EXPANSION

Contravening the original agreements, the Convention Center has already expanded several times, compromising the Gardens and Cultural Facilities with above-ground structures such as the Esplanade Ballroom, intrusive fire exits at sidewalk level, elimination of underground service access to the cultural buildings, and so on.

Today the Convention Center proposes to add a 150,000 square-foot aboveground expansion. Not only does the proposal violate the basic premise that the convention facilities would be constructed underground, but ongoing study has demonstrated that this will cause major damage to Yerba Buena Gardens.

The Yerba Buena community recognizes that the Convention Center generates economic and other benefits for the City and needs to be successful. The Convention Center management believes to maximize its success it periodically needs to expand. In addition to the currently proposed expansion, the documentation before us indicates that the Convention Center is looking 20 years out for further expansion.

SHARED MULTIPLE USE

We do not challenge that more convention space may be desirable or that in an ideal world, from the viewpoint of the Convention Center, it would all be contiguous. However, the Convention Center must realize it is located in a constrained urban area and must adhere to the original premise to share the space equitably with the other users so that no one use dominates.

During the years of initial planning and extended community dialogue, those who wanted dense commercial development championed an above-ground Convention Center. That concept was ultimately strongly rejected by the community and the City. The compromise agreed upon by the parties is the present Gardens plan that balances revenue-producing uses to support ongoing operations of the public Gardens and other amenities that make the neighborhood the special asset for the whole city and region that it has become.

CONCLUSION

Over the past months we have been happy to work with the Convention Center planners and appreciate their efforts to address our concerns. We continue to

have concern that the current proposed expansion of the Convention Center has the potential to dominate and have significant negative impact on the Yerba Buena Gardens site. We cannot support expansion that compromise the Gardens' openness, uses, views and community objectives. Therefore we ask the City, through the property owners of the site, the Office of Community Investment and Infrastructure, and ultimately the Planning Commission, to address the concerns we laid out above to ensure that we maintain the original intention that no one use dominate Yerba Buena Gardens.

Respectfully submitted on behalf of the following organizations pending final adoption by each organization's Board of Directors:

B Restaurant Children's Creativity Museum Millennium Partners MJM Management Group TODCO Development Group Yerba Buena Alliance Yerba Buena Center for the Arts Yerba Buena Community Benefit District Yerba Buena Gardens Child Development Center YBAE/Yerba Buena Gardens Festival Yerba Buena Skating and Bowling Center

From:	Jones, Sarah
То:	Purl, Elizabeth
Subject:	FW: Moscone Center Public comment
Date:	Saturday, February 22, 2014 3:10:53 PM

From: Alex Lazar <alexiaslazar@yahoo.com>
Sent: Friday, February 21, 2014 11:53 AM
To: Jones, Sarah
Cc: alex.lazar@mail.house.gov
Subject: Moscone Center Public comment

Ms. Jones,

My name is Alex Lazar and I am a resident of 1000 Howard Street, #315, San Francisco, CA 94103.

I am writing today to contribute my thoughts about the proposed expansion of the Moscone Center. As a resident of SOMA, and because I live a few blocks from the development, I would like to express my sincere support for the project.

I believe that the Moscone Center is the HUB of our tourism industry. In order for the convention center, and our city as a whole, to be successful and compete against world class cities for conventions, Moscone Center must be expanded. The proposed reboot of the Third & Howard intersection will add a sense of 'place' to Yerba Buena Gardens and ensure that residents of SOMA have reliable working-class jobs in the future.

Thank you for the opportunity to submit public comment.

Alex Lazar | Congressional Aide CA12 Congresswoman Nancy Pelosi, Democratic Leader 90 7th Street, Suite 2-800 San Francisco, CA 94103 | 415-556-4862 OFFICE 415-861-1670 FAX www.Pelosi.House.gov www.DemocraticLeader.gov

Begin forwarded message:

From: Diann Leo <<u>diann.michele@gmail.com</u>> Date: February 21, 2014 at 4:58:21 PM PST To: "<u>sarah.b.jones@sfgov.org</u>" <<u>sarah.b.jones@sfgov.org</u>> Subject: Opposition to Moscone Expansion

Dear Ms. Jones,

I work on the seasonal staff of the Yerba Buena Gardens Festival, which relies on the Yerba Buena Gardens as an outdoor venue for its programming and I oppose the planned Moscone Center expansion.

While the city's convention industry could lose \$2 billion if Moscone Center does not renovate, the Yerba Buena neighborhood could lose a greenway gem in an otherwise urban jungle. The expansion will not only affect the space of the Children's Garden, but the events that utilize the entire Yerba Buena Gardens property. These events include the private rentals by the same conventions the city is so afraid to lose, as well as the free community programming of the Yerba Buena Gardens Festival. Our festival not only represents the diversity of a dynamic neighborhood in our programming but also employs a number of artists. I have never been more proud to work for any organization than this one.

Please consider the plan's impact beyond the convention industry benefits and draft a plan that is inclusive of the entire community.

Sincerely,

Diann Leo Yerba Buena Gardens Festival Staff

From:	Jones, Sarah
To:	ray moisa
Cc:	Purl, Elizabeth
Subject:	RE: What? Moscone is Expanding Again?
Date:	Friday, February 21, 2014 8:52:30 AM

5 pm Friday is the deadline to submit comments on the scope of the Environmental Impact Report. Once the Draft EIR is published there will be a 45-day circulation period when you can submit comments on the EIR, and during that time there will be a public hearing at the Planning Commission on the EIR. We'll respond in writing to all of the comments submitted during that 45-day circulation period, and when that's complete the Planning Commission will decide whether to certify the EIR (that is, consider whether the EIR was done correctly), and separately decide whether to approve the project.

I suggest that you get in touch with Ms. Purl (cc:ed here) so that she can add you to the mailing list for the EIR. That way you will get notice when the Draft EIR is published and the 45-day comment period begins.

From: ray moisa <raymoisa@sbcglobal.net>
Sent: Friday, February 21, 2014 8:42 AM
To: Jones, Sarah
Subject: Re: What? Moscone is Expanding Again?

Dear Ms. Jones

The article in the Chronicle this morning says we have until 5pm Friday to submit comments. Is this true? When is the deadline to submit comments.

Ray Moisa

From: "Jones, Sarah" <sarah.b.jones@sfgov.org> To: ray moisa <raymoisa@sbcglobal.net> Sent: Friday, February 21, 2014 8:07 AM Subject: RE: What? Moscone is Expanding Again?

Dear Mr. Moisa,

The Moscone expansion project is undergoing environmental review, and we are currently in what's known as the "scoping" period. This is a 30-day period in which the public and other agencies can identify issues that should be raised in the environmental review process. You can find the Initial Study here: http://sfmea.sfplanning.org/2013.0154E_NOP.pdf I have forwarded your comment to the project planner, Elizabeth Purl .

-Sarah Jones Environmental Review Officer

From: ray moisa <raymoisa@sbcglobal.net>
Sent: Friday, February 21, 2014 7:56 AM
To: Jones, Sarah
Subject: What? Moscone is Expanding Again?

I just read about this proposed expansion of the Moscone Center again. I am outraged, first, that this is happening at all and that they are planning to take away public space, but I am also upset about this late notice.

Why do we have only a few hours to make public comment? Doesn't this violate State Sunshine Laws? This is very sneaky of you, to give the public such short notice. I think this is illegal. You should be ashamed.

I oppose this expansion, and I'm going to find out if this short notice violates public transparency laws.

Ray Moisa Concerned Taxpayer & Voter in San Francisco

Begin forwarded message:

From: Frank Noto <<u>Frank@fnstrategy.com</u>> Date: February 21, 2014 at 4:07:12 PM PST To: "<u>sarah.b.jones@sfgov.org</u>" <<u>sarah.b.jones@sfgov.org</u>> Subject: Support for Moscone expansion

Dear Sarah,

I am writing in support of the proposed Moscone Center expansion. The convention center is a major contributor to San Francisco's economy.

While the benefits to the immediate neighborhood certainly are a legitimate part of the conversation, the Moscone Center impacts each and every San Franciscan through its benefits to our tourist industry and positive cultural impacts. The Center desperately needs to be modernized, to sustain and create jobs in San Francisco.

The positive environmental impacts of Moscone Center should also be considered. We are one of the most environmentally-friendly cities in the US, and perhaps the world. If by failing to upgrade Moscone we push large national conventions to LA or Houston, to cite just a few examples, those conventions will necessarily have a much larger environmental and carbon footprint in terms of energy use, trash and water, because they do not have SF's transit, recycling or other advantages.

Frank Noto President, Sunset Community Democratic Club

Cell: 415-830-1502

Begin forwarded message:

From: Matthew Priest <<u>matthewpriest@earthlink.net</u>> Date: February 21, 2014 at 11:27:35 AM PST To: <<u>sarah.b.jones@sfgov.org</u>> Subject: Proposed Moscone Expansion Reply-To: Matthew Priest <<u>matthewpriest@earthlink.net</u>>

Dear Ms Jones,

The following comments are based on the Strategic Advisory Group Workshop PDF dated January 28, 2014 downloaded from <u>mosconeexpansion.com</u>. That website is not at all clear what the public process/schedule is (the project website should be explicit), but an article on <u>SFGate.com</u> written by John Wildermuth indicates that today is a deadline for public comments.

At the broadest scale, the proposal is struggling with reconciling the interests of one industry (large convention-based tourism) with the continued improvement of the South of Market/Yerba Buena neighborhoods. I applaud the effort to suppress the impact of the Third Street loading ramps and to bring active faces of the building closer to a properly-scaled sidewalk. I applaud removing the vast (and rarely-used) vehicular drop-offs on both sides of Howard Street (more later on this). I applaud increasing the porosity of the south block and creating a paseo from Third Street to the Children's Garden.

However, there are significant areas of concern. As this is (presumably) the design that will be analyzed for CEQA purposes, I point to the following issues.

1. Proposed Program and Bulk. Probably the most difficult aspect of this proposal is locating so much building volume above street level. The contentious history of Yerba Buena Center included an agreement with the residents of the neighborhood and with all of San Francisco that this would not be a single-use-dominated precinct (like most convention centers), but rather a medium-grained mixed-use urban neighborhood. Later, the City shoehorned in the massive Moscone West building that kills street life on both Fourth and Howard. A giant "transparent" glass box, it is apparently empty even on the few days a year when it is rented, since conventioneers are in meeting rooms most of the time. The current proposal is to add another building of the same bulk and greater height essentially at the same corner, thus reneging on the promise to citizens not to have a single-use precinct. But something will be built, so how can it be the best it can be? The further comments attempt to identify some opportunities.

2. Bridges. It is contrary to the Urban Design element of the General Plan to have pedestrian bridges over public rights-of-way. The rebuilt current bridge makes sense, as it

allows greater visibility/permeability from Howard to the Children's Center while allowing that bridge also to connect to the proposed second level of Moscone South. The new bridge (shown in blue on p. 32 of the document) is unnecessary and inappropriate. The reconfigured existing bridge can be designed to provide a north-south link for Moscone without creating a new, generally-impermissible bridge. It is telling that the presentation materials minimize this inappropriate bridge: the section break on the p. 34 view (in white, not black as below grade) aligns curiously well with the building behind it, and this bridge is all-but invisible on p. 35. It seems the designers are trying to hide it.

3. Vehicle Pull-outs. It is unclear from the presentation whether the vehicular pull-outs are deleted entirely or remain in reduced form because the drawings are inconsistent. If they are to remain in any form, the sidewalk widths and actual path of travel for pedestrians must be studied. On p. 30, for example, a choke point is created on the north side of Howard between the lobby and the Metreon delivery ramp. P. 31 indicates a large vehicular lay-by on the south side with ungenerous accommodation of pedestrians (especially those in transit through from Third to Fourth).

4. Third Street Sidewalk. At Moscone's current size and convention-day population, the sidewalks along Third and Fourth frequently feel insufficiently wide. With that in mind, the typical (minimum) sidewalk width shown on Third south of Howard (e.g., p. 30) may be too narrow.

5. Proposed Massing/Building Volume/Shadows. The proposed floor-to-floor heights are enormous: this is not an ordinary 3-story office building, but possibly the equivalent of 6 or 7 stories (as the view on p. 36 aptly shows). In a fine-grained city and a medium-grained neighborhood, this would be a very bulky building, as well-demonstrated on page 45: it seems to be as large as the Metreon. The existing Moscone South canopy is truly massive, and this proposed building is 60-70% longer. Further, the large terraces, balconies, and canopies exacerbate the apparent bulk of the building. Some kind of significant breaks need to be built into the project now and analyzed as part of the CEQA evaluation. The Central Corridor/Central SOMA plan made good headway into mitigating the apparent bulk of large-floorplate buildings.

The view from Moscone West (p. 51) shows how massive the proposal is compared with the Children's Center complex, even on the shorter side of the proposed building. The shadow studies show the excessive mass towards the Children's Garden: summer evenings, when the sun is up and parents are out of work, are ideal times for families to use these facilities. The images on pp. 55-56 show this building (the size of Moscone West) sidling up to the Children's Garden with all the charm of Moscone West's Howard Street side: massive emergency exit stairs and other back-of-house spaces (see plans at pp. 32-33) in a six-story-equivalent cliff. The top story of the proposal does not provide much usable (rentable) space: according to http://mosconeexpansion.com/benefits, there are no more than 28,000 square feet of meeting rooms amid a vast parterre of circulation and terraces.

The top story should be removed and the bulk of the remaining building should be mitigated in meaningful ways.

Please add me to the public noticing list for this project. Thank you.

Matthew Priest Mission District resident homeowner

Begin forwarded message:

From: Arturo Riera <<u>arturo@arturoriera.com</u>> Date: February 22, 2014 at 7:30:28 AM PST To: "<u>sarah.b.jones@sfgov.org</u>" <<u>sarah.b.jones@sfgov.org</u>> Cc: Linda Lucero <<u>llucero@ybae.org</u>>, Raul Panzar <<u>raul@ybgfestival.org</u>> Subject: Moscone Expansion Concerns Reply-To: Arturo Riera <<u>arturo@arturoriera.com</u>>

Dear Ms. Jones,

I am writing to express my dismay at the accelerated pace and lack of the public's ability to comment before any significant plans are made about this expansion. As Board Chair of Yerba Buena Gardens Arts and Events, I have worked diligently with our staff to attend all meetings regarding Moscone's Expansion. Our 100+ event, FREE to the public cultural programming, serves exactly those business travelers and local business owners that benefit from Moscone facilities and amenities so we understand our community and frankly, have skin in the game. The architects and plans are moving at a pace that feels like a runaway train and changes the original intent of the public space we call Yerba Buena Gardens.

So far I have seen plans that will eliminate our offices or potentially not. We have also seen drafts that will eliminate certain aspects of the Garden we currently program with events or potentially not. We have also heard groundbreaking dates and construction plans that make no sense unless true community involvement is really just an afterthought or political theatre. We cannot dramatically change the Yerba Buena Gardens with elements expedient to Moscone expansion that at the same time dramatically change the unencumbered access to the park and knock anything that stands in the way of expansion including offices, rehearsal space, storage and green room spaces of organizations contracted to the gardens. Most of the plans being prepared behind closed doors reflect a basic ignorance of what we do at Yerba Buena Gardens and the impact it has on our economy and quality of life.

I urge the city to make sure all stakeholders are sitting at the table during

this process with true collaboration and input and not just informed after the fact by Moscone architects or staff. I for one will be strongly opposed to plans that encroach upon or dramatically change the quality of the Gardens experience or that hampers our ability to execute our contracted activities within the gardens due to lack of community participation in the planning of the space.

Thank You for Your Consideration!

Arturo Riera 415-515-0742 arturo@arturoriera.com www.linkedin.com/in/arturoriera

Begin forwarded message:

From: Alice Rogers <<u>arcomnsf@pacbell.net</u>> Date: February 21, 2014 at 2:12:40 PM PST To: <<u>sarah.b.jones@sfgov.org</u>> Cc: Sunny Angulo <<u>Sunny.Angulo@sfgov.org</u>> Subject: Moscone Center Expansion Project 2013.0154E EIR Scoping Comments

21 February 2014

Sarah B. Jones San Francisco Planning Department 1650 Mission St. #400 San Francisco, CA 94103

RE: Moscone Center Expansion Project 2013.0154E EIR Scoping Comments

Dear Ms Jones,

Despite being registered with the Planning Department for notifications on projects/issues related to my SOMA/South Park/South Beach neighborhood, I have missed the conversation on the Moscone Center Expansion Project thus far, and only learned today of the scoping comment deadline of this afternoon. My apologies for this just-under-the-wire, and woefully incomplete, letter.

Sun/Shadow: Sun is the most fundamental element of any successful common area, especially in San Francisco, with wind shelter following closely. The EIR for this project should include extensive and detailed findings for all sun/shadow/wind changes made by this proposed project, in all of it's proposed iterations (one-story rise; two-story rise). Special focus should be given to the existing children's elevated play area, as well as any other designated public open space. No sheltered sun = no public benefit from a designated open space.

Ground Floor Public Activation and Retail: I understand that an EIR does not include economic analysis, but the project designers' assertion that glass and designated retail use at street level will--de facto--successfully activate the public realm and incorporate the project into the neighborhood fabric has been proven wrong along King Street and the throughout the Mission Bay development, thus far. The mechanics of providing neighborhood-enriching ground floor activation need to be examined and a new paradigm developed. If not in this EIR, then through some other review filter during the course of the project evaluation.

Thank you for your consideration of my comments. I look forward to your draft, and to becoming more involved in the public review process.

Sincerely, Alice Rogers

Alice Rogers 10 South Park St Studio 2 San Francisco, CA 94107
Begin forwarded message:

From: Michael Seaman <<u>mdsea923@gmail.com</u>> Date: February 22, 2014 at 12:16:00 PM PST To: <<u>sarah.b.jones@sfgov.org</u>> Subject: Opposed to Moscone Expansion - New Lobby Height

Hi, Sarah - as a long time resident of the YB area, I would like to write to you to let you know I am opposed to the plans to construct a 94 foot lobby at Moscone. I believe it is too high for the surrounding area and I implore the planners to retain the current height.

Sincerely,

Michael Seaman

Begin forwarded message:

From: Regina Sneed <<u>reginasneed@yahoo.com</u>> Date: February 21, 2014 at 1:46:12 PM PST To: "<u>sarah.b.jones@sfgov.org</u>" <<u>sarah.b.jones@sfgov.org</u>> Subject: Moscone expansion comments

Today's Chronicle article indicated this was. Last day for comments.

Here are brief comments. I hope there will be other opportunities. I now know about the March 5 community meeting sponsored by the developer.

1. I read the February 14, 2014 letter addressed to the City Administrator's Office from the Yerba Buena Alliance and support their requests.

2. As a veteran of the struggle 30 plus years ago to garner community benefits in payment for the dislocation of an entire neighborhood, I feel very strongly about the obligation of the City to ensure that these community benefits and the wonderful vibrant neighborhood and central city gathering place (the gardens and the children's area) be protected to keep the commitments made to the people.

3. I would like the city to provide a site where the public can review the original agreement and commitments. I made some attempts to locate where the redevelopment agency archives are stored with no luck. I would like Planning to put together the historic documents which show the prior agreements and make them available on the web.

4. I would be interested in serving on an citizens advisory group.

5. Since the Board of Supervisors plays the role of a redevelopment agency, it's important for the city to make it clear what the timeline and process is. It's not clear to me where citizens can have input and at which points decisions affecting the public can be redressed or appealed.

6. The developer's website frequently asked questions answer no to a question of whether the expansion plans will be significantly impact the community arts and public amenities. I object to the answer because it makes a conclusion which I don't think has yet been determined.

Please add me to any email list maintained for communications from your department about this project.

Thank you.

Regina Sneed Sf resident

Sent from my iPhone



Begin forwarded message:

From: Lawrence Stokus <<u>lvstokus@att.net</u>> Date: February 21, 2014 at 12:17:39 AM PST To: <<u>sarah.b.jones@sfgov.org</u>> Subject: Fwd: Neighbors Are Prepared to Fight Moscone Expansion, But What Alternatives?

SECOND COPY (computer blinked)

Begin forwarded message:

From: Lawrence Stokus <<u>lvstokus@att.net</u>> Subject: Neighbors Are Prepared to Fight Moscone Expansion, But What Alternatives? Date: February 20, 2014 at 11:21:31 PM PST To: <u>SaveTheSanFranciscoWaterfront@yahoogroups.com</u>

Neighbors Are Prepared to Fight Moscone Expansion, But What Alternatives?

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Links to Moscone Expansion Debate:

http://www.sfgate.com/bayarea/article/Moscone-Center-expansion-embitters-SoMa-groups-5253720.php http://sf.curbed.com/archives/2014/02/04/moscone_centers_howard_street_expansion_revealed.php

Alternative One:

Build a "green roof" on the new structure like at the Juilliard School in New York to expand the playground area. Or

perhaps, elevate the entire site only one half of the proposed new building height and put a new and expanded playground on the roof.

http://www.livefromtheroof.com/the-green-roof-at-the-juilliard-school/

?

Alternative Two:

Do not build anything new at Moscone. Build the expansion of the Convention Center at the Civic Center/ Brooks Hall or at Caltrain (along with the Warriors arena). Utilize the existing public transit system and the now being built Central Subway (we are spending \$1.6 billion to build it).

Alternative Three:

1. Expand the Convention Center at the Civic Center/ Brooks Hall or at Caltrain

2. Build the Warriors arena at Moscone.

Moscone is a transit rich location. People can take public transit to the arena events. Conventioneers take cabs (they are on an expense account).

The entire children's play complex can be raised from the current third story to the top of the arena at about twelve stories.

At night, the arena rooftop would be wonderful rooftop terrace for conventioneers, corporate parties, wedding receptions, etc.

Note in the picture below that the Warriors arena rooftop (yellow circle) is about 133% the size of Union Square (red rectangle).

Click picture to enlarge it - -

In All Cases:

Channel the massive high rise development south along the new Central Subway corridor toward Caltrain as opposed to along the waterfront. Leave the waterfront for open space and recreation along with some low rise development (allowed by the public trust) to support it all.







 From:
 Jones. Sarah

 To:
 Purt, Elizabeth

 Subject:
 FW: Variro's Arena Alternative Location: Bill Graham Auditorium/ Brooks Hall at the Civic Center

 Date:
 Friday, February 21, 2014 8:53:18 AM

 Attachments:
 Ietter to editor.jog Ietara 11/jeaq Brooks hall 7.jpeq Brooks hall 7.jpeq Civic center copy 7.jpeq civic center copy 7.jpeq babox new year 7.copy.jpeq

From: Lawrence Stokus <lvstokus@att.net> Sent: Friday, February 21, 2014 8:25 AM To: Jones, Sarah Subject: Warriors Arena Alternative Location: Bill Graham Auditorium/ Brooks Hall at the Civic Center

Ms. Jones:

I am sending you this email in addition to the email I sent to you yesterday as comments on the Moscone Expansion. This email was distributed previously in regards to the proposed Warriors arena project.

Begin forwarded message:

From: Lawrence Stokus <<u>lvstokus@att.net</u>> Subject: Warriors Arena Alternative Location: Bill Graham Auditorium/ Brooks Hall at the Civic Center Date: January 1, 2014 at 8:27:01 PM PST To: SaveTheSanFranciscoWaterfront@yahoogroups.com

Warriors Arena Alternative Location:

Bill Graham Auditorium/ Brooks Hall at the Civic Center

Recycling Existing Public Land:

A Joint Project:

Expanding the Moscone Convention Center and

Building a Warriors Arena Together at the Civic Center

?

Letter to the Editor December 31, 2013

Letter on SFGate:

Study alternatives for Warriors arena

Re: "Seeking a place to play" by John Cote (Dec. 29).

Too quick to dismiss the Bill Graham Civic Auditorium.

Without demolishing the historic Civic Auditorium, one should consider the feasibility of excavation down at least to the level of the BART Civic Center Station, retaining the facade of the auditorium and connecting underground to the Civic Center Garage.

This would be the best location from a transportation and accessibility perspective. It would not destroy a spectacular waterfront vista, nor do damage to an

environmentally sensitive bay by filling it with tons of concrete to support a 12-story indoor arena. The cost of excavating needs to be considered in comparison to the \$120 million of public money required to prepare the foundation for the Warriors to build on Piers 30-32.

Those polled in the KPIX survey who don't think transportation is an issue on the Embarcadero haven't driven or walked there lately. Adding 2 million patrons will overwhelm an already stressed T (and N, until moved to central tunnel) line, not to mention street traffic.

Margo Eachus, San Francisco

Layout:

Below the Civic Center Plaza is the Civic Center Plaza Garage (active parking) and Brooks Hall (currently used for storage). Bill Graham Auditorium is just across the street to the south.

?

Brooks Hall is currently being used to store the "Exposition Organ".

Link:

http://expositionorgan.org/where-is-the-san-francisco-exposition-organ

?

Brooks Hall is where the first MacWorld was held in 1985.

Note: Two locations are shown for the underground Warriors Arena. "Most southerly location" is shown in **dark blue**. "Most northerly location" is shown in **light blue**.

?

Advantages of Bill Graham Auditorium/ Brooks Hall Location

1. **Recycles existing public land** rather than filling the Bay to create "artificial land" 1/4 mile out into the Bay. There is no need to pour tons of concrete into the Bay to create a \$120 to \$170 million (plus 13% interest) "super heavy weight pier" that we do not need. Only the Warriors need such a super heavy weight pier to support the massive weight of their arena. The Warrior's specialized pier would be built to a strength many times what is needed for maritime purposes and is a waste of the taxpayer's

?

money. Recycling existing public land is a better use of our resources than filling the Bay and building a single purpose gold plated pier for a private investor group.

2. Does not destroy the Bay, the waterfront, the grand public vistas of the Bay, open space or future Bay marine access and recreation potential.

3. <u>Reinvigorates the Civic Center</u>. 18,000 visitors per event night. Lots of light. Will bring life, light and activity to a neighborhood which is scary (at best) at night. Perfect tie-in to the Mid-Market revival that is occurring.

4. Transit rich site. Adjacent to Bart, Muni, parking. Caltrain and Ferry stations are a short Muni ride away.

5. Good economics.

Why pay twice? Why spend both \$500 million to expand the Moscone Convention Center and \$1+ billion at Pier 30-32 to build an arena? Build **one true multipurpose facility/ arena** at the Civic Center site. Perhaps some (or all?) of the planned expansion space at Moscone could be built at the Civic Center in conjunction with the Warriors arena. Then, Moscone, in combination with the Civic Center site, would become the new San Francisco Convention Center at **a lower overall cost**.

The underground portion at the Civic Center would function as arena/ convention/ exhibition space. The above ground portion of the new Bill Graham space could be utilized for various functions: a new smaller theater/ concert hall, additional convention/ exhibition space, etc.

Moscone and the Civic Center would then become highly utilized "anchors" for the Mid Market revival area and attract even more investment to the general neighborhood.

Good economics: Take underutilized and marginally productive existing public land and reconfigure it into highly utilized and productive space as opposed to spending taxpayer money needlessly on filling the Bay.

HAPPY NEW YEAR - - -

From:Jones, SarahTo:Purl, ElizabethSubject:FW: Nay nay nay!Date:Friday, February 21, 2014 9:11:25 AM

From: Jtomkins <jtomkins@gmail.com> Sent: Friday, February 21, 2014 9:08 AM To: Jones, Sarah Subject: Nay nay nay!

Keep to the original deal. No blockbusters! Thanks James..

Sent from my Phone

Begin forwarded message:

From: JJWarner <jjwarner@sbcglobal.net> Date: February 21, 2014 at 11:26:20 AM PST To: "sarah.b.jones@sfgov.org" <sarah.b.jones@sfgov.org> Subject: New center

I am in support of the new center. It will be great for the city. Jack Warner

Begin forwarded message:

From: Jamie Whitaker <jamiewhitaker@gmail.com> Date: February 21, 2014 at 1:08:34 PM PST To: "sarah.b.jones@sfgov.org" <sarah.b.jones@sfgov.org> Cc: "rinconhill@gmail.com" <rinconhill@gmail.com>, Sbrmbna <sbrmbna@gmail.com>, April Veneracion <april.veneracion@sfgov.org>, <jane.kim@sfgov.org>, Sunny Angulo <Sunny.Angulo@sfgov.org> Subject: Public comments re: Case No. 2013.0154E Moscone Center Expansion Project

Jamie Whitaker

201 Harrison St. Apt. 229

San Francisco, CA 94105

February 21, 2014

Dear Ms. Jones,

The open space provided by Yerba Buena Gardens and the circulation of all modes of transportation (walking, biking, bus, vehicles) are very important to me as a resident of the Rincon Hill neighborhood adjacent to the Yerba Buena neighborhood.

I would like to echo my friend John Elberling of TODCO's concerns about the requirement to evaluate alternatives besides "no project" for the Moscone Center Expansion Project.

The South of Market neighborhood residents have been exploited for tax dollars and extorted to create Community Benefit Districts by the City and County of San Francisco while the City acts in a manner that harms the health, safety, and wellbeing of residents. I hope this project can start a change in the City's behaviors towards SoMa residents - taking into account what is best for community health in addition to the City's coffers.

Borrowing from Mr. Elberling:

Yerba Buena Gardens is a civic treasure and by any standard of co-equal civic

importance with Moscone Center. Any diminution of its quality, amenity, and usability as a result of the MEP would be absolutely unacceptable. The Children's Garden on CB-3 is adjacent to the main part of the above-grade MEP project, and is thus most at issue.

In view of this, it is stunning that NO proposed evaluation of Project Alternatives is included the MEP NOP whatsoever. Since CEQA requires evaluation of Project Alternatives – and not just the "No Project" Alternative – this omission is incomprehensible.

In addition to the currently proposed January 2014 MEP design and the No Project Alternative, two other Alternatives can be readily identified for evaluation in the EIR:

• A Basic Project Alternative. The initial proposals for the MEP in October 2012 were based on the "Objectives of Project Sponsor" to create a single more efficient below grade Exhibit Hall - a 60,000 sq. ft. net new "functional" space increase - which necessitated relocating the below-grade meeting rooms and support facilities into a new above-ground building at the southwest corner of Third and Howard Streets -110,000 sq ft of new construction. Some additional new Meeting Rooms space were included in that new building. For this Basic Alternative, unlike the October 2012 concept, the existing North and South Lobbies would remain essentially unchanged from today except for interior adjustments. So its total new MEP space would be 170,000 sq. ft., compared to the 253,000 "functional" space increase in the January 2014 MEP proposal.

A One Story South Lobby Expansion Alternative. This would be essentially the MEP design as proposed as late as April 2013. In addition the Basic expansion described above, it includes reconstruction and expansion of the North and South Lobbies, with also the addition of a second floor Ballroom/Exhibit Space on the South Lobby and a new East Pedestrian Bridge over Howard Street. Depending on the amount of Meeting Room Space in the new Third/Howard Building, this Alternative would add about 45,000 sq. ft. of "functional" new space, for a total of 215,000 sq. ft. A variant with an even taller corner building could provide more new "functional" space, potentially matching the total new space overall as the proposed January 2014 MEP design. However such a taller building variant would need additional Shadow/Climate impact analysis. (A rough depiction of this possible Alternative is attached, also noting the potential for the roof of the new Ballroom to be an open Terrace to be utilized on occasions as tented outdoor special event space.)

From the community perspective, the key differences among these Alternatives are: (1) reduced overall Pedestrian Travel/Safety Impacts (see NOP Comments Part 1); (2) reduced Impacts on the amenity and usability of the Children's Garden. It is evident that the Basic Project Alternative would have the minimum such impacts, while the proposed January 2013 design would have the maximum impacts. Shadow impacts on the Children's Garden are the most direct, determined by the height and location of vertical expansion of the South Lobby in each Alternative, and can be readily evaluated.

Thanks to the gutting of CEQA's urban design requirements last year by legislation pushed by the real estate development industry, "urban design" Aesthetic impacts no longer are legally required to be evaluated in the MEP EIR. **But that notwithstanding, the City Master Plan conformance approval requirements for the MEP do necessitate that these be evaluated, especially regarding impacts on**

Yerba Buena Gardens.

Clearly the construction of a much taller structure above the South Lobby will impact the "character" of the Children's Garden open spaces beyond direct Shadow Impacts. Its existing open skyscape/cityscape to the north will be walled off, resulting in a much more closed-in character to the space that may make it less attractive for user groups. That would be a terrible MEP outcome in real life. **This is judgment that civic decision makers must make as part of the MEP approval process, and evaluation of the Basic and One Story Alternatives described above is necessary for that process to be valid.**

For these several reasons, the MEP EIR must include full evaluation of the two additional Project Alternatives described above.

Thank you,

Jamie Whitaker

Sent from my iPhone

Begin forwarded message:

From: brian <<u>brianamadom@hotmail.com</u>> Date: February 21, 2014 at 1:02:38 PM PST To: "<u>sarah.b.jones@sfgov.org</u>" <<u>sarah.b.jones@sfgov.org</u>> Subject: feedback on Moscone

To Whom It May Concern:

I work at a non-profit on Market Street by Yerba Buena Lane and lunch almost daily in the area affected by Moscone's proposed expansion.

Please count me as a supporter.

Brian Whitford San Francisco resident and worker

Begin forwarded message:

From: Greg Wong <gregboy52@gmail.com>
Date: February 21, 2014 at 12:05:37 AM PST
To: <sarah.b.jones@sfgov.org>, <contact@mosconeexpansion.com>
Subject: Public Comment: The Future of Moscone

Hello,

I just wanted to say that I've previously heard about and supported plans for the renovation and expansion of Moscone, but am a bit reserved regarding these latest plans. The mass and architecture of the plans are too generic and too big as it is currently presented.

It just looks a box was plopped down on the corner rather than fully integrated into the surroundings. I applaud the reuse of the existing loading areas on Howard and would prefer a reduction in the roadway to facilitate increased landscaping and pedestrian improvements. But for the building itself, a slight taper, a public plaza and a reduction in mass on the western end would benefit this structure.

I continue to support the desired improvements of this facility but the community and the citizens of the City of San Francisco MUST benefit equally. While understanding that a third floor of meeting space is highly desirable, it would be equally amazing to create a rooftop public space or reduce the third floor toward the corner of Third to allow for public access.

The greatest impact may not be so much the sight of the building, but the reduced open space that currently exists. Most noticeably, comparing the renderings on Third Street, a significant reduction in blue sky and again a modern but too generic glass facade.

But while the building itself will likely be the most debated, I want to encourage you to explore ways to remove a lane of traffic on Howard and improve the conditions for walking and transit especially since most users will not be driving. This will significantly enhance safety for all users, and will dramatically enhance the pedestrian environment.

Finally, I strongly recommend improving conditions on the corner of 4th and Folsom to prepare for Central Subway and other developments in SOMA. While I do not believe it will become the main entrance, it needs to become more inviting. It's current design with long staircases,

emergency exits and poor signage creates a wall for potential users and ignores convention-goers and users coming from any direction other than Market St. (And realistically, the area could be significantly improved with a reduction in vehicle lanes, addition of bicycle facilities, and improvements for pedestrians.)

This is an important facility and we need to do this right. We have tremendous opportunities for not only an expansion but a redesign of the surrounding streets to better integrate it with the community. With Central Subway construction, we can see that the reallocation of street space will not cause unbearable gridlock, and the fact of the matter is that this is a transit rich location at the heart of the city and should be designed that way.

Greg W.

San Francisco, CA

APPENDIX B

Shadow Projection Images

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Moscone Expansion Project December 20 Sunrise +1hr.



Moscone Expansion Project December 20 9:00am



Moscone Expansion Project December 20 10:00am



Moscone Expansion Project December 20 11:00am



Moscone Expansion Project December 20 12:00 noon



Moscone Expansion Project December 20 1:00pm



Moscone Expansion Project December 20 2:00pm



Moscone Expansion Project December 20 3:00pm



Moscone Expansion Project December 20 3:00pm



Moscone Expansion Project December 20 Sunset -1hr.



Moscone Expansion Project June 21 Sunrise +1hr.



Moscone Expansion Project June 21 7:00am


Moscone Expansion Project June 21 8:00am



Moscone Expansion Project June 21 9:00am



Moscone Expansion Project June 21 10:00am



Moscone Expansion Project June 21 11:00am



Moscone Expansion Project June 21 12:00 noon



Moscone Expansion Project June 21 1:00pm



Moscone Expansion Project June 21 2:00pm



Moscone Expansion Project June 21 3:00pm



Moscone Expansion Project June 21 4:00pm



Moscone Expansion Project June 21 4:00pm



Moscone Expansion Project June 21 5:00pm



Moscone Expansion Project June 21 5:00pm



Moscone Expansion Project June 21 6:00pm



Moscone Expansion Project June 21 Sunset -1hr.



Moscone Expansion Project September 20 Sunrise+1hr.



Moscone Expansion Project September 20 9:00am



Moscone Expansion Project September 20 10:00am



Moscone Expansion Project September 20 11:00am



Moscone Expansion Project September 20 12:00 noon



Moscone Expansion Project September 20 1:00pm



Moscone Expansion Project September 20 2:00pm



Moscone Expansion Project September 20 3:00pm



Moscone Expansion Project September 20 4:00pm



Moscone Expansion Project September 20 5:00pm



Moscone Expansion Project September 20 6:00pm



Moscone Expansion Project September 20 Sunset -1hr.

APPENDIX C

Transportation

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Memorandum

To:	Jessica Range / Elizabeth Purl / Viktoriya Wise / Greg Riessen – SF Planning Department
	Alisa Moore / Karl Heisler – Environmental Science Associates
	Eric Womeldorff – Fehr & Peers; Luba Wyznyckyj – LCW Consulting
From:	José I. Farrán, P.E.
Date:	January 9, 2014 – Final Document v2
Re:	Moscone Center Expansion Project – Estimation of Travel Demand

This technical memorandum describes the current conditions, assumptions and methodology used to determine the travel demand for the Moscone Center Expansion Project. This document is being submitted by Adavant Consulting to the SF Planning Department for their review and approval as part of the transportation study being performed for the Project.

1. INTRODUCTION

The George S. Moscone Convention Center (Moscone Center) is located on over 20 acres in San Francisco's South of Market Area (SOMA)/Yerba Buena district. The convention center, see Figure 1, includes three main buildings, consisting of more than two million square feet of building area. Moscone North and South are bounded by Folsom Street to the South, Mission Street to the North, and Third and Fourth Streets to the East and West, respectively, and are connected by a concourse below Howard Street. Moscone West is a free-standing building located at the northwestern corner of Howard and Fourth Streets. Market Street, a major eastwest roadway, is located two blocks north of the Moscone Center. Union Square is located approximately three-quarters of a mile to the north, while Civic Center is located about one mile to the west, north of Market Street.

Moscone South opened in 1981, and consists of 260,600 square feet of exhibition space (Halls A, B and C) with associated support functions such as loading, meeting rooms, storage and mechanical spaces, below grade (see Figure 1). Below grade, Moscone South also contains the Gateway Ballroom, a multi-purpose space of almost 25,000 square feet. At the street level, Moscone South consists of the Moscone South Lobby, 13,500 square feet in size, and the Esplanade Ballroom, 42,000 square feet in size, with an additional 7,800 square feet of space for meeting rooms and support space.





Moscone Center Existing Conditions Site Plan Source: Environmental Science Associates, April 2013

Moscone North opened in 1992, adding 181,400 square feet of exhibition space (Halls D and E), as well as associated support functions such as loading, meeting rooms, storage and mechanical spaces, below grade. All of the function space at Moscone North and South is

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underground, with the exception of the street-level North and South lobbies and the Esplanade Ballroom, located at grade along the Third Street frontage of Moscone South.

Moscone West opened in 2003 and features about 99,900 square feet of exhibition space on Level 1, with additional flexible-use space on Levels 2 and 3. All of the function space at Moscone West is above ground, and Moscone West is not connected underground to Moscone North or South.

Together, Moscone North, South and West provide approximately 542,000 square feet of exhibition space and more than two million square feet of building area. Moscone Center is owned by the City and County of San Francisco, privately managed by the entertainment and convention center manager SMG, and booked by the San Francisco Travel Association (SFTA) which serves as the City's convention and visitor's bureau.

No public parking is provided at the Moscone Center. Public parking is available at nearby garages, including the Fifth and Mission Garage and the Moscone Garage on Third Street, across from Moscone South.

2. MOSCONE CENTER ATTENDANCE PATTERNS

The following paragraphs describe the past and current attendance and event utilization of the Moscone Center. Attendance can be measured on an event or daily basis. <u>Overall event</u> <u>attendance</u>, also known as <u>registered attendance</u>, represents the total number of individuals registered or ticketed to participate in an event. In the case of conventions, the registered attendance includes both visitors and exhibitors, while in the case of ticketed events the overall event attendance is calculated on the basis of the number of tickets sold for the event. The only pure ticketed event (i.e., tickets being purchased at the door with no pre-registration required) at Moscone Center is the consumer-oriented annual International Auto Show that takes place at the end of November.¹

The <u>daily event attendance</u> on the other hand, represents the number of visitors and exhibitors that would be onsite on a given event day, which may or may not equal the overall event attendance. For conventions and similar events, the daily event attendance can be assimilated to the overall event attendance, as most of the visitors and exhibitors are expected to attend the event each day over the entire period. In the case of tradeshow events, however, the sum of each day's attendance would add up to the overall event attendance, as most visitors would only attend the event on one day.

To account for these differences in daily event attendance vs. overall event attendance, and as later explained in this document (Section 4.1-Total Daily Attendance for the Design Event Day, p. 30), a series of normalizing factors have been derived that convert the overall event attendance to daily event attendance, depending on the type of event taking place at the Moscone Center.

¹ Dick Shaff, SMG Moscone Center, Vice President/General Manager, August 2, 2013



Finally, <u>total daily attendance</u> at the Moscone Center differs from the daily event attendance as it takes into account the possibility of overlapping multiple small- or mid-size events on a given day at various locations (e.g., two concurrent events, one at Moscone North and another at Moscone West). Thus, the total daily attendance at the Moscone Center is calculated by adding the daily event attendance of multiple concurrent events.

2.1 HISTORICAL ANALYSIS

This section provides a summary of the historical event demand at Moscone Center gathered from data obtained from the City.² The Moscone Center events and registered attendance between FY 2000/01 and FY 2010/11 are summarized in Table 1, and graphically presented in Figures 2 and 3.

	Events		Attendance ^[b]		Average				
Fiscal Year ^[a]	Number of Events ^[c]	Annual Change	Number of Registered Attendees ^[c]	Annual Change	Registered Attendance per Event				
2000/01	82		839,390		10,236				
2001/02	67	-18%	744,746	-11%	11,116				
2002/03	73	9%	747,832	0%	10,244				
2003/04	94	29%	937,440	25%	9,973				
2004/05	115	22%	819,843	-13%	7,129				
2005/06	119	3%	1,046,272	28%	8,792				
2006/07	119	0%	974,676	-7%	8,191				
2007/08	120	1%	1,279,000	31%	10,658				
2008/09	108	-10%	968,664	-24%	8,969				
2009/10	92	-15%	919,811	-5%	9,998				
2010/11 ^[d]	104	13%	907,985	-1%	8,731				
Total for the period	1,093	27%	10,185,659	8%	9,319				
Average for the period	99	2.2%	925,969	0.7%	9,458				

Table 1 Annual Number of Events and Registered Attendance at Moscone Center FY2000/01 to FY2010/11

Notes:

[a] Data for FY 2011/12 is not included since Moscone North/South was closed for capital renovation 131 days during the fiscal year (source: http://www.moscone.com/site/do/mediakit/view?id=9; last consulted May 6, 2013).

[b] Registered attendance reflects the reported number of attendees and exhibitors registered or ticketed for an event.

[c] Source: *Moscone Convention Center Expansion- Cost Benefit Phase II Analysis*, p. 40; prepared by Jones Lang Lasalle Hotels for the San Francisco Tourism Improvement District, March 16, 2012.

[d] Data for FY 2010/11 updated in August 2013 by Dick Shaff, SMG Moscone Center, Vice President/General Manager.

Adavant Consulting – August 2013

² Moscone Convention Center Expansion- Cost Benefit Phase II Analysis; prepared by Jones Lang Lasalle Hotels for the San Francisco Tourism Improvement District, March 16, 2012.







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As shown in Table 1, the total number of events booked at Moscone Center has grown from 82 in FY2000/01 to 104 in FY 2010/11, which represents an annual average growth rate of 2.2 percent. Similarly, the total number of registered attendees has grown from about 839,390 to 907,985 during the same period, a 0.7 percent annual average growth rate. This results in an average attendance of about 9,460 attendees per event per year. There has been an average of 99 events each year at the Moscone Center between FY 2000/01 and FY 2010/11.

Table 1 also indicates that total registered attendee levels can fluctuate considerably from year to year. The actual attendance in a given year is driven by economic conditions along with the planned rotations of large events. Total registered attendance decreased in FY2001/02 (which includes the events of 9/11) with about 744,750 attendees, and FY 2002/2003 showed an increase of only 3,000 attendees. Moscone West opened at the end of FY 2002/2003, and total attendance increased by 25 percent in FY 2003/04. Amid accelerating economic growth, annual attendance increased to a then record-high in FY 2005/06 of 1,046,300 attendees.

Due to the rotation of several large events,³ FY 2006/07 saw a 7 percent decline in registered attendance, but attendees thereafter grew to an all-time high of 1,279,000 in FY 2007/08. The ensuing economic downturn then contributed to a 24 percent attendance decline in FY 2008/09 and a further 5 percent decrease in FY 2009/10 to 919,800 attendees. Attendance decreased by 1 percent in FY 2010/11 to 907,985, attendees representing the seventh highest level of the FY 2000 to FY 2011 period.

2.2 CURRENT ATTENDANCE AT THE MOSCONE CENTER

The Moscone Center currently hosts a wide range of events including trade shows, conventions with exhibits, consumer (public) shows, special events, meetings, and seminars. Daily registered attendances at these events range from upwards of 295,000 total event attendees for large consumer shows to small 500-attendee seminars. The Moscone Center does not book any events smaller than 500 people.⁴

³ Most professional associations rotate the location of their annual events on a three- to five-year basis; for example the American Dental Association and National Automobile Dealers Association come to the Moscone Center every four years.

⁴ *Moscone Expansion Project Fiscal Responsibility & Feasibility Report, p. 3*; prepared by the San Francisco Office of Economic Workforce and Development, January 8, 2013.



One or more of the three halls at Moscone Center is occupied an average of about 70 percent of the days of any given year⁵, including move-in and break-down days; excluding move-in and break-down days, the Moscone Center has a scheduled event approximately 50 percent of the days in a given year. Many conventions repeat their bookings on both an annual and rotational basis, including groups such as Oracle's Open World conference, Salesforce's Dreamforce conference, RSA Security Conference, VMWare's VMWorld event, Semicon West, and the American Geophysical Union.

Sometimes events that take place at different locations can overlap during one or more days. During the January 2010 to December 2012 period, event days overlapped on 68 occasions, an average of 23 days a year; about 70 percent of the overlapped days were during one event taking place at the Moscone North or South, and another at Moscone West, with the remaining overlapped days reflecting an event taking place at Moscone North and another at Moscone South. In addition, although not considered overlapping for travel demand purposes, an event can take place at one location (e.g. Moscone West), while another is being set up or taken down at another (e.g., Moscone North).

The Moscone Center operators⁶ provided the transportation planning consultants with more detailed event data for the years 2010, 2011 and 2012, which is summarized in Table 2; the actual data is presented in Appendix A of this technical memorandum. The table summarizes the number of events and their registered attendance into three categories, small, medium and large, based on the total registered attendance and the number of buildings (one, two or three) used simultaneously for the event.

⁵ Average occupancy for FY 09/10, 10/11 and 11/12 were 69 percent, 64 percent and 74 percent, respectively. Dick Shaff, SMG Moscone Center, Vice President/General Manager, August 2, 2013.

⁶ Dick Shaff, SMG Moscone Center, Vice President/General Manager, August 2, 2013; Brook Mebrahtu, San Francisco Planning Department, October 12, 2013.



Number of Events and Registered Attendance by Size of Event									
trom January 1, 2010 to December 31, 2012									
Size of Event ^[a]	2010 ^[b]	2011 ^[b]	2012 ^[b]	Average per Year					
Number of Events									
- Small	5	6	8	6					
- Medium	33	41	29	34					
- Large	19	11	21	17					
All Events	57	58	58	58					
Total Registered Attendance									
- Small	7,956	12,209	10,013	10,100					
- Medium	247,843	360,271	155,820	254,600					
- Large	634,825	526,103	614,859	591,900					
All Events	890,624	898,583	780,692	856,600					
Average Registered									
Attendance per Event									
- Small	1,600	2,000	1,300	1,600					
- Medium	7,500	8,800	5,400	7,400					
- Large	33,400	47,800	29,300	34,800					
All Events	15,600	15,500	13,500	14,900					

Table 2 Moscone Center Number of Events and Registered Attendance by Size of Event from January 1, 2010 to December 31, 2012

Notes:

[a] The size of the convention/tradeshow as presented in this table is based on the total event attendance.

[b] Source: Moscone Convention Center, August and October 2013; the data presented in this table represents the number of events in a natural year (from January to December), and is therefore not directly comparable to the information shown in Table 1 (p. 4), which presents data for a fiscal year (July 1 of a particular year to June 30 of the following year).

Adavant Consulting – October 2013

Small events range from 500 to 10,000 registered attendees, medium events from 10,000 to 20,000 registered attendees, and large events would have over 20,000 people per event. As shown in Table 2, small events represent about 10 percent of the total (six events per year), medium size events represent 60 percent (34 events per year), and large events represent 30 percent (17 events per year); the average convention has 14,900 people attending. The largest convention/tradeshows typically held at the Moscone Center are Oracle's Open World and Salesforce's Dreamforce conferences with approximately up to 113,000 and 60,000 attendees, respectively; the largest consumer show is the San Francisco International Auto Show with up to 285,000 attendees.

The transportation planning consultant also obtained from the Moscone Center operators detailed information for those events that have taken place at the Moscone Center North, South and West, either individually or together, during 2010, 2011 and 2012. The data included the type and name of the event, their start and end dates (including move-in and break-down dates), the specific building location, and its total registered attendance; daily event attendance was then calculated as indicated in the previous section. The actual data is presented in Appendix B of this technical memorandum.


As shown in Figure 4, the largest average daily event attendance for a typical year during the 2010 to 2012 analysis period occurs with the combination of Moscone North, South and West (37%) as well as North plus South (26%), which together represent about 63 percent of the combined average daily event attendance. The largest single combined average daily event attendance location is at Moscone West (almost 20%), followed by South (about 8%); Moscone North has, on average, 7 percent of the combined average daily event attendance.



Moscone Center January 2010 through December 2012 Annual Average Daily Event Attendance by Event Location

The transportation planning consultant also calculated the average length of an event at the Moscone Center for the 2010-2012 period. The length of an event is expressed in event days, which refers to days on which the event has a scheduled program. The event day measure excludes the move-in days leading up to the event and break-down days following the event; average set up for an event is three days and break-down approximately two days. The average event duration, as graphically depicted in Figure 5, is slightly over three and a half days.







The two largest business sectors of groups that convene at the Moscone Center are High Tech/Computer and Medical, together accounting for two thirds of all attendees.⁷ Based on detail event data provided by the Moscone Center for this study for 2010, 2011 and 2012 (see Appendix B), Figure 6 graphically depicts attendance to Moscone Center North and South (in some instances in combination with Moscone West) grouped by event category (i.e., Convention/Tradeshow, Tradeshow, Corporate event, etc.).

Convention/Tradeshows are generally association events with both an exhibit and meeting program; tradeshows are predominantly exhibits with few if any meetings, and include consumer shows open to the general public; a meeting is a gathering of people with very limited exhibits, if any, which might include a sit-down meal; a convention-only is an event with predominantly meetings and without exhibits.

⁷ Moscone Expansion Project Fiscal Responsibility & Feasibility Report, p. 19; prepared by the San Francisco Office of Economic Workforce and Development, January 8, 2013.







As shown in Figure 6, largest category of event attendance is the combined Convention/ Tradeshow category, which comprises over 75 percent of the combined event attendance between 2010 and 2012; this category includes events such as Oracle's Open World and Salesforce's Dreamforce conferences. The next-largest categories are Tradeshow-only (about 12%), which include consumer-oriented events such as the International Automobile Show and WonderCon, followed by corporate and association meetings/banquets (almost 10%).

Based on the data provided to the transportation planning consultants by the Moscone Center operator for this study (see Appendix B), Figure 7 shows the distribution of the average number of days with scheduled events (excludes move-in and break-down days) by month for a typical year during the 2010 through 2012 study period. As shown in the figure, the largest number of days with scheduled events typically takes place in the month of November, with 22 days, followed by March and October with 20 days with scheduled events each, and then May and June, each with 16 days with scheduled events per month.







Figure 8 shows the distribution of the annual average total daily attendance by month to Moscone Center events for a typical year during the 2010 through 2012 study period. The monthly distribution of the total daily attendance is not as uniform as the number of days with scheduled events previously shown in Figure 7. The largest monthly demand occurs in November, with approximately 375,220 total daily attendees per month. This is due to large attendance events taking place in November, such as the San Francisco International Automobile Show with more than 200,000 total attendees during the event. October, which is when Oracle's Open World takes place, is the second highest month with approximately 316,390 total daily attendees, followed by March and September with just below 240,000 total daily attendees each.







The distribution of the average total daily attendance throughout the week is shown in Figure 9. The busiest days are Mondays through Thursdays with an average of approximately 6,000 to 7,150 total daily attendees, specifically Wednesdays and Thursday with about 7,150 attendees each. These two days coincide with the design weekdays typically selected for transportation planning analyses. Fridays, Saturdays and Sundays have a lower average attendance, about 4,600 to 4,800 total daily attendees each day.





Moscone Center January 2010 through December 2012 Weekly average total daily attendance by day of the week

2.3 CURRENT USAGE OF MOSCONE CENTER NORTH AND SOUTH

A similar analysis was conducted by the transportation planning consultant for those events that have taken place at the Moscone Center North and South, either individually or together, as well as in combination with the Moscone Center West, during 2010, 2011 and 2012; the detailed information is presented in Appendix B.

Table 3 on the next page provides a comparison of the event day and total daily attendance for the Moscone Center North and South (in combination with Moscone West, when operating concurrently) with the same data presented as in the previous section for the entire Moscone Center. As seen in the table, the patterns for the Moscone Center North and South (plus sometimes Moscone West) closely resemble those of the entire Moscone Center, as it was to be expected since these facilities represent approximately 77 percent of all the scheduled days with events on a given year and 86 percent of the overall total daily attendance.



Table 3

Comparison between Entire Moscone Center vs. North and South Halls Annual Average Days with Scheduled Events and Total Daily Attendance by Month and by Week from January 1, 2010 to December 31, 2012

	E	Entire Mo	oscone Cente	er	Moscone Center North and South ^[a]			Differ	Difference	
	Avg. sche ev	days w/ eduled ents	Total avg attenda	. daily Ince	Avg. d sche eve	ays w/ duled ents	Total avg attenda	ı. daily ance	Avg. days w/ schd. events	Total avg. daily attend.
Month										
- January	13	7%	168,730	8%	10	7%	109,390	6%	3	59,340
- February	15	8%	163,980	8%	15	11%	157,590	9%	0	6,390
- March	20	11%	239,540	11%	18	13%	220,960	12%	2	18,580
- April	13	7%	97,040	5%	8	6%	65,850	4%	5	31,190
- May	16	9%	128,100	6%	9	6%	86,850	5%	7	41,250
- June	16	9%	100,560	5%	9	6%	64,730	3%	7	35,830
- July	10	6%	108,180	5%	7	5%	98,290	5%	3	9,890
- August	11	6%	81,780	4%	8	6%	70,100	4%	3	11,680
- September	14	8%	236,800	11%	12	9%	217,420	12%	2	19,380
- October	20	11%	316,390	15%	17	12%	292,790	16%	3	23,600
- November	22	12%	375,220	17%	17	12%	341,050	18%	5	34,170
- December	10	6%	129,360	6%	9	6%	128,320	7%	1	1,040
Total Year	180	100%	2,145,680	100%	139	100%	1,853,340	100%	41	292,340
% Moscone N&S									77%	86%
Day of the Week										0
- Monday	0.54	16%	5,990	15%	0.40	15%	5,050	14%	0.14	940
- Tuesday	0.60	17%	6,900	17%	0.47	18%	5,930	17%	0.13	970
- Wednesday	0.58	17%	7,150	17%	0.41	16%	6,040	17%	0.17	1,110
- Thursday	0.54	16%	7,140	17%	0.40	15%	6,290	18%	0.14	850
- Friday	0.39	11%	4,670	11%	0.28	11%	4,000	11%	0.11	670
- Saturday	0.40	12%	4,570	11%	0.35	13%	4,130	12%	0.05	440
- Sunday	0.42	12%	4,840	12%	0.33	13%	4,200	12%	0.09	640
Total Week	3.47	100%	41,260	100%	2.64	100%	35,640	100%	0.83	5,620
% Moscone N&S									76%	86%
Mato										

Note:

[a] Includes Moscone West when operating concurrently with Moscone North or South.

Adavant Consulting – August 2013

2.4 TRUCK LOADING/UNI OADING OPERATIONS AT MOSCONE NORTH AND SOUTH

This section describes truck operations at Moscone North and South. An analysis of truck loading/unloading operations at Moscone West is not included because they take place at a physically separated location under that building and would not be affected by the proposed expansion project.

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Truck loading/unloading operations at Moscone Center North and South take place at a combined network of underground loading docks, as shown in Figure 10 on the next page. Truck access is provided via a ramp located mid-way along Third Street between Howard and Folsom Streets (Figure 1, p. 2) where access is controlled by an attendant. Trucks delivering freight to the Moscone Center cannot exceed 53 feet in length (tractor and trailer) and 14 feet in height.

Eighteen functional loading spaces are located at the lower level⁸ – three are on the east side of Moscone South (blue dock), five are on the west side of Moscone South (green dock), and ten are along the north side of Moscone North (red dock); all these loading spaces can accommodate tractor-trailer trucks up to 53 feet in length. Trucks exit the underground docks via a ramp located mid-way along Fourth Street between Howard and Folsom Streets. Trucks currently have the possibility of driving directly onto the exhibit hall floor; this ability would be enhanced as part of the expansion project as described later in Section 3-The Moscone Center Expansion Project, starting on p. 23 of this document. Currently most trucks unload and load materials from loading docks, and forklifts transport cargoes between the loading docks and the exhibit halls.

The Moscone Center does not directly accept shipments of event-related freight or materials, rather all freight deliveries are the responsibility of a general service contractor selected by the entity producing the event. The general service contractor provides overall drayage, decorating, signage, production, theatrical, electrical and/or other event related services, and is also responsible for the staffing and management of the loading docks and receiving areas.

Trucks accessing the Moscone Center mostly consist of exhibit and decorator type trucks. There are no catering truck deliveries as all food is prepared on site;⁹ food and beverage products are also delivered by trucks. The general service contractor is responsible for removing trash and recyclables at the conclusion of each event. San Francisco Recology handles the pickup of trash and recyclables for the Moscone Center operator on an as needed basis.

Exhibit freight trucks use crates to transport their loads, while decorator trucks primarily use carts. Thus, exhibit freight trucks would typically necessitate four one-way trips to deliver a load prior to an event¹⁰ (and then four one-way trips to pick up the load at the conclusion of an event), while decorator trucks would necessitate only two one-way trips to deliver or pick up a load.¹¹ A more detailed description of the relationship between the number of trucks and the truck trip generation can be found in Section 4.4-Freight Truck demand (p. 40).

⁸ Dick Shaff, SMG Moscone Center, Vice President/General Manager, March 1, 2013.

⁹ Dick Shaff, SMG Moscone Center, Vice President/General Manager, August 2, 2013.

¹⁰ A loaded exhibit freight truck arrives at the loading dock prior to an event to deliver the equipment shipped in crates, then departs empty. The truck returns to the dock later to pick up the empty crates and then departs. The process is reversed at the conclusion of the event.

¹¹ A truck loaded with decorating equipment arrives at the dock prior to an event to unload the materials, then departs empty. The process is reversed at the conclusion of the event.





Figure 10 Moscone Center North and South - Existing Truck Loading Areas Source: SOM, February 2013

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Virtually all event truck freight delivered to the Moscone Center must go through a marshaling yard operated by the general service contractor. Each general service contractor operates its own marshaling yard, generally located at industrial areas in the southeast portion of the City, such as Pier 80 and Hunters Point. The marshaling yard serves as a staging area to control traffic flow into the Moscone Center, as well as the weight station for all freight vehicles.

Event trucks are dispatched by the general services contractor as loading dock or access to the floor is expected to become available. Occasionally during peak truck demand periods, due to truck congestion in the underground loading dock area, the attendant might reduce the inbound truck flow via the Third Street truck access ramp. In such instances, trucks waiting to enter the Moscone Center docks have been observed to circle around the block or to queue back near the entrance ramp on Third or Folsom Streets.

The Moscone Center operator classifies the truck loading/unloading operations for an event into three categories, light, medium, and heavy, depending on the amount of expected freight to be brought into and out of the Moscone Center. According to the Moscone Center operator, there is no direct relationship between the size of the event, and its freight category. The truck loads typically include decorating equipment as well as exhibit freight, which can change substantially from one event to another, independent of their total attendance.

Table 4 provides a summary of the existing freight and typical amount of truck traffic for one event under each category; more detailed truck demand information is presented in Appendix C of this technical memorandum.

EXIS	ling Typical Freight	Delivery Cha	aracteristics b	y Calegory	-
Freight Type	Approvimate	Avg. Annual	Number of Freig	ght Trucks per	Single Event ^[c]
Catagory ^[b]	Total Freight	Percentage	Decorating	Exhibit	Total [d]
Calegory	Total Freight	of All Events	Equipment	Freight	TOTAL
Heavy Freight Event	Over 1 million lbs.	29%	40	150	190
Medium Freight Event	250,000 to 1 million lbs.	53%	30	80	110
Light Freight Event	Up to 250,000 lbs.	18%	20	40	60

Table 4
Moscone Center North and South
Existing Typical Freight Delivery Characteristics by Category $[a]$

Note:

[a] Source: Moscone Center operator, October 2013.

[b] Freight category refers to the expected amount (in pounds) of decorating and exhibit freight expected to be moved in and out for a given event.

[c] During the move-in or break-down periods.

[d] In addition, approximately 20 trucks per day bring food and beverages products to an event (product delivery trucks); see Table 5 on p. 20.

Adavant Consulting – November 2013

As shown in Table 4, medium freight-type events represents more than half of the total number of events at Moscone North and South, with a total of 110 decorating equipment and exhibit freight trucks per event during the move-in or break-down periods, while heavy freight-type events represent almost 30 percent of all the events, with a total of 190 decorating equipment and exhibit freight trucks per event during the move-in or break-down periods.

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The total truck traffic distribution by type of freight during the move-in days leading to an event and the break-down days for a heavy freight-type event¹² is shown in Figure 11; the figure also includes data for trucks delivering food and beverage products. Move-in truck traffic is distributed over six days, with a maximum of 73 trucks on the third move-in day which represent 27 percent of the total move in truck volume (256 trucks). On the other hand, truck traffic during break-down days starts in the evening of the last event day and continues for one additional day; this second day concentrates 143 trucks which represent over 72 percent of the total break-down truck volume (201 trucks).



Moscone Center North and South Daily Truck Traffic Distribution for a Heavy Freight-Type Event

Table 5 on the next page, provides a summary of the maximum average number of trucks per unloading/loading shift accessing the Moscone Center on a move-in, event and break-down day.

¹² Information provide for the 2013 SPIE Photonics West convention (February 5 to 7, 2013; estimated attendance: 19,500) by Dick Shaff, SMG Moscone Center, Vice President/General Manager, October 2013.



Table 5Moscone Center North and SouthExisting Maximum and Average Freight Demand by Shift ^[a]For a Heavy Freight-Type Event ^[b]

		Number o	f Trucks by Unl	oading/Loadi	ng Shift ^[a]	
Type of Freight	Move-in Day		Event Day		Break-down Day	
	Maximum ^[c]	Average	Maximum ^[c]	Average	Maximum ^[d]	Average
Decorating Equipment	12	3	6	2	21	14
Exhibit Freight	43	13	23	7	80	54
Food and Beverage	26	16	21	20	10	10
Total	81	32	50	30	111	78

Notes:

[a] Morning (7 AM to 3:30 PM) or evening (3:30 PM to midnight) unloading/loading shifts.

[b] Source: Moscone Center operator for the 2013 SPIE Photonics West convention (February 5 to 7, 2013), March 2013.

[c] From approximately 7 AM to 3:30 PM.

[d] From approximately 3:30 PM to midnight, except for the food and beverage trucks, which typically arrive before 10 AM.

Adavant Consulting – October 2013

2.5 EVENT BUS OPERATIONS AND TAXI SERVICE

Medium and large attendance events at the Moscone Center generally provide complimentary bus shuttle transportation for attendees between designated hotels outside of walking distance to the Moscone Center. Most guests using shuttles stay at hotels in the Union Square area, although depending on the size of the event bus service can be extended to other areas in San Francisco. Bus riders are typically required to have an event badge in order to use the service.

Depending on the number of event registrants, bus loading/unloading operations at the Moscone Center North and South can take place at one or both of the two bus loading plazas fronting the south side of Moscone North and the north side of Moscone South on Howard Street. The north bus loading plaza is approximately 180 feet in length, three lanes wide, and is able to accommodate three buses per lane. The south bus loading plaza is approximately 275 feet in length, three lanes wide, and is able to accommodate about four buses per lane. Buses typically park parallel to the sidewalks, stopping in the outside lanes for loading and unloading, and using the center lane as a bypass lane.

Bus shuttle service is provided over one or multiple routes, depending on the expected attendance, on the days of the event from before until after each day's meeting events (e.g., from 6 am until 8 pm). Typical bus service headways are 10 to 20 minutes during peak demand periods (usually at the beginning and the end of the event day), and 20 to 30 minutes at all other times. During peak demand periods there are about five buses waiting at each bus loading area, for a total of 10 to 11 buses laying over at the Moscone Center at the same time.¹³

¹³ Dick Shaff, SMG Moscone Center, Vice President/General Manager, March 1, 2013.



The Moscone Center operator classifies the event bus shuttle operations for an event into four levels of service: no service, light, medium and heavy, depending on the expected daily event attendance. Table 6 provides a summary of the approximate number of daily buses provided by each service level.

Moscone Center North and South Existing Bus Shuttle by Level of Service ^[a]					
Bus Service Level	Average Annual Percentage of All Events	Total Number of Buses in Operation per Day			
Heavy Bus Service	9%	25 to 36			
Medium Bus Service	11%	6 to 20			
Light Bus Service	27%	2 to 6			
No Bus Service	53%	None			

Note:

[a] Source: Dick Shaff and Bob Sauter; Moscone Center operator, March 2013. Adavant Consulting – May 2013

As shown in the table, no bus shuttle service is typically provided for more than half of the total number of events at Moscone North and South. Medium and heavy bus shuttle service represents 20 percent of the total number of events.

There is a taxi service stand on the south side of Howard Street, extending from Third Street to the driveway entrance to the south bus loading plaza. This taxi-only passenger loading zone is approximately 180 feet long and has a capacity for about nine waiting vehicles. Taxis drop off passengers at the Howard Street curb fronting the north and south bus loading plazas. Approximately 10 percent of the event attendees are estimated to arrive at the Moscone Center by taxi/limousine, plus other modes such as bicycle and motorcycle.¹⁴

2.6 HOWARD STREET ROAD CLOSURE

Howard Street between Third and Fourth Streets is closed to vehicular traffic for about one week during two annual events at the Moscone Center, Oracle's Open World and Salesforce's Dreamforce for the installation of tents that provide additional event space. These two events have taken place in September/October (Oracle) and August/September/October (Salesforce). Although Howard Street is closed to vehicles, the sidewalks remain open for use by pedestrians.¹⁵

When Howard Street is closed, through vehicular traffic is rerouted by means of temporary fix signage and active message signs to Harrison Street via Second Street and Hawthorne Lane, returning to Howard Street via Fifth Street. On-street parking at nearby streets is temporarily prohibited to facilitate detoured turns and minimize traffic congestion. Examples of recent traffic rerouting plans implemented by the Moscone Center are included in Appendix I.

¹⁴ See Table 13, p. 36.

¹⁵ Dick Shaff, SMG Moscone Center, Vice President/General Manager, August 2, 2013.



2.7 EXISTING EVENT OPERATIONS AT MOSCONE CENTER NORTH AND SOUTH

This section describes the move-in, exhibition and break-down operations at the Moscone North and South for a medium- and large-size attendance event. As previously described in Section 2.2-Current Attendance at the Moscone Center (starting on p. 6), medium-size events range from 10,000 to 20,000 registered attendees, while large events would typically have over 20,000 registered attendees.

Medium Event

This summary is based on detailed information provided by the Moscone Center operator describing the 5-day Annual Symposium and Meeting for the American Society of Cataract and Refractive Surgery (ASCRS) with an estimated attendance of about 13,000; a copy of the information is included in Appendix D.¹⁶

Start of Event minus 5 days and previous days

Prior to the first move-in day, building staff sets all of the meeting rooms with chairs, tables, risers and any other equipment required for event. All areas are clean and ready for the start of move-in. Building staff is onsite all of the time during event operations in the building. Freight trucks might start arriving and departing the Moscone Center.

Start of Event minus 4 days; first move-in day

Building operations take place from 7 AM or 8 AM until 5 PM or 6 PM. Trucks start arriving at the Moscone Center docks shortly after 7 AM; unloading tasks are generally completed before 4 PM although they could proceed on a 24-hour cycle in case of a very limited number of move-in days. Equipment for registration is unloaded. Exhibit hall floors are marked for exhibition booths, electrical and IT lines and equipment are installed, carpet for exhibition booths is laid.

Start of Event minus 3 days; second move-in day

Building operations take place from 7 AM or 8 AM until 5 PM or 6 PM. Trucks start arriving at the Moscone Center docks shortly after 7 AM and the last departure generally takes place before 4 PM. Exhibition equipment is unloaded and assembled in lobbies. Crates with exhibit booths are moved to exhibit halls for assembly. Show materials are moved into office areas.

Start of Event minus 2 days; third move-in day

Building operations generally take place from 7 AM or 8 AM until 7 PM or 8 PM. Trucks start arriving at the Moscone Center docks shortly after 7 AM and the last departure generally takes place before 4 PM. Exhibition equipment is moved into the exhibit halls, the assembling of equipment at offices and lobbies continues. Setting up of audio/visual equipment in meeting rooms starts. Exhibitors' registration opens in the evening (e.g., at 5 PM) and exhibitors start moving in and setting up their exhibits.

¹⁶ A Week in the life of a Moscone Center Event – Case Study: American Society of Cataract and Refractive Surgery Annual Symposium and Meeting, April 15-25, 2013; prepared by Dick Shaff, SMG Moscone Center, Vice President/General Manager; see Appendix D.



Start of Event minus 1 day; fourth move-in day

Building operations take place generally from 7 AM or 8 AM until 7 PM or 8 PM. Trucks start arriving at the Moscone Center docks shortly after 7 AM and the last departure generally takes place before 4 PM. Moving of equipment into the exhibit halls, offices and lobbies continue. Setting up of audio/visual equipment in meeting rooms continues. Second day for exhibitors to register on-site. Shuttle bus service to local hotels starts in the early afternoon (e.g., at 2 PM) and attendee registration opens.

Start of Event; first event day

Building operations begin between 5:30 AM and 8 AM and end between 6 PM and 8 PM. Truck traffic to the loading docks is reduced to a minimum as most exhibit materials are already inside the building. Shuttle bus service for attendees starts as soon as the building is open and continues uninterrupted until the end of the event (7 PM or 8 PM). Attendee registration opens about one half hour prior to the beginning of event meetings, and continues until 6 PM or 7 PM. Exhibitors complete setting up at the exhibit halls; installation and testing of audio/visual equipment is completed. Food service opens.

Start of Event plus 1 day; second event day

Building operations begin between 6 AM and 8 AM and end between 6 PM and 7 PM. Truck traffic to the loading docks is minimal. Shuttle bus service for attendees is provided uninterrupted while the building is open to attendees. Attendee registration opens about half hour prior to the beginning of event meetings and continues until 6:00 PM or 7 PM. Exhibits typically open one or two hours after the start of the event and close about one hour prior to the end of the event. Food service is open.

Start of Event plus 2 days; third event day Same type of activities as the previous day.

Start of Event plus 3 days; fourth event day Same type of activities as the previous day.

Start of Event plus 4 days, last event day

Building operations take place from about 7 AM until about 11 PM. Trucks start returning to Moscone Center building with crates for exhibits. Shuttle bus service for attendees starts as soon as the building opens and continues uninterrupted until the end of the day. Event meetings typically close shortly after midday. Dismantling of exhibits and move out starts as soon as the event meetings are over, carpet is removed from the exhibition halls floors, crates are brought from the dock and delivered to exhibition floor. Once the event meetings are over, building staff starts removing some chairs and disconnecting and moving out the audio/video equipment.

Start of Event plus 5 days, first full break-down day

Building operations take place from about 8 AM until 5 PM or 6 PM. Trucks arrive at the start of building operations and depart the Moscone Center docks to deliver empty crates and pick up equipment throughout the day, with truck travel overlapping with the evening peak commute period.



Start of Event plus 6 days, second full break-down day

Building operations take place from about 8 AM until 5 PM or 6 PM. Move out operations continue; trucks arrive and depart the Moscone Center docks throughout the day, with truck travel overlapping with the evening peak commute period. Building equipment is stored and reset for the next event.

Large Event

Large-size events, those attracting over 20,000 registered attendees, have the same type of event and hours of operation as those described above for a medium-type event.¹⁷ The only difference between large- and medium-size events is the total number of attendees and the number of exhibits.

2.8 EXISTING WORKFORCE

Currently there are approximately 153 full time management and non-event employees at Moscone Center during a typical non-event day. These include 47 employees working from 8 AM to 5 PM, 69 employees working around the clock in three shifts¹⁸, and 37 employees in charge of security.

Staffing levels during events vary depending on the size of the event, as well as on which hall the event is in. The main tasks for building staff during move-in is setting up the event meeting rooms and installing/testing audio visual equipment. During the event, building staff is tasked with the cleaning of all public areas and restrooms, resetting of event meeting rooms, managing the climate control systems, and building security, as required. In addition, event building staff is in charge of controlling vehicle access to all the building driveways and loading dock entrances.

Table 7 provides a summary of staffing levels at Moscone North and South, based on data collected during the 2013 SPIE Photonics West convention (February 5 to 7, 2013), a heavy-freight type, medium to large size event ¹⁹ with an estimated registered attendance of 19,500 and an estimated daily attendance of 16,500 (approximately 75 percent of all the events at Moscone Center have a lower daily attendance), which uses both Moscone North and South. More detailed event-day staffing information is presented in Appendix E of this technical memorandum.

¹⁷ Dick Shaff, SMG Moscone Center, Vice President/General Manager, August 2, 2013.

¹⁸ From 7 AM to 3:30 PM, from 3:30 PM to midnight, and from midnight to 7 AM; 23 employees work during each shift.

¹⁹ It is at the high-end of a medium-size event (from 10,000 to 20,000 registered attendees) and just below a large-size event (over 20,000 registered attendees).



	3	Lanning Level	is during E	vents by Ty	pe of Day		
	Average Number of Daily Employees						
Type of Day	Admin. ^[b]	Housekeep	Catering	Movers	Security	EAC/AV ^[c]	Total
Move-in	153	64	85	272	54	325	953
Day	16%	7%	9%	29%	6%	34%	100%
Event	153	88	188	161	79	113	782
Day	20%	11%	24%	21%	10%	14%	100%
Break-down	153	46	48	343	27	10	627
Day ^[d]	24%	7%	8%	55%	4%	2%	100%

Table 7 Moscone Center North and South Staffing Levels during Events by Type of Day^[a]

Notes:

[a] Source: Moscone Center operator for the 2013 SPIE Photonics West convention (February 5 to 7, 2013).

[b] Exhibitor Appointed Contractors/Audio-Video and presentation equipment providers.

[c] Based on a single break-down event day

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As shown in the table, the highest level of event-related staffing occurs during move-in days with approximately 950 daily employees on average. The daily average staffing levels on event and break-down days are about 780 and 630 employees each day, respectively. The actual number of employees within each type of day category also varies substantially; a distribution of total employees by day on those days leading up to, during and after an event are shown in Figure 12 on the next page. As shown in the figure, the busiest days are those immediately leading to the start of the event, with about 1,200 total employees. The maximum number of employees on an event day is 970, about 80 percent of the maximum.







3. THE MOSCONE CENTER EXPANSION PROJECT

The purpose of the Moscone Expansion Project is to plan for the future capacity, configuration and contiguous space needs of the Moscone Center North and South buildings to ensure San Francisco's competitive position within the meetings, convention, and exhibitions industry. The expansion project would allow Moscone to retain its existing convention business, attract new reservations and more flexibly meet future demands for large, contiguous exhibitions. No changes are proposed at Moscone West.

The Expansion Project proposes to add approximately 262,700 square feet of floor area to the functional space for exhibitions, meetings, conventions, and tradeshows, which would increase the total Moscone Center North and South to approximately 888,300 square feet. The Expansion Project would also reconfigure support space (food preparation, office, storage, and other "back of house" space), resulting in an overall reduction in floor area from approximately 570,300 square feet to approximately 563,300 square feet. In all, the project would result in approximately 140,000 square feet of new exhibition area, from 440,000 square feet to 580,000 square feet. A summary of the existing and proposed functional spaces by building and level at Moscone North and South is shown in Table 8 on the next page. No changes are proposed at Moscone West.



Table 8
Moscone Center Expansion Project
Moscone North and South Existing and Proposed Functional Spaces
by Building and Level

	Existing C	onditions	Existing plus Expansion Project		
Level	Functional Uses ^[a]	Square Feet	Functional Uses ^[a]	Square Feet	
	Exhibition Area	440,000	Exhibition Area	580,000	
Lower Level	Meeting, Concourse, Ballroom	80,000			
North Lower Mezzanine					
South Lower Mezzanine	Meeting	19,000	Meeting	7,000	
North Level 1	Lobby	15,500	Lobby	24,700	
South Level 1 ^[b]	Lobby, Circulation	21,800	Lobby, Circulation, Multipurpose	51,900	
South Mezzanine ^[b]	Lobby, Prefunction, Ballroom	49,300	Lobby, Prefunction, Ballroom, Meeting	69,700	
North Level 2			Prefunction	8,900	
South Level 2 ^{[b], [c]}			Prefunction, Ballroom, Meeting	76,000	
South Level 3 ^[b]			Prefunction, Meeting, Terrace	70,100	
Total		625,600		888,300	

Notes:

[a] All levels also include support space, which are not included in the functional space totals.

[b] Includes both Moscone South and Esplanade Spaces.

[c] Includes pedestrian bridges.

Source: Environmental Science Associates/SOM – September 2013

The Expansion Project would also extend the frontages of Moscone North, South, and Esplanade towards Howard Street and reconfigure the existing adjacent bus pick-up and drop off facilities by reducing the width and extending the length of the bus pullout lanes. The Expansion Project would also construct two pedestrian bridges spanning Howard Street that would connect Moscone North and South at the second level above grade (the existing pedestrian bridge would be removed).

Although the Expansion Project would increase the maximum size of a large event by approximately 140,000 square feet, and therefore the total number of exhibits and exhibitors, the project sponsor has indicated that it would not be expected to substantially increase the number of attendees (i.e., the same number of attendees would be able to visit a larger number of exhibits). Nonetheless, the travel demand analysis presented in the following sections of this report is based on the conservative assumption that the number of daily attendees would also grow proportionally with the amount of additional exhibit space. This is not expected to be the case because what is anticipated from the Expansion Project is an increase in the number of events per year, which would increase the number of attendees on an annual basis.



The Expansion Project would not be expected to increase the existing daily attendance, which is based on the number of members who are part of an association or corporation hosting the event, with the exception of the number of exhibitors which would increase with the additional exhibit space to be provided. However, a proportional increase in attendance has been assumed to represent a worst-case scenario in the event the number of total attendees increases as a result of the proposed project. As a result of the increase in attendance, the Expansion Project would also result in an increase in the number of buses providing shuttle service to and from the Moscone Center; the parking demand would increase as well.

The Expansion Project would be expected to increase the total number of events that would take place on a given year at the Moscone Center, as it would allow for those events that have grown too large for the current facilities to return, and new ones to be added. A financial analysis recently conducted for the Moscone Center²⁰ indicates that 71 groups had tentatively held dates and space at the Moscone Center for the January 2010 to December 2019 period but had subsequently cancelled their reservations due to space constraints (i.e. size too small, non-contiguous space, etc.). This information would suggest that approximately seven additional large events (those with a registered attendance over 20,000) per year were canceled because they were too large to be accommodated at the existing facility but that could take place in the future at the Moscone Center as a result of the Expansion Project. Since there are currently about 15 large events per year at the Moscone Center (see Table 2, p. 8), the Expansion Project would represent a 47 percent annual increase in large events. On the other hand, the Expansion Project would not be expected to have any effect on the duration of the current or future events.

Excluding the San Francisco International Auto Show (a consumer tradeshow), the largest events that currently take place at the Moscone Center (Oracle's Open World and Salesforce's Dreamforce) are convention/tradeshow combinations. Convention/tradeshow events, which would be better served by the proposed increase in exhibit space, represent over 75 percent of all the existing events at the Moscone Center, a proportion that could increase as a result of the Expansion Project. According to the project sponsor,²¹ the Expansion Project would not change the ability of the Moscone Center to accommodate two or more events simultaneously, modify the time currently required to set up or break down events, or have any impact on the existing frequency or duration of road closures of Howard Street.

The Expansion Project would increase the number of employees during an event day by approximately 28 employees, mostly additional exhibitors.²² The existing full-time management and non-event staff working at the Moscone Center would remain at the current levels; Table 9 on the next page summarizes the existing and proposed employment at the Moscone Center by type of day.

²⁰ *Moscone Convention Center Expansion - Cost Benefit Phase II Analysis*, pp. 20-22; prepared by Jones Lang Lasalle Hotels for the San Francisco Tourism Improvement District, March 16, 2012.

²¹ Dick Shaff, SMG Moscone Center, Vice President/General Manager, October 2, 2013.

²² Dick Shaff, SMG Moscone Center, Vice President/General Manager, July 29, 2013. Approximate full-time employee value as event related employment can fluctuate substantially based on the size of the event, booth size and other factors.



Existing and Troposed Namber of Daily Employees by Type of Day							
	Exi	sting Condit	ions	Existing p	ng plus Expansion Project		
Type of Day	Non-			Non-			
Type of Day	Event	Event		Event	Event		
	Staff	Staff	Total	Staff	Staff	Total	Change ^[b]
Start of event minus 6 days	153	216	369	153	244	397	28
Start of event minus 5 days	153	554	707	153	582	735	28
Start of event minus 4 days	153	882	1,035	153	910	1,063	28
Start of event minus 3 days	153	1,054	1,207	153	1,082	1,235	28
Start of event minus 2 days	153	1,048	1,201	153	1,076	1,229	28
Start of event minus 1 days	153	1,043	1,196	153	1,071	1,224	28
First day of event	153	446	599	153	474	627	28
Second day of event	153	624	777	153	652	805	28
Third day of event	153	818	971	153	846	999	28
Break-down day	153	474	627	153	502	655	28
N L L							

Table 9Moscone Center North and SouthExisting and Proposed Number of Daily Employees by Type of Day ^[a]

Notes:

[a] Source: Dick Shaff, SMG Moscone Center, Vice President/General Manager, July 29, 2013.

[b] Approximate full-time employee value as event related employment can fluctuate substantially based on the size of the event, booth size and other factors.

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The Expansion Project would eliminate one existing underground loading space, leaving a total of 17 functional loading docks. The proposed project would also add a large drive-in door to improve truck access onto the exhibit hall floor for unloading/loading operations, relieving some of the demand for loading dock space.

Truck loading access would remain at the existing truck ramp locations, entering down along Third Street between Howard and Folsom Streets, and exiting along Fourth Street by way of the below-grade truck loop. The project proposes to move the Third Street truck entrance ramp south by 105 feet to accommodate the new Esplanade Expansion; no excavation is required to move the ramp to the south. The relocation of the truck entrance would accommodate the queuing of two or three trucks below grade on the almost flat surface of the entry lane, which would also incorporate a passing lane to minimize truck queue spillback.

As discussed in the following section of this document, the Expansion Project would also increase number of trucks servicing the Moscone Center.



4. PROJECT TRAVEL DEMAND

A convention center is a special trip generator for which travel characteristics (trip generation rates, peak hour factors, etc.) are not available from standard sources such as the SF Guidelines²³ or the Institute of Transportation Engineers.²⁴ As such, the transportation planning characteristics of convention centers are evaluated on a site-specific basis taking into account the expected attendance and travel data applicable to the local area. Thus, this section documents the methodology used to develop the travel demand estimates specific to the Moscone Center Expansion Project; more detailed calculations are presented in Appendix F of this technical memorandum.

4.1 TOTAL DAILY ATTENDANCE FOR THE DESIGN EVENT DAY

Similar to other land uses, peak attendance days at convention center events are not generally utilized for transportation planning and analysis purposes, as they do not represent the most common circumstance. Instead, a "design event day" condition with the 85th, 90th or 95th percentile of the total daily attendance is typically used to represent a reasonable worst-case scenario that would occur with enough frequency to warrant consideration for analysis.

To this end, an average total daily attendance was estimated for those events that have taken place at the Moscone Center North and South, either individually or together, as well as in combination with the Moscone Center West, during 2010, 2011 and 2012. This utilizes the same event attendance data that has been presented and evaluated in Section 2.3-Current Usage of Moscone Center North and South (starting on p. 14), and is also included in Appendix B of this technical memorandum.

Total daily attendance differs from the registered event attendance (exhibitors and attendees) since it has to take into account how many attendees would be onsite on a given event day, as well as the possibility of overlapping multiple medium- and small-size events on a single day. Based on previous analyses, a series of registered event attendance to total daily attendance factors were developed, that take into account the type and duration of an event; these factors are summarized in Table 10 on the next page.

²³ *Transportation Impact Analysis Guidelines for Environmental Review*, San Francisco Planning Department, October 2002.

²⁴ *Trip Generation Manual - Ninth Edition*, Institute of Transportation Engineers, 2012.



Total Attendance to Average Daily Attendance Conversion						
Event Type	Registered Event Attendance to Total Daily Attendance Factor	Divide Registered Event Attendance by Number of Event Days?				
Convention	1.00	No				
Convention/Tradeshow	0.85	No				
Meeting	1.00	No				
Tradeshow ^[b]	1.00	Yes ^[c]				

Table 10Moscone CenterTotal Attendance to Average Daily Attendance Conversion ^[a]

Notes:

[a] Source: Table 1, p. 3, *San Diego Convention Center Expansion (Phase III) Project Trip Generation Technical Memorandum* (Fehr & Peers, April 2010), which in turn is based on *Refined Analysis of Business Capture Derived from a Potential Expansion of the San Diego Convention Center* (AECOM, November 2010).

[b] Includes consumer show events such as the San Francisco International Automobile Show and WonderCon.

[c] Total attendance at consumer shows is typically the sum of each daily attendance; i.e., the public generally attends the event on one day only.

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Then, to establish a profile for a typical design day, the transportation planning consultants calculated the total daily attendance for all events held at Moscone Center between 2010 and 2012. Events took place at the Moscone Center North and South during a total of 542 days out of the 1,096 possible days, or 49 percent of the total days, during the 3-year period of analysis.

Figure 13 graphically depicts a list of the 542 event days from January 1, 2010 to December 31, 2012, ranked in order of their total daily attendance; Figure 14 provides a more detailed view for the highest 85 days. Twenty-seven days out of 542 fall above the 95th percentile, with a total daily attendance of approximately 34,200. Similarly, 54 and 81 days fall above the 90th and 85th percentiles, with total daily attendances of 27,200 and 22,000, respectively. A noticeable change in the slope of the total daily attendance line can be observed immediately prior to the 85th percentile day, where the total daily attendance starts increasing at a faster rate.





Moscone Center North and South in combination with Moscone West – Jan 2010 to Dec 2012 Ranked Daily Attendance on Event Days



Moscone Center North and South in combination with Moscone West – Jan 2010 to Dec 2012 Ranked Total Daily Attendance on Event Days – Detail for Highest 85 Days

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Previous transportation planning analyses of convention centers have used the 85th percentile to define the total daily attendance for the design day.²⁵ This factor appears appropriate for this study as well given the patterns observed for the total daily attendance in Figure 13, where the slope of the graph changes noticeably after the 85th percentile; it is therefore recommended that the 85th percentile be used for the transportation analysis of the Moscone Center. The existing 85th percentile of total daily attendance is 22,000, considered a large-attendance event, in contrast to the average total daily attendance of about 11,900, a medium-attendance event. About 26 days a year (approximately seven percent of the 365 days) would have a total daily attendance above the 85th percentile of 22,000.

Table 11 indicates that the average daily event attendance per 1,000 square feet of exhibition space at the Moscone Center is approximately 30 attendees. This value is lowest for those events taking place at Moscone North plus West (15 daily event attendees per 1,000 square feet), and highest (except for Moscone West which is not part of the proposed project) for the simultaneous use of all three buildings (42 attendees per 1,000 square feet).

Moscone Center Number of Events and Attendance by Location from January 1, 2010 to December 31, 2012						
Location	Approximate Exhibition Space (square feet) ^[a]	Number of Events ^[b]	Daily Event Attendance ^[b]	Average number of daily attendees per 1,000 sq. ft. per event		
North	181,400	22	104,304	27.4		
South	260,600	24	130,364	20.8		
West	99,900	68	305,532	45.0		
North + South	442,000	33	406,074	27.8		
North + West	281,300	2	8,497	15.1		
South + West	360,500	1	10,770	29.9		
North + South + West	541,900	25	564,408	41.7		
Overall Average				29.7		

Notes:

[a] Source: http://www.moscone.com/press/stats.html; last consulted May 6, 2013

[b] Calculated from the event registered attendance data provided by the Moscone Convention Center operator (see Appendix B), using the adjustment factors previously presented in Table 10, p. 31.

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²⁵ For example, the Spokane Convention Center Expansion (ITS, 2013), the San Diego Convention Center Expansion, or the New York Javits Convention Center Expansion.



Thus, the proposed increase of approximately 140,000 square feet of new exhibition space would represent a project-generated increase of about 4,200 attendees per day²⁶, resulting in a design day of 26,200 daily event attendees for the Expansion Project (existing 85th percentile of 22,000 daily attendees plus a project generated increase of 4,200 daily attendees). It is estimated that on average each event attendee would generate three trips²⁷ to and from the Moscone Center; thus the Expansion Project would generate 12,600 additional attendee person-trips per day.

As previously described in Section 3-Moscone Center Expansion Project (p. 26), the Expansion Project would increase the number of employees during an event day by approximately 28 full time employees, for a total of almost 1,000 employees on an event day under the Existing plus Expansion project scenario (971 existing employees on the highest event day plus 28 additional employees). Based on trip generation data presented in the SF Guidelines, it is estimated that each employee at the Moscone Center would generate about 2.5 person-trips per day,²⁸ thus the Expansion Project would generate 70 additional employee person-trips per day. A summary of the daily trip generation calculations is included in Table 12.

Table 12
Moscone Center Expansion Project
Daily Trip Generation for Attendees and Employees

	Number of			Daily person-trips			
	Attendees	Employees	Total	Attendees	Employees	Total	
Existing	22,000	971	22,971	66,000	2,428	68,428	
Existing plus Proposed Expansion	26,200	999	27,199	78,600	2,498	81,098	
Difference	4,200	28	4,228	12,600	70	12,670	

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²⁶ This is a conservative assumption since although the proposed increase in exhibit floor space would likely increase the total number of exhibitors and their staff; it does not necessarily imply an increase in the number of event visitors.

²⁷ Assumes that half of the attendees would generate two daily trips, one inbound and one outbound, and the other half would generate four daily trips, two inbound and two outbound, as they may leave the Moscone Center during the day to go back to the hotel, a restaurant outside the immediate area, etc. The Moscone Center operator has indicated that this is a conservative assumption as most attendees would remain at the Moscone Center during the day (Dick Shaff, SMG Moscone Center, Vice President/General Manager, August 2, 2013).

²⁸ From the San Francisco Guidelines (Table C-1 for Government Office with high public use): 43.3 daily person trips per 1,000 square feet x 276 square feet per employee = 12 total daily person trips per employee. Table C-2 indicates that 20% of the daily trips are made by employees, therefore $12 \times 0.20 = 2.4$ trips per employee.



4.2 MODAL SPLIT AND VEHICLE OCCUPANCY

Separate mode of travel splits have been estimated to forecast project travel by Moscone Center attendees and employees, in accordance with data obtained from various sources. The percentages for each mode of travel for attendees and employees were estimated by comparing similar values obtained from relevant similar sources and using professional judgment. The available data includes information provided by the Moscone Center operator, convention attendee surveys conducted by the San Francisco Travel Association (previously known as the San Francisco Convention & Visitors Bureau), the SF Guidelines, and a transportation planning study conducted as part of the New York City Jacob K. Javits Convention Center expansion. More weight was given in the allocation of mode of travel percentages to data obtained from the Moscone Center operator, such as the estimation of attendee shuttle bus travel, as it is considered more relevant for this study.²⁹

On the other hand, when selecting the most appropriate estimation of event attendees who might travel by auto, the data provided by the Moscone Center operator was also compared against similar data obtained from the New York City Jacob K. Javits Convention Center, which is also located in a dense urban area, as an additional source for data validation. As shown in Table 13 on the next page the modal split ratio for the Javits Convention Center (9 percent) is similar to the ratio provided by the Moscone Center operator (5 percent); more detailed origin/destination and modal split data for the Javits Convention Center is shown in Appendix G.

Furthermore, monthly parking usage data for the Fifth/Mission garage, which is adjacent to the Moscone Center, was compared with the total monthly attendance at the Moscone Center (previously shown in Figure 8) to see if automobile usage by event attendees had any effects in the overall parking utilization at the garage. The data, which is summarized in Appendix H, shows that for the three months with the highest total daily event attendance (March, October and November), only November had a parking utilization rate of 63 percent, which is above the annual average rate of 57 percent. Along the same lines, the three months with the lowest total daily event attendance (April, June and August) all have parking utilization rates that are very close to the annual average value (51, 56, and 57 percent, respectively). Thus, it can be concluded that the number of event attendees driving to the Moscone Center is generally sufficiently small as not to substantially alter the parking conditions in the area.

The Expansion Project mode of travel information is summarized in Table 13 on the next page. The mode of travel splits shown under the last column of each category were selected for the transportation analysis for the Moscone Center.

²⁹ As previously described in Section 2.5-Event Bus Operations and Taxi Service (p. 20), bus shuttle service is generally provided to/from the Moscone Center for about half of the events at the Moscone Center over one or multiple routes, depending on the expected attendance with typical headways of 10 to 20 minutes during peak demand periods; up to 36 buses per day might be in operation during heavy bus service events.



Mode of Travel for Attendees and Employees								
Mode of Travel	Moscone Center ^[a]	SFTA Visitor Research ^[b]	SF Guidelines [c]	NY Convention Center ^[d]	Selected for the analysis			
Attendees								
Auto	up to 5% [e]	26%	36%	9%	10%			
Public Transit	[f]	49%	28%	44%	5%			
Shuttle buses	55% - 60%			11%	50%			
Walk	30%	[g]	31%	11%	30%			
Other [h]	10%	25%	5%	25%	5%			
Total	100%	100%	100%	100%	100%			
		Employ	/ees					
Auto	25%		31%	22%	30%			
Public Transit	75%		58%	75%	60%			
Shuttle buses								
Walk			8%	3%	8%			
Other [h]			3%		2%			
Total	100%		100%	100%	100%			

Table 13Moscone Center Expansion Projectode of Travel for Attendees and Employee

Notes:

[a] Estimates provided by the Moscone Center operator, April 2013.

[b] *Transportation Methods Used in SF*, p. 23, Final Report: San Francisco Visitor Profile Report; prepared by Destination Analysts, Inc. for the SF Visitors Association.

[c] *Transportation Impact Analysis Guidelines for Environmental Review*, Table E-9-Visitor trips to C-3 District All Other and Table E-2-Work trips to C-3 District All Other, San Francisco Planning Department, October 2002.

[d] New York City Jacob K. Javits Convention Center Expansion Transportation Planning Assumptions, Technical Memorandum, Table 8-Regional Origins and Destinations of Convention Center Attendees, Exhibitors, and Event Staff, and Table 14- 2010 Projected Convention Center Modal Splits for Weekday Trade Shows, PBQ&D, September 2004 (see Appendix G).

[e] The percentage of attendees arriving by automobile would typically vary based on the regional presence of the sponsor of the event; i.e., Oracle and Salesforce (both local companies) events typically generate a higher percentage of auto trips whereas most other association events generate a lower percentage of auto trips.

[f] Included with "Other".

[g] Walk mode not surveyed.

[h] "Other" includes bicycle, motorcycle, and additional modes such as taxis or limousines.

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Table 14 on the next page provides a summary of the existing and future trips that would be generated by the additional 140,000 square feet of exhibition space during the AM and PM peak hours, by mode of travel.



	Number of Person-trips						
Mode of	Ex	isting Conditio	ns	Existing	plus Expansior	n Project	
Travel	Attendees [a]	Employees	Total	Attendees [a]	Employees	Total	Difference
AM Peak Hour							
Auto	462	65	527	550	67	617	90
Public Transit	231	129	360	275	133	408	48
Shuttle buses	2,310	0	2,310	2,751	0	2,751	441
Walk	1,386	18	1,404	1,651	19	1,670	266
Other ^[d]	231	5	236	275	6	281	45
Total	4,620	217	4,837	5,502	225	5,727	890
PM Peak Hour							
Auto	726	62	788	865	64	929	141
Public Transit	363	124	487	432	128	560	73
Shuttle buses	3,630	0	3,630	4,323	0	4,323	693
Walk	2,178	17	2,195	2,594	18	2,612	417
Other ^[d]	363	5	368	432	6	438	70
	7,260	208	7,468	8,646	216	8,862	1,394

Table 14Moscone Center Expansion ProjectPeak Hour Person-trip Generation by Mode of Travel

Notes:

 [a] Based on surveys conducted at the New York Javits Convention Center; *Convention Center Expansion Transportation Planning Assumptions Technical Memorandum*, Table 10, PBQ&D, September 2004 (see Appendix G). The AM peak hour percentage of total daily attendee trips is approximately 7 percent, and the PM peak hour percentage of total daily attendee trips is 11 percent.

[b] The AM peak hour percentage of total daily trips for employees has been estimated using the weekday AM to weekday PM trip rate ratio for office use taken from the ITE Trip Generation Manual (Eighth Edition) and the PM peak hour percentage taken from Table C-1 in the *Transportation Impact Analysis Guidelines for Environmental Review*, San Francisco Planning Department, October 2002.

[c] *Transportation Impact Analysis Guidelines for Environmental Review*, Table C-1, San Francisco Planning Department, October 2002; the PM peak hour percentage of total daily attendance for office use is 8.5 percent; this is a conservative assumption as only a third of the total number of employees work during regular business hours.

[d] "Other" includes bicycle, motorcycle, and additional modes such as taxis or limousines.

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An average private vehicle occupancy rate, as obtained from the SF Guidelines for visitors and employees to the C-3 District where the Moscone Center is located, was applied to the number of auto person-trips to determine the number of additional private vehicle trips generated by the Expansion Project. Table 15 on the next page summarizes the number of existing and future private vehicles that would be generated by the additional 140,000 square feet of exhibition space during the day, as well as during the AM and the PM peak hours.



Time Denie d	Number of Vehicle-trips (total both ways)						
Time Period	Attendees [a]	Employees ^[b]	Total				
Existing Conditions							
Daily	3,568	498	4,066				
AM Peak Hour	250	44	294				
PM Peak Hour	392	42	434				
Existing plus Expansion Project							
Daily	4,250	512	4,762				
AM Peak Hour	298	46	344				
PM Peak Hour	468	44	512				
Difference							
Daily	682	14	696				
AM Peak Hour	48	2	50				
PM Peak Hour	76	2	78				

Table 15 Moscone Center Expansion Project Private Vehicle-trip Generation

Notes:

[a] Average occupancy = 1.85 persons per vehicle; *Transportation Impact Analysis Guidelines for Environmental Review*, Table E-9-Visitor trips to C-3 District All Other, San Francisco Planning Department, October 2002.

[b] Average occupancy = 1.46 persons per vehicle; *Transportation Impact Analysis Guidelines for Environmental*

Review, Table E-2-Work trips to C-3 District All Other, San Francisco Planning Department, October 2002. Adavant Consulting – October 2013

4.3 TRIP DISTRIBUTION

The place of origin of trips to the Moscone Center was derived from data obtained from the Moscone Center operator and the SF Guidelines; the information is summarized in Table 16 on the next page. The trip distributions shown under the last column of each category were selected for the transportation analysis for the Moscone Center. These distributions are based on the place of origin for convention attendees on the day of the event (e.g., hotels³⁰), not on the place of origin of their trip to San Francisco (e.g., out of State).

The place of origin trip distribution percentages for attendees and employees were selected by comparing values provided by the Moscone Center operator with those obtained from the SF Guidelines and using professional judgment. More weight was given to the data obtained from the Moscone Center operator, as it is considered more relevant for this study.

³⁰ There are approximately 25,000 hotel rooms within walking distance of the Moscone Convention Center; Source: *Moscone Convention Center Expansion- Cost Benefit Phase II Analysis*, p. 4; prepared by Jones Lang Lasalle Hotels for the San Francisco Tourism Improvement District, March 16, 2012.



Table 16
Moscone Center Expansion Project
Trips Distribution Patterns for Attendees and Employees

		Atter	ndees	Employees			
Place of Origin	Moscone Center Conventions ^[a]	Moscone Center Consumer Shows ^[a]	SF Guidelines (b), [c]	Selected for the analysis	Moscone Center ^[a]	SF Guidelines ^[d]	Selected for the analysis
San Francisco	100%	80%	57%	70% ^[e]	49%	62%	50%
Other Bay Area	[f]	[f]	28%	20%	51%	37%	50%
Out of region		20%	15%	10%		1%	
Total	100%	100%	100%	100%	100%	100%	100%

Notes:

[a] Estimates provided by the Moscone Center operator, April 2013.

[b] Includes 80 percent of individuals traveling from outside California staying at Bay Area hotels and lodgings.

[c] *Transportation Impact Analysis Guidelines for Environmental Review*, Table E-9-Visitor trips to C-3 District All Other, San Francisco Planning Department, October 2002.

[d] *Transportation Impact Analysis Guidelines for Environmental Review*, Table E-2-Work trips to C-3 District All Other, San Francisco Planning Department, October 2002.

[e] Approximately 656,000 convention attendees or 72 percent of the total annual attendance at Moscone Center (907,990) stayed at SF hotels in 2011; Source: *Moscone Expansion Project-Fiscal Responsibility & Feasibility Report*, Table II, p. 6, SF Office of Economic and Workforce Development, January 2013.

[f] The event attendee data available from the Moscone Center operator does not identify locations outside San Francisco; therefore all trips are included in the San Francisco percentage.

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Table 17 on the next page provides a summary of the existing and future private vehicle trips that would be generated by the additional 140,000 square feet of exhibition space during the AM and PM peak hours, by place of origin. More detailed calculations are presented in Appendix F of this technical memorandum.



Place of	Existing Conditions		Existing Conditions Existing plus Proposed Expansion		Existing Conditions Existing plus Proposed Expansion			Difference	
Origin	Daily	AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour	PM Peak Hour
San Francisco	2,847	206	303	3,331	241	357	484	35	54
Other Bay Area	812	59	88	956	69	104	144	10	16
Out of region	407	29	43	475	34	51	68	5	8
Total	4,066	294	434	4,762	344	512	696	50	78
 Inbound ^[a] 	2,033	272	60	2,381	321	69	348	49	9
- Outbound ^[a]	2,033	22	374	2,381	23	443	348	1	69

Table 17Moscone Center Expansion ProjectNumber of Private Vehicle Trips by Place of Origin and Time Period

Note:

[a] Distribution of inbound and outbound trips is based on surveys conducted at the New York City Jacob K. Javits Convention Center; *Convention Center Expansion Transportation Planning Assumptions Technical Memorandum*, Table 10, PBQ&D, September 2004 (see Appendix G); calculations are shown in Appendix F.

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4.4 FREIGHT TRUCK DEMAND

Freight truck delivery demand was estimated based on data provided by the Moscone Center operator for the 2013 SPIE Photonics West convention (February 5 to 7, 2013), a heavy-freight type event with an estimated attendance of 19,500. The number of one-way truck trips generated by a truck depends on its type of cargo. Trucks carrying decorating equipment perform a total of four truck trips per load (or two truck round trips) during move-in plus break-down operations, while those carrying exhibit materials packaged in crates perform a total of eight truck trips per load (or four truck round trips) during move-in plus break-down operations, as shown in Table 18 on the next page. Each food and beverage load generates two one-way truck trips.



Table 18
Moscone Center Expansion Project
Number of Freight Truck-trips per Truck by Type of Load

lypes of Freight Truckloads ^{and}					
Decorating Equipment	Exhibit Freight				
Move-in Event Operations					
 Loaded truck arrives to unload equipment 	 Loaded truck arrives to unload equipment 				
- Empty truck departs	- Empty truck departs				
	- Empty truck arrives to pick up empty equipment crates				
	 Loaded truck departs with empty equipment crates 				
Total: two truck trips per move-in load	Total: four truck-trips per move-in load				
Break-down Ev	vent Operations				
 Empty truck arrives to pick up equipment 	- Loaded truck arrives to deliver empty equipment crates				
- Loaded truck departs	- Empty truck departs				
	 Empty truck arrives to pick up equipment 				
	- Loaded truck departs				
Total: two truck trips per break-down load	Total: four truck-trips per break-down load				
Noto:					

Note:

[a] In addition, each food and beverage load generates two one-way truck trips.

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The Expansion Project would be expected to increase the number of freight trucks (primarily for the heavy freight-type events) and food and beverage trucks by approximately 32 percent.³¹ The existing and future truck demand that would be generated by the additional 140,000 square feet of exhibition space is shown in Table 19 on the next page. The table shows first the number of existing truck trips calculated from the truck data previously presented in Table 5 (p. 20). As previously described, each decorating equipment and food and beverage truck generates two one-way trips, while each exhibit freight truck generates four one-way truck trips. The number of existing truck trips is then multiplied by a 1.317 factor in order to obtain the future truck demand generated by the Moscone Center Expansion Project.

³¹ An increase of about 140,000 square feet of exhibition space over the existing total of approximately 442,000 square feet of exhibition space at Moscone Center North and South results in a factor of 1.317, as described in Section 3-The Moscone Center Expansion Project (p. 26).



Table 19Moscone Center Expansion ProjectMaximum and Average Truck Trips by Shift [a]for a Heavy Freight-Type Event

	Number of Truck Trips by Unloading/Loading Shift							
Type of Freight	Move-i	n Day	Event	t Day	Break-do	own Day		
	Maximum	Average	Maximum	Average	Maximum	Average		
Existing Conditions								
Decorating Equipment ^[b]	24	6	12	4	42	28		
Exhibit Freight ^[c]	172	52	92	28	320	216		
Food and Beverage ^[d]	52	32	42	40	20	20		
Total	248	90	146	72	382	264		
Existing plus Proposed E	xpansion							
Decorating Equipment ^[b]	32	8	16	6	56	36		
Exhibit Freight ^[c]	228	68	120	36	420	284		
Food and Beverage ^[d]	68	42	56	52	26	26		
Total	328	118	192	94	502	346		
Difference	80	28	46	22	120	82		

Notes:

[a] During the morning (from approximately 7 AM to 3:30 PM) or evening (from approximately 3:30 PM to midnight) shifts.

[b] Each decorating equipment load generates two one-way truck trips.

[c] Each exhibit freight load generates four one-way tuck trips.

[d] Each food and beverage load generates two one-way truck trips.

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4.5 EVENT BUS DEMAND

As previously shown in Table 14 (p. 37), there would be approximately 441 and 693 additional attendee person trips traveling by bus shuttle from designated hotels to the Moscone Center during the AM and PM peak hours, respectively, as a result of the Project Expansion. As previously indicated in Section 2.5-Event Bus Operations and Taxi Service (p. 20), shuttle bus service is provided over one or multiple routes with up to 36 buses per day, depending on the expected attendance.

The 441 and 693 additional attendees using the bus shuttle service during the AM and PM peak hours, respectively, represent 10 to 16 additional buses per hour arriving and departing the Moscone Center, assuming a vehicle capacity of about 45 seats per bus, or one additional bus every 4 to 6 minutes.



4.6 PARKING DEMAND

The additional parking demand for the Expansion Project was determined by applying the average mode split and the vehicle occupancy from the trip generation estimation to the expected additional number of event attendees and employees generated by the additional 140,000 square feet of exhibition space; a parking demand summary for existing and existing plus proposed expansion conditions is presented in Table 20; more detailed information is presented in Appendix F.

Table 20 Moscone Center Expansion Project Parking Demand						
Time Period	Existing Conditions	Number of Parking Spaces Existing plus Proposed Expansion	Difference			
Attendees Employees	1,784 249	2,125 256	341 7			
Total	2,033	2,381	348			

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APPENDIX A Moscone Center 2010-2012 Attendance and Events by Event Size

Moscone Center 2012 through 2012 Event Attendance by Size of Event - Source: Moscone Center, October 2013

	NO. OF EVENUS U	Ind Size of Conve	ntion per Month	lotal	
YEAR 2010	Small	Medium	Large	per month	
January 2010	1	2	2	5	
	455	7684	34,500	42,639	
February 2010	1	5	2	8	
	755	21,312	42,832	64,899	
March 2010	0	1	3	4	
	0	1,834	56,451	58,285	
April 2010	0	4	2	6	Includes Wondercon with 39,500 registered attendees
May 2010	0	17,255	51,113	68,368	(public event) - no longer Moscone client
May 2010	0	4	10.075	5	
lupa 2010	0	/0,9/0	19,275	90,245	
Julie 2010	0	4	0	4	
July 2010	0	21,423	0	21,423	
July 2010	0	2 11 000	1	J 11 222	
August 2010	0	2	29,423	41,323	
August 2010	0	J 15 786	17 021	4 22 807	
Sontombor 2010	1	10,700	2	JZ,007	
	1 096	5 886	58 822	65 804	Includes Oracle Openworld
October 2010	1,070	3,000	30,022	7	
	1 650	21 303	40 937	63 890	
November 2010	0	21,000	2	4	
	0	10.153	284.451	294.604	Includes SF Auto (public event)
Dedecember 2010	1	2	0	3	
	4,000	42,337	0	46,337	Includes Dreamforce
2010 Totals:	5	33	19	57	
	7,956	247,843	634,825	890,624	Total reported attendance
	No. of Events a	nd Size of Conve	ntion per Month	Total	
YEAR 2011					
	Small	Medium	Large	per month	
January 2011	Small 1	Medium 4	Large 0	per month 5	
January 2011	Small 1 2,902	Medium 4 78,300	Large 0 0	5 81,202	
January 2011 February 2011	Small 1 2,902 2	Medium 4 78,300 3	Large 0 0 0	per month 5 81,202 5	
January 2011 February 2011	Small 1 2,902 2 6,387	Medium 4 78,300 3 59,470	Large 0 0 0 0 0 0	per month 5 81,202 5 65,857	
January 2011 February 2011 March 2011	Small 1 2,902 2 6,387 0	Medium 4 78,300 3 59,470 4	Large 0 0 0 0 1	per month 5 81,202 5 65,857 5	
January 2011 February 2011 March 2011	Small 1 2,902 2 6,387 0 0 0	Medium 4 78,300 3 59,470 4 38,588	Large 0 0 0 0 1 19,386	per month 5 81,202 5 65,857 5 57,974	
January 2011 February 2011 March 2011 April 2011	Small 1 2,902 2 6,387 0 0 1	Medium 4 78,300 3 59,470 4 38,588 4	Large 0 0 0 1 19,386 1	per month 5 81,202 5 65,857 5 57,974 6	Includes Wondercon with 44,671 registered attendees
January 2011 February 2011 March 2011 April 2011	Small 1 2,902 2 6,387 0 0 0 1 577	Medium 4 78,300 3 59,470 4 38,588 4 24,847	Large 0 0 0 1 19,386 1 47,402	per month 5 81,202 5 65,857 5 57,974 6 72,826	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client
January 2011 February 2011 March 2011 April 2011 May 2011	Small 1 2,902 2 6,387 0 0 1 577 0 0	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 21,857	Large 0 0 0 1 19,386 1 47,402 1 10,040	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,207	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client
January 2011 February 2011 March 2011 April 2011 May 2011	Small 1 2,902 2 6,387 0 0 1 5777 0 0 1 5777 0 0 1	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356	Large 0 0 0 1 19,386 1 47,402 1 12,940	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,296	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client
January 2011 February 2011 March 2011 April 2011 May 2011 June 2011	Small 1 2,902 2 6,387 0 0 1 577 0 0 1 577 0 1 577 0 1 577	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356 5 22,22	Large 0 0 0 1 19,386 1 47,402 1 12,940 0 0	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,296 6 20,222	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client
January 2011 February 2011 March 2011 April 2011 May 2011 June 2011	Small 1 2,902 2 6,387 0 0 1 577 0 0 1 577 0 1 577 0 0 0	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356 5 26,722	Large 0 0 0 1 19,386 1 47,402 1 12,940 0 0 1	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,296 6 28,322 2	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client
January 2011 February 2011 March 2011 April 2011 May 2011 June 2011 July 2011	Small 1 2,902 2 6,387 0 0 0 1 577 0 0 1 577 0 0 1 500 0 0 0 0 0 0 0 0 0 0 0 0	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356 5 26,722 2 8,441	Large 0 0 0 1 19,386 1 47,402 1 12,940 0 0 0 1 20,995	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,296 6 28,322 3 20,426	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client
January 2011 February 2011 March 2011 April 2011 May 2011 June 2011 July 2011	Small 1 2,902 2 6,387 0 0 0 0 1 577 0 0 0 1 577 0 0 0 1 1,600 0	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356 5 26,722 2 8,441 1	Large 0 0 0 1 19,386 1 47,402 1 12,940 0 0 0 1 30,985 2	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,296 6 28,322 3 39,426 2	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client
January 2011 February 2011 March 2011 April 2011 May 2011 June 2011 July 2011 August 2011	Small 1 2,902 2 6,387 0 0 1 5777 0 0 1 577 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356 5 26,722 2 8,441 1 2,200	Large 0 0 0 1 19,386 1 47,402 1 12,940 0 0 0 1 30,985 2 50,907	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,296 6 28,322 3 39,426 3 42,287	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client
January 2011 February 2011 March 2011 April 2011 May 2011 June 2011 July 2011 August 2011	Small 1 2,902 2 6,387 0 0 0 1 577 0 0 1 1,600 0 0 0 0	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356 5 26,722 2 8,441 1 2,290 3	Large 0 0 0 1 19,386 1 47,402 1 12,940 0 0 0 1 30,985 2 59,997 2	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,296 6 28,322 3 39,426 3 62,287 5	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client Includes Dreamforce
January 2011 February 2011 March 2011 April 2011 May 2011 June 2011 July 2011 August 2011 September 2011	Small 1 2,902 2 6,387 0 0 0 1 577 0 0 0 0 1 1,600 0	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356 5 26,722 2 8,441 1 2,290 3 10,082	Large 0 0 0 1 19,386 1 47,402 1 12,940 0 0 0 1 30,985 2 59,997 2 25,255	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 72,826 6 44,296 6 28,322 3 39,426 3 62,287 5 35,337	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client Includes Dreamforce
January 2011 February 2011 March 2011 April 2011 May 2011 June 2011 July 2011 August 2011 September 2011 October 2011	Small 1 2,902 2 6,387 0 0 0 1 577 0 0 0 0 1 577 0 0 0 0 0 1 1,600 0	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356 5 26,722 2 8,441 1 2,290 3 10,082 3	Large 0 0 0 1 19,386 1 47,402 1 12,940 0 0 0 1 30,985 2 59,997 2 25,255 2	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,296 6 28,322 3 39,426 3 62,287 5 35,337 6	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client Includes Dreamforce
January 2011 February 2011 March 2011 April 2011 May 2011 June 2011 July 2011 August 2011 September 2011 October 2011	Small 1 2,902 2 6,387 0 0 0 1 577 0 0 0 0 0 1 577 0 0 0 0 0 1 1,600 1 74/3 3 3 3 3 3 3 <td>Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356 5 26,722 2 8,441 1 2,290 3 10,082 3 16,882</td> <td>Large 0 0 0 1 19,386 1 47,402 1 12,940 0 0 0 1 30,985 2 59,997 2 25,255 2 60,018</td> <td>per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,296 6 28,322 3 39,426 3 39,426 3 62,287 5 35,337 6 77,643</td> <td>Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client Includes Dreamforce</td>	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356 5 26,722 2 8,441 1 2,290 3 10,082 3 16,882	Large 0 0 0 1 19,386 1 47,402 1 12,940 0 0 0 1 30,985 2 59,997 2 25,255 2 60,018	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,296 6 28,322 3 39,426 3 39,426 3 62,287 5 35,337 6 77,643	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client Includes Dreamforce
January 2011 February 2011 March 2011 April 2011 May 2011 June 2011 July 2011 August 2011 September 2011 October 2011 November 2011	Small 1 2,902 2 6,387 0 0 0 0 1 577 0 0 0 0 1 577 0 0 0 0 1 1,600 1 743 0	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356 5 26,722 2 8,441 1 2,290 3 10,082 3 16,882 6	Large 0 0 0 1 19,386 1 47,402 1 12,940 0 0 0 1 30,985 2 59,997 2 25,255 2 59,255 2 60,018 1	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,296 6 28,322 3 39,426 3 62,287 5 35,337 6 77,643 7	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client Includes Dreamforce
January 2011 February 2011 March 2011 April 2011 May 2011 June 2011 July 2011 August 2011 September 2011 October 2011 November 2011	Small 1 2,902 2 6,387 0 0 0 1 577 0 0 0 0 1 577 0 0 0 0 0 1 1,600 1 743 0	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356 5 26,722 2 8,441 1 2,290 3 10,082 3 16,882 6 41,126	Large 0 0 0 1 19,386 1 47,402 1 12,940 0 0 0 1 30,985 2 59,997 2 25,255 2 60,018 1 270,120	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,296 6 28,322 3 39,426 3 6 28,322 3 39,426 3 5 35,337 6 77,643 7 311,246	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client Includes Dreamforce Includes Oracle Openworld Includes SF Auto (public event)
January 2011 February 2011 March 2011 April 2011 May 2011 June 2011 July 2011 August 2011 September 2011 October 2011 November 2011 December 2011	Small 1 2,902 2 6,387 0 0 1 577 0 0 1 577 0	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356 5 26,722 2 8,441 1 2,290 3 10,082 3 16,882 6 41,126 1	Large 0 0 0 1 19,386 1 47,402 1 12,940 0 0 0 1 30,985 2 59,997 2 59,997 2 25,255 2 60,018 1 270,120 0	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,296 6 28,322 3 39,426 3 62,287 5 35,337 6 77,643 7 311,246 1	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client Includes Dreamforce Includes Oracle Openworld Includes SF Auto (public event)
January 2011 February 2011 March 2011 April 2011 May 2011 June 2011 July 2011 August 2011 September 2011 October 2011 November 2011 December 2011	Small 1 2,902 2 6,387 0 0 1 5777 0 0 1 577 0	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356 5 26,722 2 8,441 1 2,290 3 10,082 3 16,882 6 41,126 1 22,167	Large 0 0 0 1 19,386 1 47,402 1 12,940 0 0 0 1 30,985 2 59,997 2 25,255 2 59,997 2 25,255 2 60,018 1 270,120 0 0 0 0 0 0 0 0 0 0 0 0 0	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,296 6 28,322 3 39,426 3 39,426 3 62,287 5 35,337 6 77,643 7 311,246 1 22,167	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client Includes Dreamforce Includes Oracle Openworld Includes SF Auto (public event)
January 2011 February 2011 March 2011 April 2011 May 2011 June 2011 July 2011 August 2011 September 2011 October 2011 November 2011 December 2011 2011 Totals:	Small 1 2,902 2 6,387 0 0 1 1 577 0 0 0 1 1 1,600 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Medium 4 78,300 3 59,470 4 38,588 4 24,847 5 31,356 5 26,722 2 8,441 1 2,290 3 10,082 3 16,882 6 41,126 1 22,167 41	Large 0 0 0 1 19,386 1 47,402 1 12,940 0 0 0 1 30,985 2 59,997 2 25,255 2 59,997 2 25,255 2 60,018 1 270,120 0 0 1	per month 5 81,202 5 65,857 5 57,974 6 72,826 6 44,296 6 28,322 3 39,426 3 62,287 5 35,337 6 77,643 7 311,246 1 22,167 58	Includes Wondercon with 44,671 registered attendees (public event) - no longer Moscone client Includes Dreamforce Includes Oracle Openworld Includes SF Auto (public event)

Moscone Center 2012 through 2012 Event Attendance by Size of Event - Source: Moscone Center, October 2013

	No. of Events and Size of Convention per Mon			Total	
YEAR 2012	Small	Medium	Large	per month	
January 2012	0	1	3	4	
-	0	2,965	64,932	67,897	
February 2012	1	2	2	5	
	1,326	5,054	43,618	49,998	
'March 2012	1	3	3	7	
	1,443	15,359	52,190	68,992	
April 2012	0	3	0	3	
	0	19,082	0	19,082	
May 2012	1	3	1	5	
	652	13,444	15,100	29,196	
June 2012	2	6	1	9	
	2,800	34,535	11,743	49,078	
July 2012	1	1	1	3	
	1,100	8,630	29,263	38,993	
August 2012	1	1	2	4	
	679	3,250	32,791	36,720	
September 2012	0	2	1	3	
	0	14,237	47,556	61,793	Includes Dreamforce
October 2012	1	2	4	7	
	2,013	11,376	113,731	127,120	Includes Oracle Openworld
November 2012	0	3	2	5	
	0	17,592	181,306	198,898	Includes SF Auto (public event)
December 2012	0	2	1	3	
	0	10,296	22,629	32,925	
2012 Totals:	8	29	21	58	
	10,013	155,820	614,859	780,692	Total reported attendance

Notes:

1. Size of convention is identified by number of attendees (North and South buildings)

2. Color Indicates when Howard Street is closed between Third and Fourth Streets

3. Non-convention event with mainly Bay Area attendees (Autoshow, tradeshow)

4. Indicates Wondercon which is no longer a Moscone Center client

5. All attendance figures include registered attendees and registered exhibitors

Moscone Center Event Analysis 2010-2012

ALL MOSCONE Years 2010 through 2012		NUMBER C	F EVENTS			TOTAL EVENT	REGISTRANTS	5	A	VG. REGISTRA	NTS PER EVI	ENT
Year	Small	Medium	Large	Total	Small	Medium	Large	Total	Small	Medium	Large	Total
2010	5	33	19	57	7,956	247,843	634,825	890,624	1,600	7,500	33,400	15,600
2011	6	41	11	58	12,209	360,271	526,103	898,583	2,000	8,800	47,800	15,500
2012	8	29	21	58	10,013	155,820	614,859	780,692	1,300	5,400	29,300	13,500
TOTAL	19	103	51	173	30,178	763,934	1,775,787	2,569,899	1,600	7,400	34,800	14,900
Average per year	6.3	34.3	17.0	57.7	10,059	254,645	591,929	856,633				
	11%	60%	29%	100%								

APPENDIX B Moscone Center 2010-2012 Attendance and Events by Event Type

Jourd		, August	2013			Fyont	Fyent	Ava Daily	I	
ID	Building	Event S	Start Date	Event I	End Date	Days	Registrants	Avg. Dally Attend.	Event Name	Event Type
1	South	01/12/10	Tuesday	01/12/10	Tuesday	1	1,237	1,237	The Board Match	Convention
3	North/South	01/17/10	Sunday	01/19/10	Tuesday	3	25,544	8,515	Winter Fancy Food Show	Tradeshow
4	North/South	01/26/10	Tuesday	01/28/10	Thursday	3	18,327	15,578	SPIE-Photonics West	Convention/Tradeshow
6	North	02/02/10	Tuesday	02/05/10	Friday	4	2,673	2,272	Molecular Medicine	Convention/Tradeshow
7	South	02/06/10	Saturday	02/09/10	Tuesday	4	13,800	3,450	SF Intl Gift Fair	Tradeshow
8	North	02/06/10	Saturday	02/13/10	Saturday	8	29,032	24,677	MacWorld	Convention/Tradeshow
10	South	02/17/10	Wednesday	02/19/10	Friday	3	3,609	3,068	Informex	Convention/Tradeshow
11	North	02/20/10	Saturday	02/23/10	Tuesday	4	7,000	5,950	Biophysical Society	Convention/Tradeshow
14	North/South	03/01/10	Monday	03/05/10	Friday	5	20,100	17,085	RSA Security Conference	Convention/Tradeshow
15	North/South/W2	03/08/10	Monday	03/10/10	Wednesday	3	18,750	15,938	UBM/Game Developers' Conf	Convention/Tradeshow
17	North/South/West	03/21/10	Sunday	03/25/10	Thursday	5	18,093	15,379	Am Chemical Soc	Convention/Tradeshow
19	South	04/02/10	Friday	04/04/10	Sunday	3	39,500	13,167	WonderCon	Tradeshow
21	North/South/West	04/09/10	Friday	04/14/10	Wednesday	6	6,230	6,230	SunGard	Convention
22	South	04/19/10	Monday	04/21/10	Wednesday	3	3,115	3,115	Drupal Association	Convention
23	North	04/20/10	Tuesday	04/22/10	Thursday	3	11,632	9,887	ad:tech	Convention/Tradeshow
24	North/South	04/26/10	Monday	04/29/10	Thursday	4	3,027	3,027	Cisco Partner Summit	Corporate
28	North	05/11/10	Tuesday	05/11/10	Tuesday	1	2,751	2,751	Prof Business Womens' Conference	Convention
29	North/South	05/15/10	Saturday	05/19/10	Wednesday	5	4,943	4,202	Am Coll of OBGYN	Convention/Tradeshow
31	North/South/West	05/29/10	Saturday	06/03/10	Thursday	6	19,275	16,384	Am Urological Assn	Convention/Tradeshow
32	South	06/08/10	Tuesday	06/11/10	Friday	4	9,503	2,376	Pacific Coast Builders Conference	Tradeshow
37	Esplanade	07/06/10	Tuesday	07/06/10	Tuesday	1	1,200	1,200	Seniors' Ball	Community
38	North/South/West	07/13/10	Tuesday	07/15/10	Thursday	3	31,979	27,182	Semicon West	Convention/Tradeshow
41	South	07/31/10	Saturday	08/03/10	Tuesday	4	15,237	3,809	SF Intl Gift Fair	Tradeshow
43	North	08/14/10	Saturday	08/17/10	Tuesday	4	7,250	6,163	Intl Soc of Aesthetic Plastic Surgery	Convention/Tradeshow
46	North/South/West	08/30/10	Monday	09/02/10	Thursday	4	17,115	14,548	VMWare Inc	Convention/Tradeshow
47	South	09/09/10	Thursday	09/11/10	Saturday	3	17,359	14,755	CA Dental Assn	Convention/Tradeshow
48	North	09/13/10	Monday	09/14/10	Tuesday	2	1,096	548	APP Nation	Tradeshow
50	North/South/West	09/19/10	Sunday	09/23/10	Thursday	5	41.463	35.244	Oracle OpenWorld	Convention/Tradeshow
53	North/South	09/28/10	Tuesday	10/05/10	Tuesday	8	8.735	7.425	Am Acad of Pediatrics	Convention/Tradeshow
56	North/South	10/10/10	Sunday	10/13/10	Wednesday	4	10.783	9,166	Direct Marketing Assn	Convention/Tradeshow
57	North/South	10/16/10	Saturday	10/17/10	Sunday	2	5.600	5.600	Leukemia/Lymphoma Soc	Association
59	South	10/19/10	Tuesday	10/19/10	Tuesday	1	880	880	Willie Brown Breakfast	Legal.Gov't.Public.Admin.
60	North/South	10/24/10	Sunday	10/26/10	Tuesday	3	14.461	12,292	Am Osteopathic Assn	Convention/Tradeshow
65	North	11/04/10	Thursday	11/07/10	Sunday	4	14,154	12,031	Audio Engineering Soc	Convention/Tradeshow
68	North/South	11/20/10	Saturday	11/28/10	Sunday	9	296 772	32 975	SE Int'l Auto Show	Tradeshow
70	South	11/29/10	Monday	12/04/10	Saturday	6	4 000	3 400	CA School Boards Assn	Convention/Tradeshow
71	North/South/West	12/06/10	Monday	12/08/10	Wednesday	3	20 186	17 158	Dreamforce (salesforce)	Convention/Tradeshow
72	North/South/West	12/13/10	Monday	12/17/10	Friday	5	18 723	15 915	Am Geophysical Union	Convention/Tradeshow
74	South	01/08/11	Saturday	01/11/11	Tuesday	4	13 050	3 263	SE Intl Gift Fair	Tradeshow
75	North/South	01/15/11	Saturday	01/18/11	Tuesday	4	20 225	5,205	Winter Fancy Food Show	Tradeshow
75	North/South	01/22/11	Saturday	01/27/11	Thursday	4	10,223	16 /100	SPIF_Photonics West	Convention/Tradeshow
70	North/South	01/22/11	Saturday	01/27/11	Monday	2	20 220	6 777	Natl Automobile Dealers Assn	Tradeshow
27 80	North/South	02/03/11	Monday	02/07/11	Saturday	5	10 025	16 036	PSA Security Conference	Convention/Tradeshow
00 Q1	North	02/14/11	Wodposday	02/17/11 02/25/11	Friday	2	2,720	2 /N2	Molecular Medicine	Convention/Tradoshow
01 QD	South	02/23/11	Thursday	02/25/11	Friday	ງ ງ	2,027	2,403 7 E00	Ronny Hinn Ministrice	Convention
02	Jouin	UZ/Z4/11	i nui suay	02/20/11	rnuay	۷	7,300	7,500		CONVENTION

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Juic	Source. Moscone Center, August 2013									
ID	Building	Event S	Start Date	Event	End Date	Event Days	Registrants	Avg. Dally Attend.	Event Name	Event Type
85	North/South/West	02/28/11	Monday	03/04/11	Friday	5	19,215	16,333	UBM/Game Developers' Conf	Convention/Tradeshow
86	North/South	03/09/11	Wednesday	03/13/11	Sunday	5	11,995	10,196	Natl Science Teachers Assn	Convention/Tradeshow
87	South	03/17/11	Thursday	03/19/11	Saturday	3	19,386	6,462	Intl Health & Racquet Sports Assn	Tradeshow
88	North	03/19/11	Saturday	03/19/11	Saturday	1	420	357	Communication Technology Expo	Convention/Tradeshow
90	North/South	03/21/11	Monday	03/28/11	Monday	8	10,157	8,633	Assn of Supervision/Curriculum Dev't	Convention/Tradeshow
93	South	04/01/11	Friday	04/03/11	Sunday	3	47,402	15,801	WonderCon	Tradeshow
94	North/South	04/09/11	Saturday	04/11/11	Monday	3	7,583	6,446	Natl School Boards Assn	Convention/Tradeshow
97	North	04/27/11	Wednesday	04/28/11	Thursday	2	2,812	1,406	Customer Engagement	Tradeshow
98	South	04/27/11	Wednesday	04/28/11	Thursday	2	577	289	APP Nation	Tradeshow
100	North/South/West	05/03/11	Tuesday	05/07/11	Saturday	5	12,940	10,999	Heart Rhythm Society	Convention/Tradeshow
102	North	05/10/11	Tuesday	05/10/11	Tuesday	1	2,962	2,962	Prof Business Womens' Conference	Convention
104	Esplanade	05/12/11	Thursday	05/12/11	Thursday	1	1,327	1,327	Seniors' Ball	Community
103	North	05/12/11	Thursday	05/17/11	Tuesday	6	3,248	2,761	Am Assn of Immunologists	Convention/Tradeshow
111	North/South	06/21/11	Tuesday	06/25/11	Saturday	5	7,900	6,715	US Travel Ass Intl Pow Wow	Convention/Tradeshow
112	North	06/22/11	Wednesday	06/24/11	Friday	3	8,738	2,913	Pacific Coast Builders Conference	Tradeshow
114	North/South	06/29/11	Wednesday	07/02/11	Saturday	4	4,787	4,787	McKesson Corporation	Corporate
116	North/South/West	07/12/11	Tuesday	07/14/11	Thursday	3	30,985	26,337	Semicon West	Convention/Tradeshow
120	South	08/06/11	Saturday	08/09/11	Tuesday	4	12,265	3,066	SF Intl Gift Fair	Tradeshow
123	North/South/West	08/31/11	Wednesday	09/02/11	Friday	3	49,000	41,650	Dreamforce (salesforce)	Convention/Tradeshow
126	North	09/08/11	Thursday	09/10/11	Saturday	3	913	776	AAFPRS	Convention/Tradeshow
125	North/South	09/10/11	Saturday	09/15/11	Thursday	6	8,000	6,800	Am Acad of Otolaryngology	Convention/Tradeshow
129	North	09/22/11	Thursday	09/24/11	Saturday	3	1,750	1,750	Expand your Horizons	Corporate
128	South	09/23/11	Friday	09/25/11	Sunday	3	18,103	15,388	CA Dental Assn	Convention/Tradeshow
131	North/South/West	10/03/11	Monday	10/06/11	Thursday	4	46,500	39,525	Oracle OpenWorld	Convention/Tradeshow
132	North/West	10/11/11	Tuesday	10/12/11	Wednesday	2	3,482	3,482	PayPal	Corporate
133	South	10/15/11	Saturday	10/18/11	Tuesday	4	8,000	6,800	Am Coll of Emergency Physicians	Convention/Tradeshow
135	North/South	10/23/11	Sunday	10/27/11	Thursday	5	20,820	17,697	Am Coll of Surgeons	Convention/Tradeshow
137	North/South	11/02/11	Wednesday	11/03/11	Thursday	2	42,172	42,172	Schwab Impact	Corporate
139	North/South	11/07/11	Monday	11/11/11	Friday	5	11,900	2,380	Tech Career Expo	Tradeshow
142	North/South	11/19/11	Saturday	11/27/11	Sunday	9	227,535	25,282	SF Int'l Auto Show	Tradeshow
144	North/South/West	12/04/11	Sunday	12/09/11	Friday	6	20,574	17,488	Am Geophysical Union	Convention/Tradeshow
146	North	01/14/12	Saturday	01/17/12	Tuesday	4	18,783	4,696	Winter Fancy Food Show	Tradeshow
148	North/South	01/21/12	Saturday	01/26/12	Thursday	6	20,324	17,275	SPIE-Photonics West	Convention/Tradeshow
150	North/South/West	02/08/12	Wednesday	02/11/12	Saturday	4	32,118	27,300	Am Acad of Orthopaedic Surgeons	Convention/Tradeshow
151	South	02/18/12	Saturday	02/21/12	Tuesday	4	11,500	2,875	SF Intl Gift Fair	Tradeshow
153	North	02/21/12	Tuesday	02/23/12	Thursday	3	2,654	2,256	Molecular Medicine	Convention/Tradeshow
155	North/South	02/23/12	Thursday	03/03/12	Saturday	10	21,669	18,419	RSA Security Conference	Convention/Tradeshow
156	North/South/West	03/05/12	Monday	03/11/12	Sunday	7	22,521	19,143	UBM/Game Developers' Conf	Convention/Tradeshow
157	North/South	03/10/12	Saturday	03/15/12	Thursday	6	7,322	7,322	Soc of Toxicology	Association
160	North	03/24/12	Saturday	03/29/12	Thursday	6	2,833	2,408	Soc of Interventional Radiology	Convention/Tradeshow
169	North/South/West	05/15/12	Tuesday	05/24/12	Thursday	10	15,100	12,835	Am Thoracic Soc	Convention/Tradeshow
171	South	06/04/12	Monday	06/08/12	Friday	5	7,996	6,797	Design Automation Conference	Convention/Tradeshow
173	North/South	06/16/12	Saturday	06/19/12	Tuesday	4	11,743	9,982	Am Soc of Microbiology (ICAAC)	Convention/Tradeshow
176	North	06/27/12	Wednesday	06/29/12	Friday	3	7,952	2,651	Pacific Coast Builders Conference	Tradeshow
177	South	06/28/12	Thursday	06/29/12	Friday	2	1,800	900	Tech Career Expo	Tradeshow

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Sourc										
10	Dellation	E		F	Tu d Data	Event	Event	Avg. Daily	Front Name	E
עו	Building	Event S	tart Date	Event	and Date	Days	Registrants	Attend.		Event Type
179	North/South/West	07/10/12	luesday	07/12/12	Ihursday	3	29,263	24,874	Semicon West	Convention/Tradeshow
180	Esplanade	0//14/12	Saturday	0//14/12	Saturday	1	1,100	1,100	Seniors' Ball	Community
181	North/South	07/21/12	Saturday	07/26/12	Thursday	6	8,630	7,336	Alpha Kappa Alpha Sorority	Convention/Tradeshow
184	South	08/04/12	Saturday	08/07/12	luesday	4	14,820	3,705	SF Intl Gift Fair	Iradeshow
186	North/South/West	08/26/12	Sunday	08/30/12	Thursday	5	17,971	15,275	VMWare Inc	Convention/Tradeshow
188	North/South	09/09/12	Sunday	09/12/12	Wednesday	4	11,703	9,948	Am Soc of Microbiology (ICAAC)	Convention/Tradeshow
190	North/South/West	09/18/12	Tuesday	09/21/12	Friday	4	47,556	40,423	Dreamforce (salesforce)	Convention/Tradeshow
191	North/South/West	10/01/12	Monday	10/04/12	Thursday	4	48,825	41,501	Oracle OpenWorld	Convention/Tradeshow
192	North/South/West	10/10/12	Wednesday	10/11/12	Thursday	2	5,126	5,126	Deloitte	Corporate
194	South	10/13/12	Saturday	10/14/12	Sunday	2	6,250	6,250	Leukemia/Lymphoma Soc	Association
193	North/South/West	10/18/12	Thursday	10/23/12	Tuesday	6	37,309	31,713	Am Dental Association	Convention/Tradeshow
195	South	10/24/12	Wednesday	10/24/12	Wednesday	1	2,013	2,013	SPUR	Association
196	North	10/26/12	Friday	10/29/12	Monday	4	14,926	12,687	Audio Engineering Soc	Convention/Tradeshow
197	South/West	10/28/12	Sunday	10/31/12	Wednesday	4	12,671	10,770	Am Public Health Assn	Convention/Tradeshow
199	North/West	11/02/12	Friday	11/07/12	Wednesday	6	5,900	5,015	Assn of Amer Medical Colleges	Convention/Tradeshow
200	North/South	11/06/12	Tuesday	11/10/12	Saturday	5	8,122	6,904	Am Soc for Human Genetics	Convention/Tradeshow
201	North/South/West	11/12/12	Monday	11/16/12	Friday	5	31,309	26,613	Green Building Council	Convention/Tradeshow
202	North/South	11/22/12	Thursday	11/26/12	Monday	5	149,997	29,999	SF Int'l Auto Show	Tradeshow
205	North/South/West	12/03/12	Monday	12/08/12	Saturday	6	22,629	19,235	Am Geophysical Union	Convention/Tradeshow
207	North/South	12/15/12	Saturday	12/17/12	Monday	3	7,836	6,661	Am Soc for Cell Biology	Convention/Tradeshow
2	West	01/13/10	Wednesday	01/15/10	Friday	3	5,884	5,884	Am Mathematical Society	Convention
5	West	02/02/10	Tuesday	02/04/10	Thursday	3	1,755	1,492	Photon USA	Convention/Tradeshow
9	West	02/17/10	Wednesday	02/19/10	Friday	3	4,200	4,200	Conf on Retroviruses and Opportunistic Infections	Convention
12	West	02/23/10	Tuesday	02/25/10	Thursday	3	3,830	3,256	Natl Assn of Independent Schools	Convention/Tradeshow
16	West	03/14/10	Sunday	03/16/10	Tuesday	3	1,834	1,559	Soc of Gynecologic Oncologists	Convention/Tradeshow
20	West	04/06/10	Tuesday	04/08/10	Thursday	3	4,883	4,151	Materials Research Society	Convention/Tradeshow
26	West	05/03/10	Monday	05/05/10	Wednesday	3	6,181	5,254	Web 2.0	Convention/Tradeshow
27	West	05/09/10	Sunday	05/11/10	Tuesday	3	4,650	4,650	Citrix Systems App Delivery	Convention
30	West	05/18/10	Tuesday	05/20/10	Thursday	3	4,063	4,063	Google I/O	Corporate
33	West	06/16/10	Wednesday	06/18/10	Friday	3	4,160	4,160	Intl Assn for Stem Cell Research	Convention
34	West	06/23/10	Wednesday	06/25/10	Friday	3	2,271	2,271	Google	Corporate
36	West	06/29/10	Tuesday	07/01/10	Thursday	3	5,658	4,809	Apple's WWDC	Convention/Tradeshow
39	West	07/25/10	Sunday	07/27/10	Tuesday	3	2,176	1,850	NACUBO	Convention/Tradeshow
42	West	08/06/10	Friday	08/09/10	Monday	4	3,740	3,740	Am Bar Assn	Convention
44	West	08/14/10	Saturday	08/19/10	Thursday	6	5,290	4,497	Incisivemedia Strategies	Convention/Tradeshow
49	West	09/11/10	Saturday	09/13/10	Monday	3	4,864	4,134	Intel Corp	Convention/Tradeshow
51	West	09/26/10	Sunday	09/28/10	Tuesday	3	1,569	1,569	DevCon	Corporate
54	West	10/06/10	Wednesday	10/08/10	Friday	3	14,917	12,679	Communication Technology Expo	Convention/Tradeshow
55	West	10/11/10	Monday	10/13/10	Wednesday	3	260	260	Virtual Good Summit	Convention
58	West	10/17/10	Sunday	10/20/10	Wednesday	4	6,038	5,132	Congress of Neurological Surgeons	Convention/Tradeshow
61	West	10/26/10	Tuesday	10/28/10	Thursday	3	2,146	2,146	PayPal	Corporate
63	West	10/31/10	Sunday	11/01/10	Monday	2	1,760	1,760	SPUR	Association
64	West	11/04/10	Thursday	11/05/10	Friday	2	1,365	1,365	55 IT Roadmap SF Convention	
66	West	11/07/10	Sunday	11/08/10	Monday	2	3,910	3,324	Assn of Records/Administrators	Convention/Tradeshow

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ID	Building	Event Start Date		Event End Date		Event Days	Event Registrants	Avg. Daily Attend.	Event Name	Event Type
67	West	11/17/10	Wednesday	11/19/10	Friday	3	5,925	5,036	Am Academy of Optometry	Convention/Tradeshow
77	West	01/24/11	Monday	01/27/11	Thursday	4	25,625	21,781	MacWorld	Convention/Tradeshow
83	West	02/24/11	Thursday	02/26/11	Saturday	3	3,140	2,669	Natl Assn Secondary School Principals	Convention/Tradeshow
89	West	03/19/11	Saturday	03/21/11	Monday	3	6,368	5,413	Am Acad of Allergy, Asthma, & Immunology	Convention/Tradeshow
91	West	03/28/11	Monday	03/30/11	Wednesday	3	8,909	7,573	Web 2.0	Convention/Tradeshow
95	West	04/10/11	Sunday	04/12/11	Tuesday	3	7,645	6,498	ad:tech	Convention/Tradeshow
96	West	04/26/11	Tuesday	04/28/11	Thursday	3	5,236	4,451	Materials Research Society	Convention/Tradeshow
101	West	05/08/11	Sunday	05/09/11	Monday	2	5,500	5,500	Google Developers Days	Corporate
105	West	05/15/11	Sunday	05/17/11	Tuesday	3	7,846	6,669	Intl Trademark Assn	Convention/Tradeshow
106	West	05/23/11	Monday	05/25/11	Wednesday	3	5,152	5,152	Citrix Systems	Corporate
108	West	06/06/11	Monday	06/08/11	Wednesday	3	5,795	4,926	Apple's WWDC	Convention/Tradeshow
109	West	06/15/11	Wednesday	06/17/11	Friday	3	3,300	2,805	Am Health Insurance Plans	Convention/Tradeshow
110	West	06/20/11	Monday	06/22/11	Wednesday	3	3,400	3,400	Google	Corporate
113	West	06/29/11	Wednesday	07/01/11	Friday	3	1,350	1,148	Natl Assn of Federal Credit Unions	Convention/Tradeshow
117	West	07/21/11	Thursday	07/23/11	Saturday	3	2,670	2,270	College Board	Convention/Tradeshow
118	West	07/28/11	Thursday	07/30/11	Saturday	3	4,162	4,162	Subway Franchise	Corporate
121	West	08/15/11	Monday	08/17/11	Wednesday	3	1,865	1,585	Search Engine Strategies	Convention/Tradeshow
124	West	09/12/11	Monday	09/14/11	Wednesday	3	5,075	5,075		Corporate
127	West	09/21/11	wednesday	09/23/11	Friday	3	1,668	1,418		Convention/Tradesnow
134	West	10/16/11	Sunday	10/17/11	Monday	2	/43	/43	RIM (GPJ)	
130	West	10/31/11	Friday	10/31/11	Nonday	1	1,760	1,/00 7,450	SPUR Am Assen for the Study of Liver Diseases	ASSOCIATION
138	West	11/04/11	Filuay	11/00/11	Sunday	3	9,000	7,000 2,255	Am Assn for Cancer Desearch	Convention/Tradeshow
140	West	/ Z/ 11/17/11	Saluruay	11/14/11	Sunday	3 1	3,029 10 512	3,200 0,026	AIII ASSITIUI CAIICEI RESEAICII	Convention/Tradeshow
141	West	01/10/12	Thursday	11/20/11	Saturday	4	10,515	0,930	Am Soc Clinical Opeology	Convention/Tradeshow
147	West	01/19/12	Friday	01/21/12	Sunday	2	2,900	2,400	An Suc Chinical Oncology MacWorld	Convention/Tradeshow
149	West	01/27/12	Monday	01/29/12	Thursday	3	23,825	21,901	Starwood Hotels	Corporate
152	West	02/20/12	Wednesday	02/23/12	Thursday	т Э	7 931	6 741	Cloudforce (salesforce)	Convention/Tradeshow
150	West	03/22/12	Thursday	03/24/12	Saturday	2	3 400	3 400	Am Counseling Assn	Association
162	West	03/31/12	Saturday	04/02/12	Monday	3	5 488	4 665	Materials Research Society	Convention/Tradeshow
163	West	04/02/12	Monday	04/04/12	Wednesday	3	9,450	8,033	ad tech	Convention/Tradeshow
164	West	04/17/12	Tuesday	04/19/12	Thursday	3	3.576	3.040	Acad of Managed Care	Convention/Tradeshow
166	West	04/29/12	Sunday	05/01/12	Tuesday	3	3,368	2,863	Am Assn for Thoracic Surgery	Convention/Tradeshow
167	West	05/07/12	Monday	05/09/12	Wednesday	3	6,132	6,132	Citrix Systems	Corporate
168	West	05/14/12	Monday	05/15/12	Tuesday	2	3,100	3,100	Prof Business Womens' Conference	Convention
170	West	05/30/12	Wednesday	06/01/12	Friday	3	4,667	3,967	Am Coll of Sports Medicine	Convention/Tradeshow
172	West	06/12/12	Tuesday	06/15/12	Friday	4	5,357	4,553	Apple's WWDC	Convention/Tradeshow
174	West	06/20/12	Wednesday	06/21/12	Thursday	2	1,800	1,800	Case Management Soc of Amer	Convention
175	West	06/26/12	Tuesday	06/28/12	Thursday	3	6,460	6,460	Google I/O	Corporate
183	West	08/03/12	Friday	08/06/12	Monday	4	3,250	2,763	Am Assn of Nurse Anesthetists	Convention/Tradeshow
185	West	08/13/12	Monday	08/15/12	Wednesday	3	1,679	1,427	Search Engine Strategies	Convention/Tradeshow
189	West	09/10/12	Monday	09/12/12	Wednesday	3	7,185	7,185	Intel	Corporate
203	West	11/28/12	Wednesday	11/30/12	Friday	3	4,140	3,519	CA School Boards Assn	Convention/Tradeshow
206	West	12/10/12	Monday	12/12/12	Wednesday	3	3,125	1,042	APP Nation	Tradeshow

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Moscone Center

Event Analysis 2010-2012

(Not including miscellaneous small events; fewer than 350 total attendees for each month)

						Avg.			
ALL MOSCONE			Event	Avg. Days	Total	Registrants	Days	in a Year	
Year	Numbe	er of Events	Days	per Event	Registrants	per Event	with	n Events	
2010	63	35%	226	3.6	888,463	14,103	188	52%	
2011	61	34%	214	3.5	897,256	14,709	168	46%	
2012	54	30%	214	4.0	779,454	14,434	186	51%	
TOTAL	178	100%	654	3.7	2,565,173	14,411	542	49 %	
Average:	59	events per ye	ar	3.7	855,058	14,411	181	49%	
Std. Dev.				1.6		30,674			

ALL MOSCO	NE	3-YEAR N	IUMBER OF E	VENTS	Average Nu	umber of	3-year Reg	jistrants	Avg. Re	gistrants	3-Yea	ar Event	3-Year Dail	y Event
	Month	Start	End	Average	Events per	r Month	per Start	Month	per Event	per Month	0	Days	Atten	d.
April	1	15	15	15.0	5.0	8%	156,036	6%	10,402	52,012	47	7%	88,401	6%
August	2	11	10	10.5	3.5	6%	134,245	5%	12,204	44,748	44	7%	98,418	6%
December	3	6	7	6.5	2.2	4%	93,073	4%	15,512	31,024	26	4%	77,497	5%
February	4	19	17	18.0	6.0	10%	209,127	8%	11,007	69,709	79	12%	154,182	10%
January	5	12	12	12.0	4.0	7%	197,124	8%	16,427	65,708	44	7%	124,191	8%
July	6	10	12	11.0	3.7	6%	127,402	5%	12,740	42,467	30	5%	100,119	6%
June	7	18	17	17.5	5.8	10%	99,970	4%	5,554	33,323	60	9%	73,451	5%
March	8	16	17	16.5	5.5	9%	165,507	6%	10,344	55,169	66	10%	132,273	9%
May	9	17	16	16.5	5.5	9%	109,837	4%	6,461	36,612	60	9%	98,707	6%
November	10	17	17	17.0	5.7	10%	830,543	32%	48,855	276,848	76	12%	219,854	14%
October	11	22	22	22.0	7.3	12%	265,270	10%	12,058	88,423	66	10%	229,983	15%
September	12	15	16	15.5	5.2	9%	177,039	7%	11,803	59,013	56	9%	152,436	10%
тот	AL	178	178	178.0	59.3	100%	2,565,173	100%	14,411	855,058	654	100%	1,549,513	100%
Avg. even	ts per month	15	15	14.8	4.9		213,764						•	

ALL MOSCONE		3-Year No. of	f Events	3-Year Dai	ily Event	3-Year Event		
	Day	Start	End	Atter	nd.	Day	S	
Friday	1	10	30	104,391	6.7%	39	6.0%	
Monday	2	36	17	373,862	24.1%	140	21.4%	
Saturday	3	35	21	275,117	17.8%	154	23.5%	
Sunday	4	22	13	193,889	12.5%	77	11.8%	
Thursday	5	19	41	153,659	9.9%	69	10.6%	
Tuesday	6	30	31	246,994	15.9%	101	15.4%	
Wednesday	7	26	25	201,601	13.0%	74	11.3%	
TOTAL		178	178	1,549,513	100.0%	654	100.0%	

	No. of Event Days	Number of Events					
	1	10	6%				
	2	18	10%				
	3	77	43%				
	4	33	19%				
	5	16	9%				
	6	16	9%				
	7	1	1%				
	8	3	2%				
	9	2	1%				
	10	2	1%				
		178	100%				
Avg. e	vent duration	3.67	days				

Daily Attendance/

Moscone Center

Event Analysis 2010-2012

(Not including miscellaneous small events; fewer than 350 total attendees for each month)

ALL MOSCONE Daily				Total E	vent	Avg. Registrant	Even	t	Avg. Days	3-Year Dai	ly Event	
Event Type	Class	Factor	Number of	Number of Events		ants	per Event	Days		per Event	Atter	nd.
Association	1	1.00	7	4%	28,105	1%	4,015	17	3%	2.4	28,105	2%
Community	2	1.00	3	2%	3,627	0%	1,209	3	0%	1.0	3,627	0%
Convention	3	1.00	15	8%	52,954	2%	3,530	39	6%	2.6	52,954	3%
Convention/Tradeshow	4	0.85	107	60%	1,369,406	53%	12,798	440	67%	4.1	1,163,995	75%
Corporate	5	1.00	20	11%	116,552	5%	5,828	58	9%	2.9	116,552	8%
Legal,Gov't,Public,Admin.	6	1.00	1	1%	880	0%	880	1	0%	1.0	880	0%
Tradeshow (days)	7	1.00	25	14%	993,649	39%	39,746	96	15%	3.8	183,400	12%
TOTAL			178	100%	2,565,173	100%	14,411	654	100%	3.7	1,549,513	100%

ALL MOSCONE	LL MOSCONE			Event	Avg. Days	Total	Avg.Regist.	3-Year Da	ily Event	Number of	Daily	Square	Event/
	Building	3-Year No. o	f Events	Days	per Event	Registrants	per Event	Atte	nd.	Events	Attendance	feet	1000 sf
Esplanade	1	3	2%	3	1.0	3,627	1,209	3,627	0.2%				
North	2	21	12%	72	3.4	146,406	6,972	104,304	6.7%	21	104,304	181,400	27.4
North/South	3	33	19%	166	5.0	1,088,367	32,981	406,074	26.2%	33	406,074	442,000	27.8
North/South/W2	4	1	1%	3	3.0	18,750	18,750	15,938	1.0%				
North/South/Wes	5	25	14%	119	4.8	662,005	26,480	564,408	36.4%	25	564,408	541,900	41.7
North/West	6	2	1%	8	4.0	9,382	4,691	8,497	0.5%	2	8,497	281,300	15.1
South	7	24	13%	75	3.1	278,902	11,621	130,364	8.4%	24	130,364	260,600	20.8
South/West	8	1	1%	4	4.0	12,671	12,671	10,770	0.7%	1	10,770	360,500	29.9
West	9	68	38%	204	3.0	345,063	5,074	305,532	19.7%	68	305,532	99,900	45.0
TOTAL		178	67%	654	3.7	2,565,173	14,411	1,549,513	100.0%	25	218,564	309,657	29.7

ALL MOSCONE		-	FOTAL DAILY	ATTENDANCE		Annual Avg.	Total Daily		DAYS WITH EV	ENTS	Ar	nnual Avg. Day	s with Events
	Month	2010	2011	2012	Total	Attendance	per Month	2010	2011	2012	Total	per Mo	onth
April	1	140,446	102,397	48,272	291,115	97,038	3.9%	20	10	9	39	13	7.2%
August	2	80,133	58,671	106,528	245,332	81,777	3.3%	13	8	13	34	11	6.3%
December	3	144,647	104,927	138,514.7	388,089	129,363	5.2%	12	6	12	30	10	5.5%
February	4	65,658	160,489	265,799.5	491,946	163,982	6.6%	17	13	16	46	15	8.5%
January	5	91,167	219,340	195,684.2	506,191	168,730	6.8%	10	14	15	39	13	7.2%
July	6	96,914	107,880	119,733.7	324,528	108,176	4.3%	9	11	10	30	10	5.5%
June	7	87,566	85,279	128,822.0	301,667	100,556	4.0%	15	14	20	49	16	9.0%
March	8	214,809	227,838	275,983.7	718,631	239,544	9.6%	16	22	23	61	20	11.3%
May	9	114,811	105,747	163,742.7	384,301	128,100	5.1%	15	15	17	47	16	8.7%
November	10	375,211	392,237	358,225.7	1,125,674	375,225	15.0%	20	24	22	66	22	12.2%
October	11	190,287	283,995	474,875.7	949,158	316,386	12.7%	23	16	21	60	20	11.1%
September	12	290,059	197,319	223,035.6	710,414	236,805	9.5%	18	15	8	41	14	7.6%
тоти	AL.	1,891,708	2,046,121	2,499,217	6,437,046	2,145,682	85. 9 %	188	168	186	542	181	100.0%
								52%	46%	51%	-	49%	

Moscone Center

Event Analysis 2010-2012

(Not including miscellaneous small events; fewer than 350 total attendees for each month)

ALL MOSCONE TOTAL DAILY ATTENDANCE					Annual Avg	. Total Daily	Attendance		DAYS WITH E	VENTS	Anı	nual Avg. Days	with Ever	
	Day	2010	2011	2012	Total	per Day i	n a Year	per Day	2010	2011	2012	Total	per Day of th	ne Week
Friday	1	164,468	241,631	321,669	727,767	242,589	11.3%	4,665	18	21	22	61	0.4	11.3%
Monday	2	291,146	281,522	361,766	934,433	311,478	14.5%	5,990	32	25	28	85	0.5	15.7%
Saturday	3	176,388	230,332	306,520	713,241	237,747	11.1%	4,572	16	23	23	62	0.4	11.4%
Sunday	4	258,671	229,714	266,554	754,939	251,646	11.7%	4,839	25	20	21	66	0.4	12.2%
Thursday	5	296,984	380,779	435,852	1,113,615	371,205	17.3%	7,139	28	27	29	84	0.5	15.5%
Tuesday	6	367,400	303,354	406,336	1,077,090	359,030	16.7%	6,904	37	26	31	94	0.6	17.3%
Wednesday	7	336,652	378,789	400,520	1,115,961	371,987	17.3%	7,154	32	26	32	90	0.6	16.6%
TOTAL		1,891,708	2,046,121	2,499,217	6,437,046	2,145,682	100.0%	41,263	188	168	186	542	3.5	100.0%

MOSCONE North+South		T	TOTAL DAILY	ATTENDANCE		Annual Avg.	Total Daily		DAYS WITH EV	ENTS	Anı	nual Avg. Day	s with Events
	Month	2010	2011	2012	Total	Attendance	per Month	2010	2011	2012	Total	per Mo	onth
April	1	127,995	69,551	-	197,545	65,848	2.6%	17	8	0	25	8	4.6%
August	2	65,173	53,915	91,197	210,285	70,095	2.8%	9	5	9	23	8	4.2%
December	3	144,647	104,927	135,389.7	384,964	128,321	5.1%	12	6	9	27	9	5.0%
February	4	55,891	160,489	256,399.5	472,780	157,593	6.3%	15	13	16	44	15	8.1%
January	5	73,515	132,215	122,435.4	328,165	109,388	4.4%	7	14	10	31	10	5.7%
July	6	86,556	88,586	119,733.7	294,875	98,292	3.9%	5	5	10	20	7	3.7%
June	7	58,654	51,887	83,661.2	194,202	64,734	2.6%	7	7	12	26	9	4.8%
March	8	210,133	205,120	247,636.2	662,889	220,963	8.8%	13	20	20	53	18	9.8%
May	9	72,910	59,284	128,350.0	260,544	86,848	3.5%	9	7	10	26	9	4.8%
November	10	351,696	323,779	347,668.7	1,023,143	341,048	13.6%	15	16	19	50	17	9.2%
October	11	122,742	280,749	474,875.7	878,366	292,789	11.7%	15	15	21	51	17	9.4%
September	12	272,949	177,841	201,480.6	652,270	217,423	8.7%	15	14	8	37	12	6.8%
тот	AL	1,642,860	1,708,343	2,208,827	5,560,030	1,853,343	74.2%	139	130	144	413	138	76.2%
								38%	36%	39%	•	38%	

MOSCONE No	OSCONE North+South TOTAL DAILY ATTENDANCE					Annual Avg	. Total Daily	Attendance		DAYS WITH E	VENTS	Anr	ual Avg. Days	s with Ever
	Day	2010	2011	2012	Total	per Y	ear	per Day	2010	2011	2012	Total	per Day of the	ne Week
Friday	1	130,697	214,391	279,050	624,138	208,046	9.7%	4,001	12	16	15	43	0.3	7.9%
Monday	2	257,914	207,605	322,208	787,727	262,576	12.2%	5,050	23	17	22	62	0.4	11.4%
Saturday	3	168,514	204,060	271,277	643,851	214,617	10.0%	4,127	15	19	21	55	0.4	10.1%
Sunday	4	230,953	190,463	234,313	655,729	218,576	10.2%	4,203	18	16	18	52	0.3	9.6%
Thursday	5	248,529	334,957	397,556	981,042	327,014	15.2%	6,289	18	23	22	63	0.4	11.6%
Tuesday	6	328,702	236,244	360,152	925,098	308,366	14.4%	5,930	32	19	23	74	0.5	13.7%
Wednesday	7	277,551	320,624	344,272	942,446	314,149	14.6%	6,041	21	20	23	64	0.4	11.8%
TOTAL		1,642,860	1,708,343	2,208,827	5,560,030	1,853,343	86.4%	35,641	139	130	144	413	2.6	76.2%

APPENDIX C

MOSCONE CENTER NORTH AND SOUTH FREIGHT TRUCK OPERATIONS

SPIE Photonics West

Location:Moscone North, South and WestEvent Dates:02/05/13 to 02/07/13Attendance:19,500Freight Class:Heavy

TRUCK OPERAT Day	FIONS Date	Shift	Decorating Equipment	Exhibit Freight	All Trucks
Wednesday	01/30/13	AM	5	19	24
Move-in day		PM	0	0	0
Thursday	01/31/13	AM	4	16	20
Move-in day		PM	5	17	22
		Graveyard	0	0	0
Friday	02/01/13	AM	12	43	55
Move-in day		PM	2	8	10
		Graveyard	0	0	0
Saturday	02/02/13	AM	5	20	25
Move-in day		PM	0	1	1
		Graveyard	0	0	0
Sunday	02/03/13	AM	1	5	6
Move-in day		PM	0	0	0
-		Graveyard	0	0	0
Monday	02/04/13	AM	6	21	27
Move-in day		PM	0	1	1
		Graveyard	0	0	0
Tuesday	02/05/13	AM	0	0	0
Event day		PM	0	0	0
		Graveyard	0	0	0
Wednesday	02/06/13	AM	0	0	0
Event day		PM	0	0	0
Ĩ		Graveyard	0	0	0
Thursday	02/07/13	AM	6	21	27
Event day		PM	6	23	29
Ĩ		Graveyard	0	0	0
Friday	02/08/13	AM	7	27	34
Break-down day		PM	21	80	101
,		Graveyard	0	0	0
Grand Total		-	80	302	382

SPIE Photonics West

Location:Moscone North, South and WestEvent Dates:02/05/13 to 02/07/13Attendance:19,500Freight Class:Heavy

TOTAL BY DAY					
Wednesday	01/30/13	Move-in day	5	19	24
Thursday	01/31/13	Move-in day	9	33	42
Friday	02/01/13	Move-in day	14	51	65
Saturday	02/02/13	Move-in day	5	21	26
Sunday	02/03/13	Move-in day	1	5	6
Monday	02/04/13	Move-in day	6	22	28
Tuesday	02/05/13	Event day	0	0	0
Wednesday	02/06/13	Event day	0	0	0
Thursday	02/07/13	Event day	12	44	56
Friday	02/08/13	Break-down day	28	107	135
Grand Total			80	302	382
AVERAGE TOTAL	PER DAY				
Move-in day			7	25	32
Event day			4	15	19
Break-down day			28	107	135
PEAK LOADING P	ERIOD				
Move-in day			12	43	55
Event day			6	23	29
Break-down day			21	80	101
AVERAGE LOADIN	IG PERIOD				
Move-in day			2	9	11
Event day			1	5	6
Break-down day			9	36	45

APPENDIX D A WEEK IN THE LIFE OF A MOSCONE CENTER EVENT

WEEK IN THE LIFE OF A MOSCONE CENTER EVENT CASE STUDY by Dick Shaff, SMG Moscone Center, Vice President/General Manager AMERICAN SOCIETY OF CATARACT AND REFRACTIVE SURGERY APRIL 15-25, 2013

Day by Day Analysis

Prior to first day of move in for event Building staff has set all of the meeting rooms with chairs, tables, risers and any other equipment required for event. All areas are clean and ready for the start of move in. Building staff is on site all of the time the event is in the building. Staffing varies depending on which stage the event is in. For move in staff is setting rooms, during the event staff is cleaning all public areas and restrooms and re setting meeting rooms as required. Staffing the driveways, managing the HVAC systems, etc.

MOVE IN

Monday April 15, 7am – 5:00pm Trucks start arriving at docks all day. Equipment for registration is unloaded. Exhibit Hall floor is marked, electrical and IT is installed, Carpet is laid in booths.

Tuesday April 15 8am- 5:00pm

Trucks start arriving and departing from docks all day. Equipment for registration is unloaded and assembled in lobbies. Crates with exhibit booths are moved to exhibit halls for assembly. Show materials are moved into office areas.

Wednesday April 16 7am-7:00pm

Trucks continue to arrive and depart from docks all day. Move in to exhibit halls, offices and lobbies continue.

Audio/Visual starts set up in meeting rooms. 5pm Exhibitors registration opens. Exhibitors start moving in and setting up exhibits.

Thursday April 17, 8am-8:00pm

Trucks continue to arrive and depart from docks. Move in to exhibit halls, offices and lobbies continue. Audio/Visual continues set up in meeting rooms. Exhibitor's registration and moving in continues 2pm Shuttle bus program begins and Attendee Registration opens

Friday April 18, 5:45am – 6:30pm

Truck traffic is reduced as most exhibit materials are in the building 5:45 Shuttle starts and continues through 7:00pm 6am Registration opens 6:30 Meetings begin and run through 6:30pm Exhibitors continue to move in A/V continues to move in Food service is open

Saturday April 20 6:00am - 6:45pm

Limited truck traffic 6:00am Shuttle service begins 6:30 Meetings begin and run until 6pm 9:00 Exhibits open. The exhibits close at 5pm 10:00 General Session starts Food service is open

Sunday April 21 5:45 – 7:30pm

Same activity as Saturday

Monday April 22 5:45 – 9pm Same activity as Sunday

Tuesday April 23 7am-11pm

Trucks start returning to building with crates for exhibits 7am-4:30pm Meetings 9am- 1pm Exhibits open 1pm Exhibits start move out carpet removed, crates delivered to floor, dismantling begins. 4:30 meetings over, Building staff starts removing some chairs, A/V begins move out 4:45-6:00pm Closing reception 6:00pm Last of Shuttle service.

Wednesday April 24 8am 5pm

Full move out Trucks deliver, pickup and leave all day

Thursday April 25, 8am – 11:59pm

Move out continues Trucks come and go Equipment is struck and re set for next event This page intentionally left blank

APPENDIX E

MOSCONE CENTER NORTH AND SOUTH STAFFING LEVELS

SPIE Photonics West

Location:Moscone North, South and WestEvent Dates:02/05/13 to 02/07/13Attendance:19,500Freight Class:Heavy

			Administration, Convention & Security Staff									
EVENT WORKF	ORCE ALLO	CATION	Moscone			Freeman		Exhibitor	PSAV			
			(House	Savor	Freeman	Labor	Maloney	Appointed	(Presentation	Projection	Total Event	
Day	Date	Shift	keeping)	(Catering)	(Gral Service	s Contractor)	(Security)	Contractors	Services)	(AV Services)	Employees	
Wednesday	01/30/13	AM	17	0	15	165	0	0	0	0	197	
Move-in day		PM	19	0	0	0	0	0	0	0	19	
Thursday	01/31/13	AM	19	57	15	355	5	25	6	6	488	
Move-in day		PM	22	0	0	0	12	20	0	0	54	
		Graveyard	0	0	0	0	12	0	0	0	12	
Friday	02/01/13	AM	25	75	15	375	18	220	2	7	737	
Move-in day		PM	35	0	0	0	18	50	0	0	103	
		Graveyard	26	0	0	0	16	0	0	0	42	
Saturday	02/02/13	AM	47	92	15	192	36	400	2	0	784	
Move-in day		PM	28	0	0	0	22	200	0	0	250	
		Graveyard	0	0	0	0	20	0	0	0	20	
Sunday	02/03/13	AM	43	120	15	158	37	500	3	0	876	
Move-in day		PM	30	0	0	0	23	100	0	0	153	
		Graveyard	0	0	0	0	19	0	0	0	19	
Monday	02/04/13	AM	42	163	15	242	40	350	3	7	862	
Move-in day		PM	32	0	0	54	25	50	0	0	161	
		Graveyard	0	0	0		20	0	0	0	20	
Tuesday	02/05/13	AM	56	130	15	96	46	20	3	6	372	
Event day		PM	34	0	0	0	20	0	0	0	54	
		Graveyard	0	0	0	0	20	0	0	0	20	
Wednesday	02/06/13	AM	54	240	15	25	38	120	3	6	501	
Event day		PM	33	0	0	0	20	50	0	0	103	
		Graveyard	0	0	0	0	20	0	0	0	20	
Thursday	02/07/13	AM	54	194	6	49	35	100	4	7	449	
Event day		PM	34	0	9	269	30	20	0	0	362	
		Graveyard	0	0	0	0	7	0	0	0	7	
Friday	02/08/13	AM	25	48	15	328	27	10	0	0	453	
Break-down day		PM	21	0	0	0	0	0	0	0	21	
		Graveyard	0	0	0	0	0	0	0	0	0	
otal Event Employees			696	1,119	150	2,308	586	2,235	26	39	7,159	

SPIE Photonics West

Location:Moscone North, South and WestEvent Dates:02/05/13 to 02/07/13Attendance:19,500Freight Class:Heavy

						Administration	, Convention	& Security Staf	f				
EVENT EMPLO	DYEES PER DA	λY	Moscone			Freeman		Exhibitor	PSAV			Mgmt	
			(House	Savor	Freeman	Labor	Maloney	Appointed	(Presentation	Projection	Total Event	& non-event	ALL
Day	Date	Shift	keeping)	(Catering)	(Gral Service	es Contractor)	(Security)	Contractors	Services)	(AV Services)	Employees	staff	STAFFING
Wednesday	01/30/13	Move-in day	36	0	15	165	0	0	0	0	216	153	369
Thursday	01/31/13	Move-in day	41	57	15	355	29	45	6	6	554	153	707
Friday	02/01/13	Move-in day	86	75	15	375	52	270	2	7	882	153	1,035
Saturday	02/02/13	Move-in day	75	92	15	192	78	600	2	0	1,054	153	1,207
Sunday	02/03/13	Move-in day	73	120	15	158	79	600	3	0	1,048	153	1,201
Monday	02/04/13	Move-in day	74	163	15	296	85	400	3	7	1,043	153	1,196
Tuesday	02/05/13	Event day	90	130	15	96	86	20	3	6	446	153	599
Wednesday	02/06/13	Event day	87	240	15	25	78	170	3	6	624	153	777
Thursday	02/07/13	Event day	88	194	15	318	72	120	4	7	818	153	971
Friday	02/08/13	Break-down day	46	48	15	328	27	10	0	0	474	153	627
Total Event En	nployees		696	1,119	150	2,308	586	2,235	26	39	7,159	1,530	8,689
AVERAGE EVE Move-in day	ent employe	ES PER DAY	64	85	15	257	54	319	3	3	800		
Event day			88	188	15	146	79	103	3	6	629	-	
Break-down day	у		46	48	15	328	27	10	0	0	474	-	
AVERAGE AM	PEAK HOUR E	EVENT EMPLOYEE	S										
Move-in day			32	85	15	248	23	249	3	3	657		
			50%	100%	100%	96%	42%	78%	100%	100%	82%	_	
Event day			55	188	12	57	40	80	3	6	441		
			62%	100%	80%	39%	50%	77%	100%	100%	70%	_	
Break-down day	у		25	48	15	328	27	10	0	0	453		
			54%	100%	100%	100%	100%	100%	0%	0%	96%		
AVERAGE PM	PEAK HOUR E	EVENT EMPLOYEE	S										
Move-in day			28	0	0	9	1/	/0	0	0	123		
			43%	0%	0%	4%	31%	22%	0%	0%	15%	-	
Event day			34	0	3	90	23	23	0	0	1/3		
<u> </u>			38%	0%	20%	61%	30%	23%	0%	0%	2/%	-	
Break-down day	у		21	0	0	0	0	0	0	0	21		
			46%	0%	0%	0%	0%	0%	0%	0%	4%		

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APPENDIX F

TRAVEL DEMAND CALCULATIONS

TRAVEL DEMAND CALCULATIONS

EXISTING CONDITIONS

Person-trips by	22,000	971		Dai	ily Person-Trip	S	AM Pea	k Hour Person	-Trips	PM Pea	k Hour Person	-Trips
Mode of Travel	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total
Auto	10%	30%	11%	6,600	728	7,328	462	65	527	726	62	788
Public Transit	5%	60%	7%	3,300	1,457	4,757	231	129	360	363	124	487
Shuttle buses	50%	0%	48%	33,000	0	33,000	2,310	0	2,310	3,630	0	3,630
Walk	30%	8%	29%	19,800	194	19,994	1,386	18	1,404	2,178	17	2,195
Other	5%	2%	5%	3,300	49	3,349	231	5	236	363	5	368
Total Person-trips	100%	100%	100%	66,000	2,428	68,428	4,620	217	4,837	7,260	208	7,468

EXPANSION PROJECT

Person-trips by	4,200	28		Da	ily Person-Trip	S	AM Pea	k Hour Person	-Trips	PM Pea	k Hour Person	-Trips
Mode of Travel	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total
Auto	10%	30%	10%	1,260	21	1,281	88	2	90	139	2	141
Public Transit	5%	60%	5%	630	42	672	44	4	48	69	4	73
Shuttle buses	50%	0%	50%	6,300	0	6,300	441	0	441	693	0	693
Walk	30%	8%	30%	3,780	6	3,786	265	1	266	416	1	417
Other	5%	2%	5%	630	1	631	44	1	45	69	1	70
Total Person-trips	100%	100%	100%	12,600	70	12,670	882	8	890	1,386	8	1,394

EXISTING PLUS EXPANSION PROJECT

Person-trips by	26,200 999			Daily Person-Trips			AM Pea	k Hour Person	-Trips	PM Peak Hour Person-Trips			
Mode of Travel	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total	
Auto	10%	30%	11%	7,860	749	8,609	550	67	617	865	64	929	
Public Transit	5%	60%	7%	3,930	1,499	5,429	275	133	408	432	128	560	
Shuttle buses	50%	0%	48%	39,300	0	39,300	2,751	0	2,751	4,323	0	4,323	
Walk	30%	8%	29%	23,580	200	23,780	1,651	19	1,670	2,594	18	2,612	
Other	5%	2%	5%	3,930	50	3,980	275	6	281	432	6	438	
Total Person-trips	100%	100%	100%	78,600	2,498	81,098	5,502	225	5,727	8,646	216	8,862	

TRAVEL DEMAND CALCULATIONS

EXPANSION PROJECT	Daily Transit Trips			AM Pea	ik Hour Transit	Trips	PM Peak Hour Transit Trips		
Transit Person-trips	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total
Inbound	50%	50%	50%	100%	50%	96%	10%	50%	12%
	315	21	336	44	2	46	7	2	9
Outbound	50%	50%	50%	0%	50%	4%	90%	50%	88%
	315	21	336	0	2	2	62	2	64
	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total Transit Person-trips	630	42	672	44	4	48	69	4	73

EXPANSION PROJECT	Da	ily Transit Trip	S	AM Pea	ik Hour Transit	t Trips	PM Peak Hour Transit Trips			
All Walk Person-trips (auto+transit+walk only)	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total	
Inbound	50%	50%	50%	100%	50%	99%	10%	50%	10%	
	2,835	34	2,869	397	4	401	62	4	66	
Outbound	50%	50%	50%	0%	50%	1%	90%	50%	90%	
	2,835	34	2,869	0	4	4	562	4	566	
	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Total All Walk Person-trips (auto+transit+walk only)	5,670	68	5,738	397	8	405	624	8	632	

EXPANSION PROJECT	Daily Transit Trips			AM Pea	k Hour Transit	Trips	PM Peak Hour Transit Trips		
Shuttle Bus Person-trips	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total
Inbound	50%	50%	50%	100%	50%	100%	10%	50%	10%
	3,150	0	3,150	441	0	441	69	0	69
Outbound	50%	50%	50%	0%	50%	0%	90%	50%	90%
	3,150	0	3,150	0	0	0	624	0	624
	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total Shuttle Bus Person-trips	6,300	0	6,300	441	0	441	693	0	693

TRAVEL DEMAND CALCULATIONS

EXISTING CONDITIONS	Da	Daily Vehicle-Trips			ak Hour Vehicl	e-Trips	PM Peak Hour Vehicle-Trips			
Vehicle-trips	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total	
Inbound	50%	50%	50%	100%	50%	93%	10%	50%	14%	
	1,784	249	2,033	250	22	272	39	21	60	
Outbound	50%	50%	50%	0%	50%	7%	90%	50%	86%	
	1,784	249	2,033	0	22	22	353	21	374	
	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Total Vehicle-trips	3,568	498	4,066	250	44	294	392	42	434	
Parking Demand	1,784	249	2,033							
EXPANSION PROJECT	Da	ily Vehicle-Tri	ps	AM Pea	ak Hour Vehicl	e-Trips	PM Pea	k Hour Vehicle	e-Trips	
Vehicle-trips	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total	
Inbound	50%	50%	50%	100%	50%	98%	10%	50%	12%	
	341	7	348	48	1	49	8	1	9	
Outbound	50%	50%	50%	0%	50%	2%	90%	50%	88%	
	341	7	348	0	1	1	68	1	69	
	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Total Vehicle-trips	682	14	696	48	2	50	76	2	78	
Parking Demand	341	7	348							
EXISTING PLUS EXPANSION PROJECT	Da	ily Vehicle-Tri	ps	AM Pea	ak Hour Vehicl	e-Trips	PM Pea	k Hour Vehicle	e-Trips	
Vehicle-trips	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total	
Inbound	50%	50%	50%	100%	50%	93%	10%	50%	13%	
	2,125	256	2,381	298	23	321	47	22	69	
Outbound	50%	50%	50%	0%	50%	7%	90%	50%	87%	
	2,125	256	2,381	0	23	23	421	22	443	
	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Total Vehicle-trips	4,250	512	4,762	298	46	344	468	44	512	
Parking Demand	2,125	256	2,381							

TRAVEL DEMAND CALCULATIONS

EXISTING CONDITIONS

Vehicles-trips by				Daily Vehicle-Trips			AM Pea	k Hour Vehicle	-Trips	PM Peak Hour Vehicle-Trips		
Place of Origin	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total
San Francisco	70%	50%	68%	2,498	249	2,747	175	22	197	274	21	295
Remainder of SF Bay Area	20%	50%	24%	713	249	962	50	18	68	79	21	100
Out of region	10%	0%	9%	357	0	357	25	4	29	39	0	39
Total Vehicle-trips	100%	100%	100%	3,568	498	4,066	250	44	294	392	42	434

EXPANSION PROJECT

Vehicles-trips by				Da	ily Vehicle-Trip	S	AM Pea	k Hour Vehicle	-Trips	PM Peak Hour Vehicle-Trips		
Place of Origin	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total
San Francisco	70%	50%	70%	477	7	484	34	1	35	53	1	54
Remainder of SF Bay Area	20%	50%	21%	137	7	144	9	1	10	15	1	16
Out of region	10%	0%	10%	68	0	68	5	0	5	8	0	8
Total Vehicle-trips	100%	100%	100%	682	14	696	48	2	50	76	2	78

EXISTING PLUS EXPANSION PROJECT

Vehicles-trips by				Daily Vehicle-Trips			AM Peak Hour Vehicle-Trips			PM Peak Hour Vehicle-Trips		
Place of Origin	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total	Attendees	Employees	Total
San Francisco	70%	50%	68%	2,975	256	3,231	209	23	232	327	22	349
Remainder of SF Bay Area	20%	50%	23%	850	256	1,106	59	19	78	94	22	116
Out of region	10%	0%	9%	425	0	425	30	4	34	47	0	47
Total Vehicle-trips	100%	100%	100%	4,250	512	4,762	298	46	344	468	44	512

Adavant Consulting

		NUM	BER OF DAILY	TRUCK T	RIPS		NUMBER OF TRUCK TRIPS BY SHIFT [a]					
	Move-in	Day	Event D	ay	Break-down Day		Move-in Day		Event Day		Break-dow	n Day
EXISTING	Maximum	Avg.	Maximum	Avg.	Maximum	Avg.	Maximum	Avg.	Maximum	Avg.	Maximum	Avg.
Decorator trucks	28	14	24	8	56	56	24	6	12	4	42	28
Exhibit trucks	204	100	176	60	428	428	172	52	92	28	320	216
Food & bev. trucks	52	22	42	40	20	20	52	32	42	40	20	20
Total	284	136	242	108	504	504	248	90	146	72	382	264
PROJECT												
Decorator trucks	8	4	8	2	18	18	8	2	4	2	14	8
Exhibit trucks	64	32	56	20	136	136	56	16	28	8	100	68
Food & bev. trucks	16	6	14	12	6	6	16	10	14	12	6	6
Total	88	42	78	34	160	160	80	28	46	22	120	82
EXIST + PROJECT												
Decorator trucks	36	18	32	10	74	74	32	8	16	6	56	36
Exhibit trucks	268	132	232	80	564	564	228	68	120	36	420	284
Food & bev. trucks	68	28	56	52	26	26	68	42	56	52	26	26
Total	372	178	320	142	664	664	328	118	192	94	502	346

[a] Morning shift from 7 AM to 3:30 PM and evening shift from 3:30 PM to midnight.

Moscone Center Travel Demand v40.xlsx

APPENDIX G

NEW YORK CITY JACOB K. JAVITS CENTER TRANSPORTATION PLANNING ASSUMPTIONS



PB Team NYCT – Number 7 Extension Project 2 Broadway -5th Floor, Mailbox 519

2 Broadway-5th Floor, Mailbox 519 New York, NY 10004 Fax: 646-252-2063

FINAL

MEMORANDUM

- TO: G. Price, NYC Department of City Planning M. Amjadi, NYC Department of City Planning
- FROM: E. Metzger
- DATE: September 28, 2004
- RE: CM-1189R/C-26501– Preparation of a Draft and Final Environmental Impact Statement and Provision of Transit Engineering Services for the Proposed No. 7 Subway Extension-Far West Midtown Manhattan Rezoning
- **SUBJECT:** Convention Center Expansion Transportation Planning Assumptions

CIN:	MTA-NYC Transit/CM 1189R-C26501-00-C-1.00-DCP-03F-1622
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This technical memorandum provides a summary of the transportation planning assumptions proposed to be utilized for the development of Jacob K. Javits Convention Center (Convention Center) Expansion trip generation rates for the traffic, parking, transit, and pedestrian analyses of the DGEIS. The proposed expansion would approximately double the amount of existing exhibition space, increase the number of existing meeting rooms, and add new components such as a plenary hall with fixed seating. The northward expansion of the Convention Center would also provide for an additional entrance on West 42nd Street (accessed via the proposed Convention Center hotel).

Existing Attendance Patterns

The Convention Center currently hosts a wide range of events including trade shows, conventions with exhibits, consumer (public) shows, special events, meetings, and seminars. Daily attendances at these events range from upwards of 95,000 attendees for large public shows to small seminars with attendances of less than 100. Table 1 provides a listing of all events held at the Convention Center in 1999¹, ranked in order of their total daily visitation (attendees plus exhibitors.)

As shown in Table 1, public shows tend to draw the largest daily attendances; the top four attendance dates in 1999 were all weekend days associated with the New York International Auto Show (attendance on these four dates ranged from 68,202 to 95,707). The Auto Show, which is historically the largest attended show at the Convention Center, attracted approximately 525,000 visitors during a nine-day period in 1999. Other large public shows at the Convention Center in 1999 included the New York National Boat Show and the PC Expo. With the exception of these large public shows, attendance patterns at the Convention Center are dominated by combinations of trade shows (held on both weekdays and weekends) when more than one event is scheduled simultaneously. These events drew daily attendances of

¹ Annual attendance from 1999 was assumed to be a "typical" year for analysis purposes, based upon input from Convention Center management and a review of attendance patterns from 1997-2000. Attendance data after 2000 was not considered due to the events of September 11, 2001. To provide for a more conservative analysis, 1999 attendance data will be subsequently increased to account for modest growth experienced in Convention Center attendance between 1999 and 2000 (an overall increase of 6.2%); this change is reflected in Table 5.

Rank	Estimated Attendance	Date	Day of Week	Show Type Primary Event(s)							
#1	95,707	4/10/99	Saturday	Public	Int'l Auto Show	1					
#2	86,483	4/3/99	Saturday	Public	Int'l Auto Show						
#3	81,056	4/11/99	Sunday	Public	Int'l Auto Show						
#4	68,202	4/4/99	Sunday	Public	Int'l Auto Show						
#5	67,516	1/9/99	Saturday	Public	Boat Show	Fashion Boutique	Style Industrie				
#6	62,126	6/23/99	Wednesday	Public	PC Expo						
#7	60,047	6/22/99	Tuesday	Public	PC Expo						
#8	59,958	10/28/99	Thursday	Trade	Interplan/Design	Photo East Expo '99					
#9	56,724	1/31/99	Sunday	Trade	Int'l Gift Fair						
#10	52,692	10/29/99	Friday	Trade	Interplan/Design	Photo East Expo '99					
#11	51,004	4/9/99	Friday	Public	Int'l Auto Show						
#12	46,989	2/1/99	Monday	Trade	Int'l Gift Fair						
#13	43,369	8/15/99	Sunday	Trade	Int'l Gift Fair						
#14	42,985	1/10/99	Sunday	Public	Boat Show	Fashion Boutique	Style Industrie	Fashion Accessories			
#15	41,075	4/8/99	Thursday	Public	Int'l Auto Show						
#16	40,577	8/16/99	Monday	Trade	Int'l Gift Fair						
#17	40,254	4/7/99	Wednesday	Public	Int'l Auto Show						
#18	39,220	2/2/99	Tuesday	Trade	Int'l Gift Fair						
#19	36,903	7/21/99	Wednesday	Public	Law Enforcement	MacWorld					
#20	36,821	1/2/99	Saturday	Public	Boat Show						
#21	36,720	8/1/99	Sunday	Trade	Style Industrie	Fashion Boutique	Fashion Acc. Expo.	JA Jewelry			
#22	35,486	5/16/99	Sunday	Trade	Contemp Furniture	Italian Style	Surtex	Nat'l Stationery			
#23	35,327	6/24/99	Thursday	Public	PC Expo						
#24	35,058	4/6/99	Tuesday	Public	Int'l Auto Show						
#25	32,600	5/17/99	Monday	Trade	Contemp Furniture	Italian Style	Surtex	Nat'l Stationery			
#26	32,371	4/5/99	Monday	Public	Int'l Auto Show						
#27	31,701	8/17/99	Tuesday	Trade	Int'l Gift Fair						
#28	31,651	8/2/99	Monday	Trade	Style Industrie	Fashion Boutique	Fashion Acc. Expo.	JA Jewelry			
#29	31,023	10/6/99	Wednesday	Public	Fall Internet World						
#30	29,767	9/25/99	Saturday	Trade	Audio Engineering	Nat'l Merchandise	Style Industrie				
#31	29,009	9/26/99	Sunday	Trade	Audio Engineering	Nat'l Merchandise	Style Industrie				
#32	28,927	7/22/99	Thursday	Public	Law Enforcement	MacWorld					
#33	28,885	10/7/99	Thursday	Public	Fall Internet World						
#34	28,884	5/25/99	Tuesday	Trade	Fashion Boutique	Medical D & M	Finance Bus. Tech.				
#35	28,582	11/17/99	Wednesday	Trade	Chemical Expo	Financial Tech Expo	In-Cosmetic USA				
#36	28,346	11/6/99	Saturday	Trade	Hotel/Motel/Rest.						
#37	27,782	5/26/99	Wednesday	Trade	Fashion Boutique	Medical D & M	Finance Bus. Tech.				
#38	27,716	11/8/99	Monday	Trade	Hotel/Motel/Rest.		Culinary Inst.				
#39	26,939	10/30/99	Saturday	Trade	Photo East Expo '99	NYS Teachers Exam					
#40	26,552	2/3/99	Wednesday	Trade	Int'l Gift Fair						
#41	26,550	11/16/99	Tuesday	Trade	Chemical Expo	Financial Tech Expo	In-Cosmetic USA				
#42	26,163	11/7/99	Sunday	Trade	Hotel/Motel/Rest.	Latil Danuta Oham					
#43	26,141	3/7/99	Sunday	Trade	Art Expo	Int I Beauty Show	Fachier Accession				
#44	23,190	1/11/99	Monday	Trade	Fashion Boutique	Style Industrie	Fashion Accessories				
#45	23,174	2/13/99	Saturday	Trade	Int'l Toy Fair	Variety Merchandise	Descriptions for a section				
#46	22,905	5/4/99	Tuesday	Trade	Fashion Access.	On Demand Digital	Premium incentive				
#47	22,594	9/24/99	Friday	Trade	Audio Engineering	Nat'i Merchandise	Retall Seek				
#48	22,439	5/18/99	Tuesday	Trade	Contemp Furniture	Italian Style	Surtex	Nat'l Stationery			
#49	22,301	1/24/99	Sunday	Trade	NUS FASHION	JA Jewelly					
#50	22,200	0/10/99	Tuesday	Trade	Inti Gill Fall Chula Industria	Feebien Deutique	Fashian Ass. Eves	IA levels			
#51	21,703	0/3/99	Wednesday	Trade	Style Industrie	POR Show	Fashion Acc. Expo.	JA Jewelly			
#52	21,499	9/10/99	Tuesday	Trade	Vibe Chile	FOF SHOW					
#53	21,145	4/20/99	Tuesday	Trade	VIDE Style	Interpriex	Intinet 9 Flee Comm				
#54	20,010	6/2//99	Tuesday	Trade	Liconcing 100	HBA Clobal Evpo	Inthet & Elec Comm				
#55	20,007	0/0/99	Tuesday	Trade	Licensing 99	пва Giobai Expo					
#50	20,390	0/24/99	Tuesday	Trade	Intil Vision Even	Feebien Deutique					
#57 #E9	20,314	3/20/99	Jacurday	Trade	Eachion Routique	Vibo Stulo	Kida Eachian	Off price Spee			
#50	20,200	6/0/00	Tuesday	Trade	Fashion Boulique	VIDE Style	KIUS FASHION	On-price Spec.			
#09	10,932	3/10/00	Fridow	Trada	Int'l Vision Even	I IDA GIUDAI EXPO		ł			
#00	19,704	3/19/99	Sunday	Trade	Greater NV Dental						
#62	10,002	11/18/00	Thursday	Trade	Chemical Evpo	Einancial Tech Evpo	In-Cosmetic LISA	Postage Stamps			
#02	10 000	10/27/00	Wedneeder	Trade	Internical EXPU	ппаныа тесп схро	III-COSIIIellC USA	i usiage stamps			
#03	10,000	10/21/99	Wednesday	Trade	Interplati/Design	Int'l Bue Evno					
#04	10,000	4/∠1/99	Sunday	Trada	Interpriex	Variety Merchandica		ł			
#00 #60	10,002	2/14/99	Wodresda	Trade	Ruildingo NV	Fachion Echric	Intinot & Elea Com				
#00	10,550	4/28/99	Monday	Trade	Buildings NY Kide Eachion						
#01	10,427	10/17/00	Sunday	Trade	Fachion Poutique	Vibo Stulo	Kida Eachion				
#00	18,000	1/2/00	Sunday	Dublic	Roat Show	Church of Christ	11105 F d5111011	ł			
#09	17 002	2/12/00	Eriday	Trade	Int'l Toy Fair	GIULTI OF GITISL					
#1U	17,902	2/12/99	FIGAY	undue	Internet internet in the second secon	1	1	1			

1

#71

#72

#73

#74

#75

17,439

17 348

17,088

17 068

2/23/99

5/5/99

10/8/99

7/11/00

17.037 10/18/99 Monday

Tuesday

Wednesday

Friday

Sunday

Trade NY Rest. & Food

Trade Fancy Food

On Demand Digital

Fall Internet World

Trade Fashion Boutique Vibe Style

Trade

Public

I.T. for Wall Street

Premium Incentive

NYS Law Exam

Kids Eashion

Off-price Spec.

Table 1: Ranked Daily Attendance of 1999 Convention Center Events (Annual)

Table 1: Ranked Daily Attendance of 1999 Convention Center Events (Annual)

	Estimated		-	Show	ow					
Rank	Attendance	Date	Day of Week	Туре		Primary	Event(s)			
#76	16,892	5/24/99	Monday	Trade	Fashion Boutique					
#77	16,563	7/12/99	Monday	Trade	Fancy Food					
#78	16,556	12/18/99	Saturday	Trade	Kwanzaa Holiday					
#79	16,149	7/23/99	Friday	Trade	MacWorld					
#80	15,904	5/23/99	Sunday	Trade	Fashion Boutique					
#81	15,474	3/8/99	Monday	Trade	Art Expo	Int'l Beauty Show				
#82	15,187	11/29/99	Monday	Trade	Greater NY Dental					
#83	14,818	9/27/99	Monday	Trade	Audio Engineering	Nat'l Merchandise	Style Industrie			
#84	14,766	1/16/99	Saturday	Public	Int'l Motorcycle	NYS Teachers Exam				
#85	14,759	11/30/99	Tuesday	Trade	Greater NY Dental					
#86	14,616	3/21/99	Sunday	Trade	Int'l Vision Expo	Fashion Boutique				
#87	14,470	2/20/99	Saturday	Trade	Style Industrie	Church of Christ				
#88	14,294	2/22/99	Monday	Trade	Style Industrie	NY Rest. & Food	I.T. for Wall Street			
#89	14,038	12/1/99	Wednesday	Trade	Greater NY Dental					
#90	13,981	2/21/99	Sunday	Trade	Style Industrie	NY Rest. & Food				
#91	13,959	9/1/99	wednesday	Trade	Data warehousing	Int I Security Cont.				
#92	13,831	1/8/99	Friday	Public	Boat Show	Church of Christ				
#93	13,364	12/19/99	Sunday	Trade	Kwanzaa Holiday	Church of Christ				
#94	13,291	9/14/99	Wedneedey	Trade	LT for Wall Street	NVC Low Even				
#95	13,200	2/24/99	Soturdov	Trade	Style Industrie	Fachion Poutique				
#90	12,317	7/12/00	Tuesday	Trade	Style Industrie	Fashion Boulique				
#31 #09	12,404	9/16/00	Thursday	Trade	Comp Telephony	POP Show	Show Biz Expo			
#90	12,204	1/26/00	Tuesday	Trade	Kids Fashion		SHOW DIZ EXPU			
#100	11,516	3/9/99	Tuesday	Trade	Int'l Beauty Show	or coowerry				
#100	11 216	1/12/00	Tuesday	Trade	Fashion Boutique	Fashion Accessories				
#102	10.967	6/10/99	Thursday	Trade	Licensing '99	HBA Global Expo				
#102	10,307	2/15/99	Monday	Trade	Int'l Toy Fair	Variety Merchandise				
#104	10,000	10/20/99	Wednesday	Trade	Kids Fashion	Off-price Spec	Int'l Eashion Eabric			
#105	10,772	11/9/99	Tuesday	Trade	Hotel/Motel/Rest	on price opec.	Inter admont admo			
#106	10,700	4/18/99	Sunday	Trade	Frotica	Gay & Leshian Bus	Vibe Style			
#107	10,000	8/31/99	Tuesday	Trade	Data Warehousing	Int'l Security Conf	vibe otyle			
#108	10,369	5/3/99	Monday	Trade	Style Industrie	Fashion Access	On Demand Digital			
#109	10,000	4/22/99	Thursday	Trade	Interphex		on bonnand bighar			
#110	9.873	1/17/99	Sunday	Public	Int'l Motorcycle					
#111	9,811	1/30/99	Saturday	Trade	Int'l Gift Fair					
#112	9.704	5/6/99	Thursday	Trade	On Demand Digital	Premium Incentive				
#113	9,695	1/7/99	Thursday	Public	Boat Show					
#114	9,600	3/6/99	Saturday	Trade	Art Expo	Int'l Beauty Show				
#115	9.575	1/6/99	Wednesday	Public	Boat Show					
#116	9.557	1/19/99	Tuesday	Trade	Retail Federation	Magic East				
#117	9,512	8/14/99	Saturday	Trade	Int'l Gift Fair					
#118	9,389	12/14/99	Tuesday	Trade	E-Business Expo	Bazaar & Earthweb				
#119	9,365	5/15/99	Saturday	Trade	Contemp Furniture	Italian Style				
#120	9,321	1/18/99	Monday	Trade	Retail Federation					
#121	9,284	8/4/99	Wednesday	Trade	JA Jewelry					
#122	8,972	5/27/99	Thursday	Trade	Medical D & M	Finance Bus. Tech.				
#123	8,686	4/17/99	Saturday	Trade	Erotica	Gay & Lesbian Bus.	Teachers Exam			
#124	8,651	1/5/99	Tuesday	Public	Boat Show					
#125	8,478	8/23/99	Monday	Trade	Telecom Business					
#126	8,468	5/19/99	Wednesday	Trade	Nat'l Stationery					
#127	8,130	5/2/99	Sunday	Trade	Style Industrie	Fashion Access.				
#128	7,961	12/15/99	Wednesday	Trade	E-Business Expo	Bazaar & Earthweb				
#129	7,804	8/25/99	Wednesday	Trade	Telecom Business					
#130	7,735	9/2/99	Thursday	Trade	Data Warehousing	Int'l Security Conf.				
#131	7,510	6/17/99	Thursday	Trade	1CI Commencement					
#132	7,052	8/9/99	Monday	Trade	Kids Fashion	Music Expo				
#133	7,051	2/4/99	Thursday	Trade	Int'l Gift Fair					
#134	7,015	1/4/99	Monday	Public	Boat Show					
#135	6,728	3/5/99	Friday	Trade	Art Expo					
#136	6,716	10/5/99	Tuesday	Public	Fall Internet World					
#137	6,466	7/14/99	Wednesday	Trade	Fancy Food					
#138	6,354	3/4/99	Thursday	Trade	Art Expo					
#139	6,324	4/29/99	Thursday	Trade	Fashion Fabric	Intrnet & Elec Comm				
#140	6,300	2/25/99	Inursday	Irade	I.I. for Wall Street					
#141	5,824	3/14/99	Sunday	Irade	Int I Kids Fashion	E-II late as a 1947 - 19				
#142	5,759	10/4/99	Monday	Trade	NY Fall Textile	Fail Internet World				
#143	5,525	3/15/99	Monday	Trade	Int I KIds Fashion	VINISUO USA				
#144	5,510	6/27/99	Sunday	Trade	Unurch of Unrist	Local 638 Vote				
#145	5,499	4/19/99	Monday	Trade	VIDE Style					
#146	5,353	8/19/99	nursday	Trade	Int I GITT Fall					
#147	5,218	8/8/99	Sunday	Trade	NIUS FASITION					
#148	0,205 5,205	0/20/99 7/20/00	Tuonday	Trade	Morebonding	Low Enforcement				
#149	5,200	1/15/00	Friday	Public	Int'l Motorcycle	Law EniorCement				
#100	5,105	1/10/99	i nuay	i ublic	int i wotorcycle	I	1	L		

Table 1: Ranked Daily Attendance of 1999 Convention Center Events (Annual)

	Estimated			Show				
Rank	Attendance	Date	Dav of Week	Type	Primary Event(s)			
#151	E OEG	4/20/00	Fridov	Trada	CLINX Job Eair		Erom(o)	
#151	5,000	4/30/99	Thursday	Trade	CONT JOD Fall	Barra a A E arthurach		
#152	5,025	12/16/99	Thursday	Trade	E-Business Expo	Bazaar & Earthweb		
#153	4,878	8/10/99	Tuesday	Irade	Kids Fashion	Music Expo		
#154	4,745	6/5/99	Saturday	Irade	Agriflor Financial Analyst			
#155	4,742	4/16/99	Friday	Irade	Erotica			
#156	4,477	3/16/99	Tuesday	Trade	Int'l Kids Fashion	Vinisud USA		
#157	4,410	6/3/99	Thursday	Irade	China Trade	Living Better Expo	Agriflor	
#158	4,313	10/3/99	Sunday	Trade	NY Fall Textile			
#159	4,202	10/16/99	Saturday	Trade	Fashion Boutique			
#160	4,154	12/8/99	Wednesday	Trade	Java Business	Criminal Justice		
#161	4,135	10/21/99	Thursday	Trade	Int'l Fashion Fabric			
#162	4,009	1/20/99	Wednesday	Trade	Retail Federation	Magic East		
#163	3,768	10/2/99	Saturday	Trade	NY Fall Textile			
#164	3,733	5/1/99	Saturday	Trade	Style Industrie			
#165	3,555	12/7/99	Tuesday	Trade	Java Business			
#166	3,519	9/18/99	Saturday	Trade	Show Biz Expo	Franchise Expo		
#167	3,492	2/11/99	Thursday	Trade	Int'l Toy Fair			
#168	3,432	6/4/99	Friday	Trade	Agriflor			
#169	3,290	9/17/99	Friday	Trade	Show Biz Expo	Franchise Expo		
#170	3,255	5/30/99	Sunday	Trade	Church of Christ			
#171	3,205	6/30/99	Wednesday	Trade	Bar Review			
#172	3,147	7/27/99	Tuesday	Trade	NYS Bar Exam			
#173	3,147	7/28/99	Wednesday	Trade	NYS Bar Exam			
#174	3,094	11/27/99	Saturday	Trade	Greater NY Dental			
#175	3,030	4/15/99	Thursday	Trade	Erotica			
#176	3,005	2/28/99	Sunday	Trade	Church of Christ			
#177	3,005	5/9/99	Sunday	Trade	Church of Christ			
#178	3,005	6/6/99	Sunday	Trade	Church of Christ			
#179	3,005	8/6/99	Friday	Trade	US Immig & Nat.			
#180	3,005	8/26/99	Thursday	Trade	US Immig & Nat.			
#181	3,005	11/12/99	Friday	Trade	Sylvia Browne			
#182	3,005	11/14/99	Sunday	Trade	Church of Christ			
#183	3,005	12/5/99	Sunday	Trade	Penny Harvest			
#184	2,470	7/18/99	Sunday	Trade	Merchandise			
#185	2,304	12/9/99	Thursday	Trade	Java Business	Criminal Justice		
#186	2,259	3/18/99	Thursday	Trade	Int'l Kids Fashion			
#187	2,222	10/1/99	Friday	Trade	NY Fall Textile			
#188	2,208	3/22/99	Monday	Trade	Fashion Boutique			
#189	2,094	4/26/99	Monday	Trade	Buildings NY			
#190	2,005	7/9/99	Friday	Trade	Local 638 Vote			
#191	2,005	8/5/99	Thursday	Trade	Gibbs Graduation			
#192	2,000	9/23/99	Thursday	Trade	Retail Seek			
#193	1,961	3/17/99	Wednesday	Trade	Int'l Kids Fashion			
#194	1,943	1/21/99	Thursday	Trade	Magic East			
#195	1,875	7/19/99	Monday	Trade	Merchandise			
#196	1,835	8/30/99	Monday	Trade	Data Warehousing			
#197	1,805	9/8/99	Wednesday	Trade	Sun Microsystems			
#198	1,769	2/16/99	Tuesday	Trade	Variety Merchandise			
#199	1,546	3/23/99	Tuesday	Trade	Fashion Boutique	Sero Scholarship		
#200	1,535	1/22/99	Friday	Trade	Magic East			
#201	1,505	3/25/99	Thursday	Trade	Mercedes Benz			
#202	1,475	9/9/99	Thursday	Trade	Sun Microsystems			
#203	1,405	9/20/99	Monday	Trade	Yom Kipper Services			
#204	1,385	3/12/99	Friday	Trade	Limo Transpo			
#205	1,360	11/20/99	Saturday	Trade	Postage Stamps			
#206	1,272	3/13/99	Saturday	Irade	Limo Transpo			
#207	1,078	11/19/99	Friday	Trade	Postage Stamps			
#208	1,005	4/25/99	Sunday	Trade	Childrens Museum			
#209	855	7/17/99	Saturday	Irade	NYS Teachers Exam			
#210	825	11/21/99	Sunday	Irade	Postage Stamps			
#211	788	6/2/99	vvednesday	Trade	China Trade	Living Better Expo		
#212	600	11/1/99	Monday	Trade	NUS East Meeting			
#213	505	6/1/99	Tuesday	Irade	Unina Trade		L	
#214	505	9/29/99	vvednesday	Trade	KW Training		-	
#215	505	12/3/99	Friday	Trade	Banker's Trust Party			
#216	495	11/2/99	Tuesday	Irade	NUS East Meeting		L	
#217	487	12/6/99	Monday	Trade	Java Business			
#218	405	3/24/99	vvednesday	Trade	Aging Brain		-	
#219	405	////99	vvednesday	Trade	Kvv i raining			
#220	380	11/23/99	luesday	I rade	America Sings		L	
#221	380	11/24/99	vveanesday	Trade	America Sings	Vers Kisser Oraci		
#222	333	9/19/99	Sunday	Trade	Franchise Expo	TOT KIPPUT Services		
#223	260	5/22/99	Saturday	Trade	Financial Analyst			
#224	200	1/23/99	Thursdow	Trade	INT Special Olympics			
#225	200	11/4/99	rnursday	irade	JAVIIS IVIASKED BAIL	1		1

Table 1: Ranked Daily Attendance of 1999 Convention Center Events (Annual)

	Estimated			Show	N				
Rank	Attendance	Date	Day of Week	Type	Primary Event(s)				
#226	225	6/11/00	Fridov	Trada	China Trada Evpa	,	(;)		
#220	230	0/11/99	Filuay	Trade	China Hade Expo				
#227	200	7/2/99	Friday	Irade	Worship Conference				
#228	200	7/3/99	Saturday	Trade	Worship Conference				
#229	155	5/11/99	Tuesday	Trade	IAEM Volley Ball				
#230	122	6/12/99	Saturday	Trade	China Trade Expo				
#231	115	7/4/00	Sunday	Trade	Worship Conference				
#200	105	6/10/00	Sunday	Trade	Duese Deede	-			
#232	105	0/10/99	Filday	Trade	Duarie Reade				
#233	93	9/3/99	Friday	Irade	Data Warehousing				
#234	65	6/16/99	Wednesday	Trade	The View R4 to R5				
#235	45	5/21/99	Friday	Trade	Sisco Seminar				
#236	30	6/25/99	Friday	Trade	Wolmer's Meeting				
#237	0	1/1/00	Friday	made	troinior o mooting	i			
#200	0	1/1/33	Wedneedey			-			
#230	0	1/13/99	wednesday						
#239	0	1/14/99	Thursday						
#240	0	1/27/99	Wednesday						
#241	0	1/28/99	Thursday						
#242	0	1/29/99	Friday						
#243	Ő	2/5/99	Friday			i			
#240	0	2/6/00	Coturdou			1			
#244	U	2/0/99	Saturday		l		l	l	
#245	0	2/7/99	Sunday			L		ļ	
#246	0	2/8/99	Monday						
#247	0	2/9/99	Tuesday						
#248	0	2/10/99	Wednesday						
#240	Ő	2/17/00	Wednesday		1		1	1	
#250	0	2/11/00	Thursday			1			
#200	U	2/10/99	Thursday						
#251	0	2/19/99	Friday						
#252	0	2/26/99	Friday						
#253	0	2/27/99	Saturday						
#254	0	3/1/99	Monday						
#255	0	3/2/99	Tuesday						
#255	0	2/2/00	Wednesday			1			
#250	0	3/3/99	weunesuay						
#257	0	3/10/99	Wednesday						
#258	0	3/11/99	Thursday						
#259	0	3/26/99	Friday						
#260	0	3/27/99	Saturday						
#261	0	3/28/99	Sunday						
#262	Ő	3/20/00	Monday						
#202	0	3/29/99	Turaday						
#263	0	3/30/99	Tuesday			-			
#264	0	3/31/99	Wednesday						
#265	0	4/1/99	Thursday						
#266	0	4/2/99	Friday						
#267	0	4/12/99	Monday						
#268	Ő	4/13/00	Tuesday						
#200	0	4/14/00	Wedneedey			1			
#209	0	4/14/99	wednesday						
#270	0	4/23/99	Friday			-			
#271	0	4/24/99	Saturday						
#272	0	5/7/99	Friday						
#273	0	5/8/99	Saturday						
#274	0	5/10/99	Monday		İ	1	İ	İ	
#275	0	5/12/00	Wednesday			1			
#270	0	5/12/39	Thursday			<u> </u>			
#2/16	U	5/13/99	mursday		l		l	l	
#277	0	5/14/99	Friday						
#278	0	5/20/99	Thursday			L			
#279	0	5/28/99	Friday						
#280	0	5/29/99	Saturday						
#281	0	5/31/99	Mondav						
#282	0	6/7/99	Monday		İ	İ	i	i	
#202	0	6/12/00	Sunday			ł	l	l	
#283	U	0/13/99	Sunday		l		l	l	
#∠84	U	6/14/99	ivionday						
#285	0	6/15/99	Tuesday						
#286	0	6/19/99	Saturday						
#287	0	6/20/99	Sunday						
#288	0	6/21/99	Monday		İ	1	İ	İ	
#280	õ	6/26/00	Saturday						
#200	0	6/20/00	Tuosday						
#290	U	0/29/99	Tuesday						
#291	0	7/1/99	Thursday						
#292	0	7/5/99	Monday						
#293	0	7/6/99	Tuesdav						
#294	0	7/8/99	Thursday			İ			
#205	Č	7/10/00	Saturday			1			
#290	0	7/10/99	Saturuay						
#296	U	7/15/99	Inursday						
#297	0	7/16/99	Friday						
#298	0	7/24/99	Saturday						
#299	0	7/25/99	Sundav						
#300	0	7/26/99	Monday		1	1	1	1	

Table 1: Ranked Daily Attendance of 1999 Convention Center Events (Annual)

	Estimated			Show				
Rank	Attendance	Date	Dav of Week	Type		Primary	Event(s)	
#301	0	7/20/00	Thursday	11			210111(0)	
#307	0	7/30/99	Friday					
#303	0	8/7/99	Saturday					
#304	0	8/11/99	Wednesday					
#305	0	8/12/99	Thursday					
#306	0	8/13/99	Friday					
#307	0	8/20/99	Friday					
#308	0	8/21/99	Saturday					
#309	0	8/22/99	Sunday					
#310	0	8/27/99	Friday					
#311	0	8/28/99	Saturday					
#312	0	8/29/99	Sunday					
#313	0	9/4/99	Saturday					
#314	0	9/5/99	Sunday					
#315	0	9/6/99	Monday					
#316	0	9/7/99	Tuesday					
#317	0	9/10/99	Friday					
#310	0	9/11/99	Saturday					
#319	0	9/12/99	Monday					
#320	0	9/13/99	Tuesday					
#322	0	9/22/99	Wednesday					
#323	0	9/28/99	Tuesday					
#324	0	9/30/99	Thursday					
#325	0	10/9/99	Saturday					
#326	0	10/10/99	Sunday					
#327	0	10/11/99	Monday					
#328	0	10/12/99	Tuesday					
#329	0	10/13/99	Wednesday					
#330	0	10/14/99	Thursday					
#331	0	10/15/99	Friday					
#332	0	10/22/99	Friday					
#333	0	10/23/99	Saturday					
#334	0	10/24/99	Sunday					
#335	0	10/25/99	Tuonday					
#337	0	10/20/33	Sunday					
#338	0	11/3/99	Wednesday					
#339	Ő	11/5/99	Friday					
#340	0	11/10/99	Wednesday					
#341	0	11/11/99	Thursday					
#342	0	11/13/99	Saturday					
#343	0	11/15/99	Monday					
#344	0	11/22/99	Monday					
#345	0	11/25/99	Thursday					
#346	0	11/26/99	Friday					
#347	0	12/2/99	Thursday					
#348	0	12/4/99	Saturday					
#349	0	12/10/99	Friday					
#350	0	12/11/99	Saturday			-	-	
#351	0	12/12/99	Sunday					
#352	0	12/13/99	Friday					
#354	0	12/20/99	Monday					
#355	0	12/21/99	Tuesday					
#356	0	12/22/99	Wednesday					
#357	ő	12/23/99	Thursday		1	-	-	1
#358	0	12/24/99	Friday					
#359	0	12/25/99	Saturday					
#360	0	12/26/99	Sunday					
#361	0	12/27/99	Monday					
#362	0	12/28/99	Tuesday					
#363	0	12/29/99	Wednesday					
#364	0	12/30/99	Thursday					
#365	0	12/31/99	Friday					

Source: Eng-Wong, Taub & Associates, 2003.

3,379,732 Total Attendance

14,321 Average Attendance

28,205 85th Percentile Attendance

236

Event Days Dark Days (Days When No Events Are Scheduled) 129



PB Team NYCT – Number 7 Extension Project 2 Broadway-5th Floor, Mailbox 519 New York, NY 10004

Fax: 646-252-2063

approximately 10,000 to 30,000 attendees. It is

important to note that in 1999, there were 129 dark days (days when no shows were scheduled). This was due to the inability of the Convention Center to book events back-to-back (because of move-in/move-out requirements), and the lack of demand to hold events on some holidays. The distribution of daily attendance at the Convention Center in 1999 is illustrated in Figure 1.

Based on precedent documented in several New York City-certified EIS's², peak attendance days are not utilized for analysis purposes, as they do not represent the most common circumstance. Instead a "design event day" condition with the 85th percentile daily attendance was identified to develop a reasonable worst-case scenario that would occur with enough frequency to warrant consideration for analysis. In 1999, the 85th percentile daily attendance was 28,205 (excluding dark days). This contrasts to the average daily attendance of 14,321.

Since daily attendance at the Convention Center is noticeably different on weekends compared to weekdays (20 of the top 50 attendance dates occurred on weekends), 1999 attendance data was further sorted by weekdays, Saturdays, and Sundays. Table 2 ranks 1999 attendance at weekday events, Table 3 ranks 1999 attendances at Saturday events, and Table 4 ranks attendance at Sunday events. As shown in Tables 2 through 4, the 85th percentile daily attendance was 26,550, 29,057, and 36,041 on weekdays, Saturdays, and Sundays, respectively. The 85th percentile daily attendance was higher on Sundays compared to Saturdays, which can be attributed to the occurrence of more combinations of trade shows that were held on Sundays (many of these shows began on Sunday and extended into the beginning of the week). Figure 2 shows the distribution of daily attendance on weekdays and Figure 3 shows the distribution of daily attendances on both Saturdays.

Projected Attendance Patterns

The proposed expanded exhibition and meeting space at the Convention Center would be used to attract public shows with larger space requirements and to accommodate multiple, smallervenue trade shows simultaneously. According to Convention Center management, attendance increases due to the expansion would be expected to differ between public and trade shows. Although public shows (such as the Auto Show, New York International Motorcycle Show, and PC Expo) may expand to fill the larger exhibition area, they are all expected to experience only a 15% increase in total visitation. However, the New York National Boat Show is the only public show that is neither expected to increase in size nor visitation, and instead could be coupled with a new four-day public show drawing approximately 80,000 total visitors. The proposed expansion would also afford small- and medium-sized trade shows (gift, fashion, and professional associations) the opportunity to expand their scopes, as well as to allow the Convention Center to schedule a greater number of simultaneous events. Based on the projections provided by Convention Center management, the visitation for all other shows (including trade shows) is expected to increase by 84% – approximately the same factor as the increase in floor space.

In order to project future 85th percentile attendance at the expanded Convention Center, the daily attendances at all Convention Center events held in 1999 (shown in Table 1) were



Daily Attendance

Figure 1: 1999 Convention Center Annual Attendance

² -U.S.T.A. National Tennis Center Project, Final Environmental Impact Statement, New York City Departments of City Planning and Environmental Protection, July 23, 1993;

^{-34&}lt;sup>th</sup> Street Rezoning, Final Environmental Impact Statement, Allee King Rosen & Fleming, June 1990;

⁻The Rezoning of the Block Bounded by 42nd Street, 41st Street, 11th Avenue and 12th Avenue, Final Environmental Impact Statement, Vollmer Associates, 1989; and

⁻Ninth Avenue and 31st Street Project, Final Environmental Impact Statement, Allee King Rosen & Fleming/Vollmer Associates, December 1989.

Table 2: Ranked Daily Attendance of 1999 Convention Center Events (Weekdays)

Damla	Estimated	Data	Davi of March	Chan Tuna	Drimony Friend(a)			
Rank	Attendance	Date	Day of week	Show Type	DC Fuere	Primary	Event(s)	1
#1	62,126	6/23/99	wednesday	Public	PC Expo			
#2	60,047	6/22/99	Tuesday	Public	PC Expo			
#3	59,958	10/28/99	Thursday	Irade	Interplan/Design	Photo East Expo '99		
#4	52,692	10/29/99	Friday	Trade	Interplan/Design	Photo East Expo 99		
#5	51,004	4/9/99	Friday	Public	Int I Auto Show			
#b	46,989	2/1/99	Monday	Trade	Int'i Gift Fair			
#7	41,075	4/8/99	Thursday	Public	Int I Auto Show			
#8	40,577	8/16/99	Monday	Trade	Inti Gift Fair			
#9	40,254	4/7/99	wednesday	Public	Int I Auto Show			
#10	39,220	2/2/99	Tuesday	Irade	Int I Gift Fair	MaaMaalal		
#11	36,903	7/21/99	wednesday	Public	Law Enforcement	Macvvorid		
#12	35,327	6/24/99	Thursday	Public	PC Expo			
#13	35,058	4/6/99	Tuesday	Public	Int I Auto Snow	Italian Chila	Custou	Natil Ctationany
#14	32,600	5/17/99	Monday	Dublic	Contemp Furniture	Italian Style	Suriex	Nati Stationery
#15	32,371	4/5/99	Tuonday	Trada	Int'l Cift Foir			
#10	31,701	6/17/99	Tuesday	Trade	Initi Gill Fair Otale Januatria	Feebies Deutieus	Feebies Ass. Funs	IA levels.
#17	31,051	6/2/99	wonday	Trade	Style industrie	Fashion Boulique	Fashion Acc. Expo.	JA Jewelly
#18	31,023	10/6/99	wednesday	Public	Fail Internet World	MaaMaalal		
#19	20,927	1/22/99	Thursday	Public	Law Enlorcement	Macword		
#20	20,000	TU/7/99	Tuesday	Public	Fail Internet World	Madical D. 8 M	Cineman Dun Tank	
#21	20,004	5/25/99	Tuesday Worde series	Trade	Chaminal Funa	Financial D & M	Finance Bus. Tech.	
#22	20,302	E/26/00	Wednesday	Trade	Enchion Routique	Medical D & M	Finance Bug Tech	
#23	27,702	11/9/00	Monday	Trade	Hatel/Matel/Rest	Wedical D & W	Culinony Inst	
#24	27,710	11/6/99	Wordseadow	Trade	Hotel/Wotel/Rest.		Cullmary Inst.	
#25	20,002	2/3/99	Tuosday	Trade	Chamical Expo	Einopoial Tooh Evpo	In Cosmotio LISA	
#20 #07	20,000	1/11/00	Monday	Trada	Eashion Boutique	Style Industria	Eachion Acconcorian	
#28	23,190	5/4/00	Tuesday	Trade	Eachion Access	On Demand Digital	Premium Incentivo	
#20 #20	22,900	0/24/00	Friday	Trada	Audio Engineering	Nat'l Merchandico	Retail Seek	
#29	22,394	5/24/99	Tuesday	Trade	Contomp Euroiture	Italian Style	Curtox	Not'l Stationary
#30	22,439	8/18/00	Wednesdow	Trade	Int'l Gift Eair	nandi i Otyre	GUILEX	wat i Statiofiely
#31	22,200	8/2/00	Tuesday	Trade	Style Industria	Eachion Boutique	Eachion Acc. Ever	
#32	21,703	0/3/99	Wednesdow	Trade	Comp Telephory	POP Show	ashion Acc. EXPO.	on Jewelly
#33	21,435	3/13/33	Tuosday	Trade	Vibo Stylo	Internhov		
#34	21,145	4/20/99	Tuesday	Trade	Duildings NIV	Feebieg Febrie	Infant & Elas Comm	
#35	20,010	6/9/00	Tuesday	Trade	Liconcing '00	URA Clobal Expo	Intriet & Liec Comm	
#30	20,007	9/24/00	Tuesday	Trade	Telecom Rusiness	пви біоваї Ехро		
#38	20,390	0/24/99	Tuesday	Trade	Eachion Boutique	Vibe Style	Kide Eachion	Off-price Spec
#30	10.022	6/0/00	Wednesday	Trade	Liconcing '00	UDe Style	Rius Fasiliun	On-price Spec.
#39	19,932	2/10/00	Fridov	Trade	Int'l Vision Expo	пви біоваї Ехро		
#40	19,704	3/19/99	Thursday	Trade	Chemical Expo	Einancial Tech Expo	In-Cosmetic LISA	Poetage Stampe
#42	18,880	10/27/00	Wednesday	Trade	Internion/Design	ппанска тесн схро	III-OOSIIIGIIC OOA	i ostage otamps
#42	18,653	10/21/99	Wednesday	Trade	Interplan/Design	Int'l Bue, Expo		
#43	18,550	4/28/00	Wednesday	Trade	Buildings NV	Eachion Eabric	Int'net & Elec Comm	
#45	18,427	1/25/00	Monday	Trade	Kide Eachion		Intriet & Liec Comm	
#45	17 902	2/12/00	Friday	Trade	Int'l Toy Fair	JA Jewelly		
#40	17,302	2/23/00	Tuesday	Trade	NV Rest & Food	I.T. for Wall Street	NVS Law Exam	
#48	17,433	5/5/99	Wednesday	Trade	On Demand Digital	Premium Incentive		
#40	17,040	10/8/00	Friday	Public	Eall Internet World	i ternioni incentive		
#50	17,000	10/18/99	Monday	Trade	Fashion Boutique	Vibe Style	Kids Eashion	Off-price Spec
#51	16,892	5/24/99	Monday	Trade	Fashion Boutique	vibo otylo	rado r domon	on phoe opeo.
#52	16,563	7/12/00	Monday	Trade	Fancy Food			
#53	16 149	7/23/99	Friday	Trade	MacWorld			
#54	15 474	3/8/99	Monday	Trade	Art Expo	Int'l Reauty Show		
#55	15 187	11/29/99	Monday	Trade	Greater NY Dental	Introducty onow		
#56	14 818	9/27/99	Monday	Trade	Audio Engineering	Nat'l Merchandise	Style Industrie	
#57	14 759	11/30/99	Tuesday	Trade	Greater NY Dental	nutrimoronanaloo	otyle indddilo	
#58	14,733	2/22/99	Monday	Trade	Style Industrie	NY Rest & Food	LT for Wall Street	
#59	14.038	12/1/99	Wednesday	Trade	Greater NY Dental			
#60	13,959	9/1/99	Wednesday	Trade	Data Warehousing	Int'l Security Conf.		
#61	13,831	1/8/99	Friday	Public	Boat Show		1	1
#62	13,291	9/14/99	Tuesday	Trade	Comp. Telephony			
#63	13,258	2/24/99	Wednesday	Trade	I.T. for Wall Street	NYS Law Exam		
#64	12,404	7/13/99	Tuesday	Trade	Fancy Food		1	1
#65	12.204	9/16/99	Thursday	Trade	Comp. Telephony	POP Show	Show Biz Expo	
#66	12.096	1/26/99	Tuesdav	Trade	Kids Fashion	JA Jewelry		
#67	11.516	3/9/99	Tuesday	Trade	Int'l Beauty Show		1	İ
#68	11.216	1/12/99	Tuesdav	Trade	Fashion Boutique	Fashion Accessories	İ	İ
#69	10.967	6/10/99	Thursday	Trade	Licensing '99	HBA Global Expo		
#70	10,898	2/15/99	Monday	Trade	Int'l Toy Fair	Variety Merchandise	1	İ
#71	10.772	10/20/99	Wednesday	Trade	Kids Fashion	Off-price Spec.	Int'l Fashion Fabric	İ
#72	10,700	11/9/99	Tuesday	Trade	Hotel/Motel/Rest.	1		İ
#73	10,446	8/31/99	Tuesday	Trade	Data Warehousing	Int'l Security Conf.	İ	İ
#74	10.369	5/3/99	Monday	Trade	Style Industrie	Fashion Access.	On Demand Digital	İ
#75	10,176	4/22/99	Thursday	Trade	Interphex	1		İ
#76	9,704	5/6/99	Thursday	Trade	On Demand Digital	Premium Incentive	İ	İ
#77	9,695	1/7/99	Thursday	Public	Boat Show		İ	İ
#78	9,575	1/6/99	Wednesday	Public	Boat Show		l	l
#79	9,557	1/19/99	Tuesday	Trade	Retail Federation	Magic East	İ	İ
#80	9,389	12/14/99	Tuesday	Trade	E-Business Expo	Bazaar & Earthweb		
#81	9,321	1/18/99	Monday	Trade	Retail Federation		l	l
#82	9,284	8/4/99	Wednesday	Trade	JA Jewelry	1	İ	İ
#83	8,972	5/27/99	Thursday	Trade	Medical D & M	Finance Bus. Tech.		
#84	8,651	1/5/99	Tuesday	Public	Boat Show		l	l
#85	8,478	8/23/99	Monday	Trade	Telecom Business			
#86	8,468	5/19/99	Wednesdav	Trade	Nat'l Stationery	1	İ	İ
#87	7,961	12/15/99	Wednesday	Trade	E-Business Expo	Bazaar & Earthweb	1	i i
#88	7,804	8/25/99	Wednesday	Trade	Telecom Business		İ	İ
#89	7,735	9/2/99	Thursday	Trade	Data Warehousing	Int'l Security Conf.	İ	İ
#90	7,510	6/17/99	Thursday	Trade	TCI Commencement		İ	İ
#91	7.052	8/9/99	Monday	Trade	Kids Fashion	Music Expo	1	i i
#92	7 051	2/4/99	Thursday	Trade	Int'l Gift Fair			1

Table 2: Ranked Daily Attendance of 1999 Convention Center Events (Weekdays)

Rank	Estimated Attendance	Date	Day of Week	Show Type	Primary Event(s)			
#93	7.015	1/4/99	Monday	Public	Boat Show	1 million y	Evenius/	
#94	6,728	3/5/99	Friday	Trade	Art Expo			
#95	6,716	10/5/99	Tuesday	Public	Fall Internet World			
#96	6,466	7/14/99	Wednesday	Trade	Fancy Food			
#97	6,354	3/4/99	Thursday	Trade	Art Expo	Intiant & Else Comm		
#96 #99	6,324	2/25/99	Thursday	Trade	T for Wall Street	Int het & Elec Comm		
#100	5,759	10/4/99	Monday	Trade	NY Fall Textile	Fall Internet World		
#101	5,525	3/15/99	Monday	Trade	Int'l Kids Fashion	Vinisud USA		
#102	5,499	4/19/99	Monday	Trade	Vibe Style			
#103	5,353	8/19/99	Ihursday	Irade	Int'l Gift Fair Chairman's Address			
#104	5,205	7/20/99	Tuesday	Trade	Merchandise	Law Enforcement		
#106	5,185	1/15/99	Friday	Public	Int'l Motorcycle			
#107	5,056	4/30/99	Friday	Trade	CUNY Job Fair			
#108	5,025	12/16/99	Tuesday	Irade	E-Business Expo	Bazaar & Earthweb		
#109	4,878	4/16/99	Friday	Trade	Erotica	WUSIC EXPO		
#111	4,477	3/16/99	Tuesday	Trade	Int'l Kids Fashion	Vinisud USA		
#112	4,410	6/3/99	Thursday	Trade	China Trade	Living Better Expo	Agriflor	
#113	4,154	12/8/99	Wednesday	Trade	Java Business	Criminal Justice		
#114	4,135	1/20/99	Wednesday	Trade	Retail Federation	Magic Fast		
#116	3,555	12/7/99	Tuesday	Trade	Java Business			
#117	3,492	2/11/99	Thursday	Trade	Int'l Toy Fair			
#118	3,432	6/4/99	Friday	Trade	Agriflor	E		
#119 #120	3,290	6/30/99	Wednesday	Trade	Bar Review	rianunise Expo		
#121	3,147	7/27/99	Tuesday	Trade	NYS Bar Exam			
#122	3,147	7/28/99	Wednesday	Trade	NYS Bar Exam			
#123	3,030	4/15/99	Thursday	Trade	Erotica			
#124 #125	3,005	8/6/99	Friday	Trade	US IMMIG & Nat.			
#126	3.005	11/12/99	Friday	Trade	Svlvia Browne			
#127	2,304	12/9/99	Thursday	Trade	Java Business	Criminal Justice		
#128	2,259	3/18/99	Thursday	Trade	Int'l Kids Fashion			
#129	2,222	10/1/99	Friday	Trade	NY Fall Textile			
#130	2,208	3/22/99	Monday	Trade	Pashion Boulique Buildings NY			
#132	2,005	7/9/99	Friday	Trade	Local 638 Vote			
#133	2,005	8/5/99	Thursday	Trade	Gibbs Graduation			
#134	2,000	9/23/99	Thursday	Trade	Retail Seek			
#135	1,961	3/17/99	vvednesday	Trade	Int I Kids Fashion			
#137	1,875	7/19/99	Monday	Trade	Merchandise			
#138	1,835	8/30/99	Monday	Trade	Data Warehousing			
#139	1,805	9/8/99	Wednesday	Trade	Sun Microsystems			
#140	1,769	2/16/99	Tuesday	Irade	Variety Merchandise	Soro Sobolarabia		
#141	1,535	1/22/99	Friday	Trade	Magic East	Selo Scholarship		
#143	1,505	3/25/99	Thursday	Trade	Mercedes Benz			
#144	1,475	9/9/99	Thursday	Trade	Sun Microsystems			
#145	1,405	9/20/99	Monday	Trade	Yom Kipper Services			
#146 #147	1,365	11/19/99	Friday	Trade	Postage Stamps			
#148	788	6/2/99	Wednesday	Trade	China Trade	Living Better Expo		
#149	600	11/1/99	Monday	Trade	MCS East Meeting			
#150	505	6/1/99	Tuesday	Trade	China Trade			
#151 #152	505	9/29/99	Friday	Trade	KW Training Banker's Trust Party			
#153	495	11/2/99	Tuesday	Trade	MCS East Meeting			
#154	487	12/6/99	Monday	Trade	Java Business			
#155	405	3/24/99	Wednesday	Trade	Aging Brain			
#156 #157	405	11/23/99	Tuesday	Trade	America Sings			
#158	380	11/24/99	Wednesday	Trade	America Sings			
#159	255	11/4/99	Thursday	Trade	Javits Masked Ball			
#160	235	6/11/99	Friday	Trade	China Trade Expo			
#161 #162	200	7/2/99 5/11/99	Friday	Trade	Worship Conterence			
#163	105	6/18/99	Friday	Trade	Duane Reade			
#164	93	9/3/99	Friday	Trade	Data Warehousing			
#165	65	6/16/99	Wednesday	Trade	The View R4 to R5			
#166	45	5/21/99	Friday	Trade	Sisco Seminar Wolmer's Mosting			
#168	0	1/1/99	Friday	naue	women's weeting			
#169	0	1/13/99	Wednesday					
#170	0	1/14/99	Thursday					
#171	0	1/27/99	Wednesday					
#173	0	1/20/99	Friday					
#174	0	2/5/99	Friday					
#175	0	2/8/99	Monday					
#176	0	2/9/99	Tuesday					
#1//	0	2/10/99	Wednesday					
#179	0	2/18/99	Thursday					
#180	0	2/19/99	Friday					
#181	0	2/26/99	Friday					
#182	0	3/1/99	Monday					
#184	0	3/3/00	Wednesday					

Table 2: Ranked Daily Attendance of 1999 Convention Center Events (Weekdays)

D	Estimated			o			
Rank	Attendance	Date	Day of week	Snow Type	Primary	Event(s)	
#185	0	3/10/99	Wednesday				
#186	0	3/11/99	Thursday				
#187	0	3/26/99	Friday				
#188	0	3/29/99	Monday				
#189	0	3/30/99	Tuesday				
#190	0	3/31/99	Wednesday				
#101	0	4/1/00	Thursday				
#191	0	4/1/99	Thuisday				
#192	0	4/2/99	Friday				
#193	0	4/12/99	Monday				
#194	0	4/13/99	Tuesday				
#195	0	4/14/99	Wednesday				
#196	0	4/23/99	Friday				
#197	0	5/7/99	Friday				
#198	0	5/10/99	Monday				
#199	0	5/12/99	Wednesday				
#200	0	5/13/99	Thursday				
#201	0	5/1//00	Friday				
#201	0	5/20/00	Thursday				
#202	0	5/20/00	Frideu				
#203	0	5/26/99	Fluay				
#204	0	5/31/99	Monday				
#205	0	6/7/99	Monday				
#206	0	6/14/99	Monday				
#207	0	6/15/99	Tuesday		 		
#208	0	6/21/99	Monday				
#209	0	6/29/99	Tuesday				
#210	0	7/1/99	Thursday				
#211	0	7/5/99	Monday				
#212	ő	7/6/99	Tuesday				
#212	0	7/8/00	Thursday				
#213	0	7/0/99	Thursday				
#214	0	7/15/99	Thursday				
#215	0	7/16/99	Friday				
#216	0	7/26/99	Monday				
#217	0	7/29/99	Thursday				
#218	0	7/30/99	Friday				
#219	0	8/11/99	Wednesday				
#220	0	8/12/99	Thursday				
#221	0	8/13/99	Friday				
#222	0	8/20/99	Friday				
#223	0	8/27/00	Friday				
#224	0	0/6/00	Monday				
#224	0	9/0/99	Tuesday				
#225	0	9/7/99	Tuesday				
#226	0	9/10/99	Friday				
#227	0	9/13/99	Monday				
#228	0	9/21/99	Tuesday				
#229	0	9/22/99	Wednesday				
#230	0	9/28/99	Tuesday				
#231	0	9/30/99	Thursday				
#232	0	10/11/99	Monday				
#233	0	10/12/99	Tuesday				
#234	0	10/13/99	Wednesday				
#235	0	10/14/99	Thursday				
#233	0	10/14/99	Thursday				
#230	U	10/15/99	Friday				
#237	U	10/22/99	Friday		 		
#238	0	10/25/99	Monday				
#239	0	10/26/99	Tuesday				
#240	0	11/3/99	Wednesday				
#241	0	11/5/99	Friday				
#242	0	11/10/99	Wednesday				
#243	0	11/11/99	Thursday				
#244	0	11/15/99	Monday		1		
#245	0	11/22/99	Monday				
#246	0	11/25/00	Thursday				
#240	0	11/25/55	Friday				
#241	0	11/20/33	Thursday				
#248	U	12/2/99	Inursday				
#249	U	12/10/99	Friday				
#250	0	12/13/99	Monday				
#251	0	12/17/99	Friday				
#252	0	12/20/99	Monday				
#253	0	12/21/99	Tuesday				
#254	0	12/22/99	Wednesdav				
#255	0	12/23/99	Thursday				
#256	0	12/24/99	Friday				
#250	0	12/27/00	Monday		 		<u> </u>
#201	0	12/21/33	Tuesday				
#258	U	12/28/99	Tuesday				
#259	U	12/29/99	vvednesday				
#260	0	12/30/99	Thursday				
#261	0	12/21/00	Eridov		 		

Table 3: Ranked Daily	v Attendance of 1	999 Convention	Center Events	(Saturdays)

Rank	Attendance	Date	Day of Week	Show Type		Primary	Event(s)	
#1	95,707	4/10/99	Saturday	Public	Int'l Auto Show			
#2	86,483	4/3/99	Saturday	Public	Int'l Auto Show			
#3	67,516	1/9/99	Saturday	Public	Boat Show	Fashion Boutique	Style Industrie	
#4	36,821	1/2/99	Saturday	Public	Boat Show			
#5	29,767	9/25/99	Saturday	Trade	Audio Engineering	Nat'l Merchandise	Style Industrie	
#6	28,346	11/6/99	Saturday	Trade	Hotel/Motel/Rest.			
#7	26,939	10/30/99	Saturday	Trade	Photo East Expo '99	NYS Teachers Exam		
#8	23,174	2/13/99	Saturday	Trade	Int'l Toy Fair	Variety Merchandise		
#9	20,314	3/20/99	Saturday	Trade	Int'l Vision Expo	Fashion Boutique		
#10	16,556	12/18/99	Saturday	Trade	Kwanzaa Holiday			
#11	14,766	1/16/99	Saturday	Public	Int'l Motorcycle	NYS Teachers Exam		
#12	14,470	2/20/99	Saturday	Trade	Style Industrie	Church of Christ		
#13	12,517	7/31/99	Saturday	Trade	Style Industrie	Fashion Boutique		
#14	9,811	1/30/99	Saturday	Trade	Int'l Gift Fair			
#15	9,600	3/6/99	Saturday	Trade	Art Expo	Int'l Beauty Show		
#16	9,512	8/14/99	Saturday	Trade	Int'l Gift Fair			
#17	9,365	5/15/99	Saturday	Trade	Contemp Furniture	Italian Style		
#18	8,686	4/17/99	Saturday	Trade	Erotica	Gay & Lesbian Bus.	Teachers Exam	
#19	4,745	6/5/99	Saturday	Trade	Agriflor	Financial Analyst		
#20	4,202	10/16/99	Saturday	Trade	Fashion Boutique			
#21	3,768	10/2/99	Saturday	Trade	NY Fall Textile			
#22	3,733	5/1/99	Saturday	Trade	Style Industrie			
#23	3,519	9/18/99	Saturday	Trade	Show Biz Expo	Franchise Expo		
#24	3,094	11/27/99	Saturday	Trade	Greater NY Dental			
#25	1,360	11/20/99	Saturday	Trade	Postage Stamps			
#26	1,272	3/13/99	Saturday	Trade	Limo Transpo			
#27	855	7/17/99	Saturday	Trade	NYS Teachers Exam			
#28	260	5/22/99	Saturday	Trade	Financial Analyst			
#29	255	1/23/99	Saturday	Trade	NY Special Olympics			
#30	200	7/3/99	Saturday	Trade	Worship Conference			
#31	122	6/12/99	Saturday	Trade	China Trade Expo			
#32	0	2/6/99	Saturday					
#33	0	2/27/99	Saturday					
#34	0	3/27/99	Saturday					
#35	0	4/24/99	Saturday					
#36	0	5/8/99	Saturday					
#37	0	5/29/99	Saturday					
#38	0	6/19/99	Saturday					
#39	0	6/26/99	Saturday				ļ	
#40	0	7/10/99	Saturday					
#41	0	7/24/99	Saturday					
#42	0	8/7/99	Saturday					
#43	0	8/21/99	Saturday					
#44	0	8/28/99	Saturday					
#45	0	9/4/99	Saturday					
#46	0	9/11/99	Saturday					
#47	0	10/9/99	Saturday					
#48	0	10/23/99	Saturday					
#49	0	11/13/99	Saturday					
#50	0	12/4/99	Saturday					
#51	0	12/11/99	Saturday					
#52	0	12/25/99	Saturday					

Source: Eng-Wong, Taub & Associates, 2003.

17,669 29,057 31 21

Average Attendance 85th Percentile Attendance Event Days Dark Days (Days When No Events Are Scheduled)

Source: Eng-Wong, Taub & Associates, 2003.

12,824 26,550 167 94

Average Attendance 85th Percentile Attendance Event Days Dark Days (Days When No Events Are Scheduled)

Table 4: Ranked Daily Attendance of 1999 Convention Center Events (Sundays)

	Estimated								
Rank	Attendance	Date	Day of Week	Show Type	e Primary Event(s)				
#1	81,056	4/11/99	Sunday	Public	Int'l Auto Show				
#2	68,202	4/4/99	Sunday	Public	Int'l Auto Show				
#3	56,724	1/31/99	Sunday	Trade	Int'l Gift Fair				
#4	43,369	8/15/99	Sunday	Trade	Int'l Gift Fair				
#5	42,985	1/10/99	Sunday	Public	Boat Show	Fashion Boutique	Style Industrie	Fashion Accessories	
#6	36,720	8/1/99	Sunday	Trade	Style Industrie	Fashion Boutique	Fashion Acc. Expo.	JA Jewelry	
#7	35,486	5/16/99	Sunday	Trade	Contemp Furniture	Italian Style	Surtex	Nat'l Stationery	
#8	29,009	9/26/99	Sunday	Trade	Audio Engineering	Nat'l Merchandise	Style Industrie		
#9	26,163	11/7/99	Sunday	Trade	Hotel/Motel/Rest.		, , , , , , , , , , , , , , , , , , ,		
#10	26,141	3/7/99	Sunday	Trade	Art Expo	Int'l Beauty Show			
#11	22,381	1/24/99	Sunday	Trade	Kids Fashion	JA Jewelry			
#12	19.662	11/28/99	Sunday	Trade	Greater NY Dental	, i			
#13	18,562	2/14/99	Sunday	Trade	Int'l Toy Fair	Variety Merchandise			
#14	18.088	10/17/99	Sunday	Trade	Fashion Boutique	Vibe Style	Kids Fashion		
#15	18.074	1/3/99	Sunday	Public	Boat Show	Church of Christ			
#16	17,068	7/11/99	Sunday	Trade	Fancy Food				
#17	15,904	5/23/99	Sunday	Trade	Fashion Boutique				
#18	14,616	3/21/99	Sunday	Trade	Int'l Vision Expo	Eashion Boutique			
#19	13,981	2/21/99	Sunday	Trade	Style Industrie	NY Rest. & Food			
#20	13,564	12/19/99	Sunday	Trade	Kwanzaa Holiday	Church of Christ			
#21	10,658	4/18/99	Sunday	Trade	Frotica	Gay & Lesbian Bus	Vibe Style		
#22	9.873	1/17/99	Sunday	Public	Int'l Motorcycle				
#23	8,130	5/2/99	Sunday	Trade	Style Industrie	Fashion Access			
#24	5.824	3/14/99	Sunday	Trade	Int'l Kids Fashion				
#25	5.510	6/27/99	Sunday	Trade	Church of Christ	Local 638 Vote			
#26	5,218	8/8/99	Sunday	Trade	Kids Fashion				
#27	4 313	10/3/99	Sunday	Trade	NY Fall Textile				
#28	3 255	5/30/99	Sunday	Trade	Church of Christ				
#20	3,205	2/28/00	Sunday	Trade	Church of Christ				
#20	3,005	5/0/00	Sunday	Trade	Church of Christ				
#30	3,005	6/6/99	Sunday	Trade	Church of Christ				
#32	3,005	11/14/99	Sunday	Trade	Church of Christ				
#33	3,005	12/5/00	Sunday	Trade	Penny Harvest				
#34	2,470	7/18/00	Sunday	Trade	Merchandise				
#35	1,005	1/25/00	Sunday	Trade	Childrens Museum				
#36	825	11/21/99	Sunday	Trade	Postare Stamps			1	
#37	333	9/19/99	Sunday	Trade	Franchise Expo	Yom Kippur Services		1	
#38	115	7/4/99	Sunday	Trade	Worship Conference			1	
#39	0	2/7/99	Sunday			1		1	
#40	0	3/28/99	Sunday	1		1		1	
#41	0	6/13/99	Sunday	1		1		1	
#42	0	6/20/00	Sunday					1	
#43	0	7/25/00	Sunday					1	
#44	0	8/22/00	Sunday					1	
#45	0	8/20/00	Sunday					1	
#46	0	0/5/00	Sunday	1	1			1	
#40	0	9/12/00	Sunday					1	
#47	0	10/10/00	Sunday	1		1		1	
#40	0	10/10/99	Sunday	1		1		1	
#49	0	10/24/39	Sunday	1		1		1	
#50	0	12/12/00	Sunday	1		1		1	
#50	0	12/12/99	Sunday						

Source: Eng-Wong, Taub & Associates, 2003.

Average Attendance 85th Percentile Attendance

18,166 36,041 38 14

Event Days Dark Days (Days When No Events Are Scheduled)



Figure 2: 1999 Convention Center Weekday Attendance


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increased by the methodologies described above

(e.g. public show attendances were increased by 15% and trade show attendances were increased by 84%). This methodology is based on the current Convention Center schedule, however the expansion of the Convention Center could allow for greater flexibility in the scheduling of some future events. As an example, events could be open to the public in the existing portion of the facility, while other events could be moving in/out in the expanded portion (in essence reducing the total amount of dark days). Because dark days were not included in the calculation of current 85th percentile attendance, this methodology conservatively assumes the worst-case scenario in that the increased attendance would not be spread over a greater number of days. Table 5 provides a comparison of existing and projected 85th percentile attendance for weekdays, Saturdays, and Sundays. As shown in Table 5, a resulting 65.4% increase in overall daily visitation is expected. Figure 4 contains an overlay of the annual distribution of projected daily attendance over existing daily attendance.

Table 5: Existing and Projected 85th Percentile Daily Attendances

	Existing	Projected	Net Increase (Percent)
Weekday	28,188	43,107 ¹	14,919 (+52.9%)
Saturday	30,849	56,763	25,914 (+84.0%)
Sunday	38,265	62,684	24,419 (+63.8%)
Overall	29,945	49,539	19,594 (+65.4%)

Source: Eng-Wong Taub & Associates, 2003. 1999 existing attendances were conservatively increased to account for modest growth experienced in Convention Center between 1999 and 2000 (an overall increase of 6.2%). Notes: 1. Refer to "Analysis of Concurrent Weekday Convention Event at Multi-Use Facility" below.

For comparative purposes, attendance patterns at the Orange County Convention Center (Orlando, FL) were obtained for 1983-2002, during which time the facility underwent two major expansions (in 1989 and 1996³). After both expansions, the size of the exhibition and meeting areas more than doubled, while attendance increased by approximately 45 percent and 60 percent, respectively (see Table 6). Therefore, the projected 65.4% increase of annual visitation at the Javits Convention Center is comparable to the empirical trends observed at the Orange County Convention Center (e.g. overall attendance would not increase in the same proportion as the amount of new expansion space). This trend of increased attendance was also projected for the expansion of the Spokane Convention Center (Spokane, WA) in that size of the facility would be expanded from 120,600 to 293,600 square feet (an increase of 143%) but that future attendance would essentially double.⁴

Analysis of Concurrent Weekday Convention Event at Multi-Use Facility

Subsequent to the publication of the DGEIS, concurrent convention events at the expanded Convention Center and proposed Multi-Use Facility were analyzed to represent the reasonable worst-case scenario for events occurring during the Weekday AM, Midday, and PM peak hours. A weekday trade show at the Multi-Use Facility would be expected to draw an 85th percentile daily attendance of 8,625. Conversely, refinements to the program for the Convention Center expansion have reduced the size of the total expanded exhibition space by approximately 60,000 square feet. For this reason, the projected 85th percentile weekday daily attendance at the expanded Convention Center was reduced from 43,107 to 40,882, resulting in a net total weekday convention event attendance (at both the expanded Convention Center and Multi-Use

³ Ann Fisher, Orange County Convention Center Marketing-Research, July 15, 2003.

⁴ Spokane Convention Center Expansion Transportation Impact Analysis, The Transpo Group, January 2003.





(1983-2002)
Center
Convention
County
Orange
at the
Attendance
Annual

***	e														-							Ľ	
Percent	Increase							136%								239%							
Exhibition and	Meeting Area (sf)			177 112	011,171						417,969				1,416,678								
Percent	ncrease							45%								60%							
Average	Attendance			20000	404,340			628,405								1,003,736							
als	Attendance	342,982	461,601	500,571	383,808	429,899	478,814	600,614	596,050	569,412	657,549	568,955	705,824	700,429	1,017,679	930,219	982,366	1,022,937	1,052,146	842,479	1,017,070		
Ρ	# of Events	129	119	135	112	123	170	254	239	196	177	159	188	168	240	260	244	216	205	191	200		
eted Events	Attendance	199,999	187,866	151,106	65,584	134,573	106,344	17,867	14,171	24,451	36,897	27,900	23,600	21,923	0	14,355	12,394	4,000	0	4,800	6,275		
Public Ticke	# of Events	90 90	25	29	14	21	15	9	5	3	8	4	2	1	0	2	2	1	0	ŀ	4		
tings	Attendance	45,763	37,566	123,247	51,151	24,275	30,486	70,757	74,198	84,272	58,871	43,010	51,539	55,901	46,770	43,300	50,864	22,543	25,228	25,632	47,595		
Mee	# of Events	58	43	45	46	50	64	143	125	107	80	29	84	89	107	119	108	72	92	75	95		
quets	Attendance	11,076	10,726	7,082	3,944	7,541	3,296	4,820	15,153	6,647	7,274	3,460	5,106	4,043	3,827	9,867	2,832	7,344	2,881	2,200	500		
Ban	# of Events	23	26	22	11	11	12	18	27	14	11	4	8	2	6	2	2	14	9	2	1		
er Shows	Attendance	30,704	61,736	63,923	61,569	118,142	119,861	164,400	115,555	139,240	128,557	98,367	126,007	132,840	118,171	103,730	78,665	97,177	102,790	107,705	151,048		
Consum	# of Events	9	6	16	11	17	15	27	16	14	12	11	13	15	10	9	2	6	7	8	10	Contor (Orlar	
Tradeshows	Attendance	55,440	163,707	155,213	201,560	145,368	218,827	342,770	376,973	314,802	425,950	396,218	499,572	485,722	848,911	758,967	837,611	891,873	921,247	702,142	811,652	Convention	
Conventions 8	# of Events	12	16	23	30	24	34	60	66	58	66	73	81	82	114	121	115	120	116	105	06	Orange Count	
	Year	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Source.	

<u>Source:</u> Orange County Convention Center (Orlando, FL) <u>Note:</u> Attendance data from 2001 not included in 1996-2002 average.

Previous Expansions of Orange County Convention Center

Total Space (sf)	177,113	417,969	941,647	1,408,530	1,416,678
Meeting Space (sf)	29,603	73,179	213,457	313,140	313,140
Exhibition Space (sf)	147,510	344,790	728,190	1,095,390	1,103,538
Completion Date	February 1983	January 1989	January 1996	August 1996	December 1997
Construction Phase	Phase #1	Phase #2 (Expansion)	Phase #3 (Expansion)	Phase #4 (Expansion)	Phase #1 Retrofit

Source: Orange County Convention Center (Orlando, FL)

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Facility) of 49,507. The same trip generation

assumptions contained within this technical memorandum were applied to a weekday convention event at the Multi-Use Facility.

Existing and Projected Convention Center Employment

Table 7 shows the number of existing and projected employees at the Convention Center. The travel demand associated with full-time workers (those working standard day shifts) will be assumed to be similar to those of other office workers in the rezoning area and will therefore be projected based on the methodologies contained within the Office Trip Generation Transportation Planning Assumptions Technical Memorandum⁵. The travel demand associated with all other Convention Center employees (mainly temporary workers) will be based on recent travel surveys completed by Convention Center event staff, which is described in more detail in the following section.

Table 7: Existing and Projected Convention Center Employees

Туре	Existing	Projected	Net Increase
Full-time	150	200	50
Temporary	970	1,470	500
Contractors	107	142	35
Totals	1,227	1,812	585

Source: Hellmuth, Obata, and Kassabaum, 2003.

Convention Center Travel Surveys

Because existing travel pattern data for the Convention Center are limited, detailed travel surveys were conducted by Eng-Wong Taub & Associates (EWT) at a public show on Sunday, April 27, 2003 (the New York International Auto Show) and at a combination of trade shows on Tuesday, May 6, 2003 (Industry 212 incorporating Femme, Accessories the Show/MODA Manhattan, and Lightfair)⁶. The two surveys included manual door counts (to determine the overall variation of temporal distributions throughout the day) and visitor surveys (to determine trip origins and destinations, mode of travel, durations of visits, and travel patterns specific to both attendees and exhibitors). Survey forms were also completed by event staff,⁷ which make up a sizeable portion of the total Convention Center employment (as shown in Table 7).

Trip Origins and Destinations

Table 8 shows the origins and destinations of Convention Center attendees, exhibitors, and event staff for both the weekend public show and weekday trade shows, which were obtained from interviews as part of the EWT surveys. As shown in Table 8, attendee departures from the weekend public show to Manhattan were substantially higher than attendee arrivals from Manhattan. This variation can be explained by the large percentage of attendees that went sightseeing or to restaurants following the event (this is illustrated by Table 9, which lists the pre- and post- event activities of Convention Center attendees, exhibitors, and event staff). In contrast, most trip destinations of exhibitors in the weekend public show were consistent with their origins. For the weekday trade shows, there were only slightly more attendees and



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exhibitors with Manhattan destinations compared

to origins, as most trips occurred between homes, hotels, and offices. It should be noted that Table 8 does not include separate origins and destinations for event staff; the arrival and departure activities of event staff listed in Table 9 are generally the same and predominantly involve trips to/from homes.

Temporal Distributions

Table 10 summarizes existing temporal distribution patterns based on the EWT surveys for both the weekend public show and the weekday trade shows. As shown in Table 10, temporal distributions for attendees, exhibitors, and event staff were obtained from interviews; overall temporal distributions correlate well with the temporal distributions of attendees; attendees accounted for 99.3% of the total visitors (the remaining 0.7% were exbibitors) at the public show and attendees accounted for 81.4% of the total visitors (18.6% were exhibitors) at weekday trade shows⁸. The overall temporal distributions for the weekend public show and weekday trade shows are plotted in Figure 5. This figure indicates that the temporal distributions for the weekend public show as associated with the weekday trade shows are more evenly spread over the course of the day.

To verify that the surveyed temporal distributions were representative of typical public and trade shows at the Convention Center, the starting and ending times of all events in 1999 were reviewed. Weekday trade shows typically start at 9 AM or 10 AM and end at 4 PM, 5 PM, or 6 PM (it is not uncommon for a combination of simultaneous events to start/end at different times). Similarly, most weekend public shows start between 8 AM and 10 AM and end at 5 PM or 6 PM.

The analysis of travel demand associated with Convention Center trade shows will focus on the weekday 8-9 AM, 12-1 PM, and 5-6 PM periods. As shown in Figure 5, these time periods generally correlate with the peaks in the weekday overall temporal distributions at the Convention Center.⁹ These peak periods also represent the worst-case scenario for the combined effects of incremental travel demand associated with the Convention Center and primary land use components of the adjacent Hudson Yards development (e.g. office, residential, and hotel) when applied to the existing peak periods of background traffic volumes.

For analysis purposes, projected trips to/from the Convention Center will be calculated separately for attendees, exhibitors, and event staff based on the temporal distributions obtained from the EWT interviews (also shown in Table 10). This methodology will allow for a more accurate projection of overall trips to the Convention Center because characteristics such as origin/destinations, travel modes, and average vehicle occupancy vary among the different types of visitors and employees. As a conservative measure, the sharp peak in departures of exhibitors from the weekday trade shows during the 6-7 PM period (a temporal distribution of 30.1%) will be assumed to occur during the 5-6 PM peak hour (in place of a temporal distribution of 5.4%.)

It was determined that the worst-case scenario for weekend trips would result from a combination of trips from the Convention Center and arrivals or departures from a Sunday

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⁵ Assuming 250 square feet of floor space per office employee.

⁶ Jacob K. Javits Convention Center Expansion Study, Technical Memorandum Travel Surveys, Eng-Wong Taub & Associates, May 15, 2003

⁷ These workers included cleaning service personnel, food service personnel, and carpenters.

⁸ The split between attendees and exhibitors at the surveyed events was provided by Convention Center management.

⁹ The review of 1999 Convention Center event starting times indicated that a greater number of weekday trade shows begin at 10 AM compared to 9 AM. For this reason, it is logical for weekday arrivals to the Convention Center to be concentrated during the 9-10 AM period.

Table 8: Regional Origins and Destinations of Convention Center Attendees, Exhibitors, and Event Staff

WEEKEND PUBLIC SHOW

	THE CEN	DI OBEIO OII	0.11					
	Atte	ndees	Exh	ibitors	Event Staff			
Region	Origin	Destination	Origin	Destination	Origin/Destination			
Staten Island	2.5%	1.6%	2.2%	1.7%	0.0%			
Manhattan	12.5%	43.7%	48.1%	48.6%	22.2%			
Bronx	6.7%	3.8%	3.8%	2.8%	24.4%			
Brooklyn	15.2%	9.8%	23.5%	22.9%	22.2%			
Queens	19.0%	12.2%	3.8%	5.6%	22.2%			
Long Island	7.1%	4.0%	1.6%	1.7%	4.4%			
Westchester and Upstate (East of Hudson)	5.8%	3.6%	1.6%	1.7%	0.0%			
Rockland and Upstate (West of Hudson)	2.8%	1.9%	1.1%	1.7%	2.2%			
Northern New Jersey	21.2%	14.7%	13.1%	11.7%	2.2%			
Southern New Jersey	1.3%	0.8%	0.0%	1.1%	0.0%			
Connecticut and New England	5.8%	4.0%	1.1%	0.6%	0.0%			
Totals	100.0%	100.0%	100.0%	100.0%	100.0%			

Source: Eng-Wong Taub & Associates, 2003

	WEEKDA	Y TRADE SHO	ows		
	Atte	ndees	Exh	ibitors	Event Staff
Region	Origin	Destination	Origin	Destination	Origin/Destination
Staten Island	0.5%	0.0%	0.3%	0.0%	15.2%
Manhattan	60.5%	68.6%	71.4%	76.2%	9.1%
Bronx	1.0%	0.8%	0.0%	0.0%	9.1%
Brooklyn	5.1%	3.6%	1.3%	1.4%	21.2%
Queens	9.1%	8.8%	5.9%	4.8%	12.1%
Long Island	2.7%	1.5%	2.0%	1.7%	6.1%
Westchester and Upstate (East of Hudson)	2.9%	2.6%	2.3%	2.4%	3.0%
Rockland and Upstate (West of Hudson)	2.7%	1.8%	1.6%	1.7%	9.1%
Northern New Jersey	10.8%	9.0%	11.9%	8.3%	15.2%
Southern New Jersey	1.2%	0.5%	0.6%	1.0%	0.0%
Connecticut and New England	3.4%	2.8%	2.6%	2.4%	0.0%
Totals	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Eng-Wong Taub & Associates, 2003

Table 9: Pre- and Post- Event Activities of Convention Center Attendees, Exhibitors, and Event Staff

WEEKEND PUBLIC SHOW

			•			
	Atter	ndees	Exhi	bitors	Even	t Staff
Activity	Arrival	Departure	Arrival	Departure	Arrival	Departure
Home	95%	58%	53%	40%	96%	96%
Work	1%	1%	0%	2%	4%	4%
Hotel	1%	0%	41%	38%	0%	0%
Restaurant	0%	24%	0%	2%	0%	0%
Sightseeing	0%	8%	0%	12%	0%	0%
Other	3%	9%	5%	7%	0%	0%
Total	100%	100%	100%	100%	100%	100%

Source: Eng-Wong Taub & Associates, 2003

	WEEKDA	TRADE SHO	ows			
	Atter	ndees	Exhi	bitors	Even	t Staff
Activity	Arrival	Departure	Arrival	Departure	Arrival	Departure
Home	37%	32%	24%	20%	100%	100%
Work	18%	14%	7%	9%	0%	0%
Hotel	36%	26%	61%	53%	0%	0%
Restaurant	0%	10%	0%	12%	0%	0%
Sightseeing	0%	3%	0%	1%	0%	0%
Other	7%	16%	8%	6%	0%	0%
Total	100%	100%	100%	100%	100%	100%

Source: Eng-Wong Taub & Associates, 2003

	unts	ers)	Temporal Distribution									0.1%	1.3%	3.8%	5.6%	8.9%	12.0%	13.1%	14.4%	13.8%	12.0%	10.4%	4.6%					100.0%
4	anual Door Co	verall (All Use	Out									25%	%6	4%	14%	29%	36%	48%	20%	29%	%69	%98	65%					
	M	0	E									75%	91%	%96	86%	71%	64%	52%	20%	41%	31%	14%	5%					
			Temporal Distribution	9.5%					3.2%	16.0%	10.6%	6.4%	3.2%	1.1%	2.3%			2.8%	17.0%	11.9%	1.2%	%9'6		1.2%			1.2%	100.0%
		Event Staff	Out	100%					%0	%0	%0	%0	%0	%0	53%			82%	56%	100%	100%	100%		100%			100%	
MO			ч	%0					100%	100%	100%	100%	100%	100%	47%			18%	44%	%0	%0	%0		%0			%0	
DIBLIC SHO	/S		Temporal Distribution	0.3%				0.3%	0.5%	2.2%	14.7%	11.7%	21.2%	%8'0	0.3%	0.3%	0.3%	1.1%	1.9%	1.9%	12.5%	5.8%	8.9%	6.1%	2.8%	2.8%	3.6%	100.0%
WEEKEND	erson Interview	Exhibitors	Out	100%				100%	%0	%0	2%	%0	3%	34%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	F		ų	%0				%0	100%	100%	98%	100%	97%	%99	%0	%0	%0	%0	%0	%0	%0	%0	%0	%0	%0	%0	%0	
			Temporal Distribution										0.8%	7.8%	8.7%	8.6%	9.0%	11.5%	12.2%	13.2%	13.0%	15.2%						100.0%
		Attendees	Out										%0	2%	19%	32%	43%	55%	52%	48%	64%	95%						
			E										100%	98%	81%	68%	57%	45%	48%	52%	36%	5%						
			Time Period	00 AM - 1:00 AM	00 AM - 2:00 AM	10 AM - 3:00 AM	10 AM - 4:00 AM	00 AM - 5:00 AM	00 AM - 6:00 AM	ND AM - 7:00 AM	ND AM - 8:00 AM	00 AM - 9:00 AM	10 AM - 10:00 AM	11:00 AM - 11:00 AM	10 AM - 12:00 PM	00 PM - 1:00 PM	10 PM - 2:00 PM	00 PM - 3:00 PM	10 PM - 4:00 PM	00 PM - 5:00 PM	M 00:9 - M 00	M 00:7 - M 00	NO PM - 8:00 PM	M 00:6 - M 00	00 PM - 10:00 PM	00 PM - 11:00 PM	00 PM - 12:00 AM	Totals

I Ime Period	£	Out	DISTRIBUTION	ш	out	DISTRIBUTION	۵ ۲	Out	DISTRIBUTION	u	Out	DISTRIBUTION
12:00 AM - 1:00 AM				%0	1 00%	0.3%	%0	100%	9.5%			
1:00 AM - 2:00 AM												
2:00 AM - 3:00 AM												
3:00 AM - 4:00 AM												
4:00 AM - 5:00 AM				%0	1 00%	0.3%						
5:00 AM - 6:00 AM				100%	%0	0.5%	100%	0%	3.2%			
6:00 AM - 7:00 AM				100%	%0	2.2%	100%	0%	16.0%			
7:00 AM - 8:00 AM				98%	2%	14.7%	100%	0%	10.6%			
8:00 AM - 9:00 AM				100%	%0	11.7%	100%	0%	6.4%	75%	25%	0.1%
9:00 AM - 10:00 AM	100%	%0	0.8%	97%	3%	21.2%	100%	0%	3.2%	91%	9%	1.3%
10:00 AM - 11:00 AM	98%	2%	7.8%	66%	34%	0.8%	100%	0%	1.1%	96%	4%	3.8%
11:00 AM - 12:00 PM	81%	19%	8.7%	0%	100%	0.3%	47%	53%	2.3%	86%	14%	5.6%
12:00 PM - 1:00 PM	68%	32%	8.6%	%0	100%	0.3%				%12	29%	8.9%
1:00 PM - 2:00 PM	57%	43%	9.0%	%0	100%	0.3%				64%	36%	12.0%
2:00 PM - 3:00 PM	45%	55%	11.5%	0%	100%	1.1%	18%	82%	5.8%	52%	48%	13.1%
3:00 PM - 4:00 PM	48%	52%	12.2%	%0	100%	1.9%	44%	56%	17.0%	50%	50%	14.4%
4:00 PM - 5:00 PM	52%	48%	13.2%	0%	100%	1.9%	0%	100%	11.9%	41%	59%	13.8%
5:00 PM - 6:00 PM	36%	64%	13.0%	0%	100%	12.5%	0%	100%	1.2%	31%	69%	12.0%
6:00 PM - 7:00 PM	5%	95%	15.2%	0%	100%	5.8%	0%	100%	9.5%	14%	86%	10.4%
7:00 PM - 8:00 PM				0%	100%	8.9%				5%	95%	4.6%
8:00 PM - 9:00 PM				0%	100%	6.1%	0%	100%	1.2%			
9:00 PM - 10:00 PM				0%	100%	2.8%						
10:00 PM - 11:00 PM				0%	1 00%	2.8%						
11:00 PM - 12:00 AM				0%	1 00%	3.6%	%0	100%	1.2%			
Totals			100.0%			100.0%			100.0%			100.0%
Source: Eng-Wong Taub & Ass	sociates (2003)											
51.5 mm Biot Biot Biot	(000*) 00100000				WEEKDAY	TRADE SHO	SM					
				4	Person Interview	S				W	inual Door Cour	its
		Attendees			Exhibitors			Event Staff		0	verall (All User	s)
			Temporal			Temporal			Temporal			Temporal
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1:00 AM - 2:00 AM				a/ 001	8/0	0.4.0	%0	100%	22.7%			
2:00 AM - 3:00 AM												
3:00 AM - 4:00 AM												
4:00 AM - 5:00 AM												
5:00 AM - 6:00 AM												
6:00 AM - 7:00 AM				100%	%0	4.0%	100%	%0	1.5%			
7:00 AM - 8:00 AM	100%	%0	1.0%	100%	%0	11.6%				91%	9%	0.7%
8:00 AM - 9:00 AM	100%	%0	5.5%	96%	4%	18.7%				95%	5%	6.3%
9:00 AM - 10:00 AM	100%	0%	8.3%	94%	6%	5.3%				91%	9%	10.5%
10:00 AM - 11:00 AM	97%	3%	13.4%	83%	17%	7.6%				84%	16%	8.3%
11:00 AM - 12:00 PM	93%	%/	6.9%	89%	11%	2.9%				12%	28%	1.1%
MH 00:1 - MH 00:1	13%	0%.17	1.1%	00%0	34%	%C.1	10001	001		%CC	45%	9.1%
1:00 PM - 2:00 PM	54%	40%	4.9%	49%	51%	1.0%	100%	0%0	4.5%	53%	41%	9.5%
2:00 PM - 3:00 PM	44%	20% 00%	9.3%	33%	01%	0.1	100%	0%0	%C.T	40%	54% 520/	9.5%
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2 Broadway-5th Floor, Mailbox 519 New York, NY 10004 Fax: 646-252-2063

afternoon football game at the proposed adjacent

multi-use facility. The four peak periods generated by the proposed multi-use facility would be:

- 12-1 PM (arrivals associated with a 1 PM football game);
- 3-4 PM (arrivals associated with the 4 PM football game);
- 4-5 PM (departures associated with a 1 PM football game); and
- 7-8 PM (departures associated with a 4 PM football game).

As evidenced in Figure 5, the 12-1 PM and 7-8 PM time periods would not constitute the worstcase scenarios given the significantly lower temporal distributions of Convention Center trips during these time periods compared its 3-4 PM peak hour. According to travel forecast projections for the multi-use facility, that post-game departures would be substantially more peaked than pre-game arrivals; there would be approximately 9,000 more total person trips during the 4-5 PM period compared to the 3-4 PM period.¹⁰ Although the overall door counts at the Convention Center showed a slightly higher temporal distribution of trips from 3-4 PM (14.4%) compared to 4-5 PM (13.8%), a preliminary trip generation analysis of incremental travel demand calculated separately for attendees, exhibitors, and event staff (using the data from Tables 5, 7, and 10) shows that there would be approximately 400 more total person trips during the 4-5 PM period compared to the 3-4 PM period. Therefore, since both the proposed Convention Center expansion and the proposed multi-use facility would generate a greater amount of trips during the 4-5 PM period compared to the 3-4 PM period, the 4-5 PM period has been selected as the worst-case scenario for analysis.

Existing Modal Splits

Separate modal splits will be utilized to forecast travel demand associated with Convention Center attendees, exhibitors, and event staff, akin to the method that will be used for temporal distributions. The EWT surveys included separate arrival and departure modal splits due to the tendency for people to arrive by one mode of travel and leave by another. Tables 11 and 12 show existing arrival/departure modal splits by region for the weekend public show and the weekday trade shows, respectively. These tables also include the weighted average modal splits, which were calculated by applying the respective origins and destinations (listed in Table 8) to the regional modal splits. Although slight differences in modal splits were observed for arrivals and departures (such as an increase in departures by the walk mode and a decrease in departures by the taxi mode), the variations in the weighted average modal splits for arrivals and departures are primarily a function of the increased amount of Manhattan destinations compared to origins. It should be noted that separate arrival and departure modal splits by region were not included for event staff because they were nearly identical. Based on the results of the EWT travel surveys, the traffic assignments for auto trips will include the following percentages of passengers being dropped off adjacent to the Convention Center:

- 4% of auto trips for attendees at the weekend public show;
- 2% of auto trips for exhibitors at the weekend public show; and
- 6% of auto trips for both attendees and exhibitors at the weekday trade shows.

Projected Modal Splits with the No. 7 Subway Extension

The existing modal splits obtained from the EWT surveys will be utilized to project incremental travel demand in the 2010 condition with only the Convention Center expansion. In order to forecast future travel patterns for the 2010 condition with the proposed action (which includes the No. 7 subway extension), several assumptions were made to reflect the increased access to transit services. It is anticipated that 34% of both the existing auto and taxi users would shift to



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¹⁰ This projection was included as part of the Multi-Use Facility Transportation Planning Assumptions Technical Memorandum (October 10, 2003).

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Source: Eng-Wong Table & Associates, 2003	Source: Eng-Wong Taub & Associates, 2003



PB Team NYCT - Number 7 Extension Project 2 Broadway-5th Floor, Mailbox 519 New York, NY 10004

Fax: 646-252-2063

the extended No. 7 subway line¹¹. This primary

assumption is based on the ratio of auto modal splits from 1990 US Census reverse journey-towork data in the Convention Center and Hudson Yards Development area (16.3%) compared to the Midtown Manhattan area (10.7%)¹². It was also assumed that other types of existing transit trips destined for the Convention Center would be diverted to the No. 7 subway extension. including all Metro-North riders (which would switch to the No. 7 line at Grand Central Terminal), approximately half of the subway riders (which would switch to the No. 7 line at the Times Square, Fifth Avenue, and Grand Central stations), and approximately half of bus riders (including subway riders that currently transfer to the M34 or M42 buses). Tables 13 and 14 show projected 2010 arrival/departure modal splits by region with the No. 7 subway extension for the weekend public show and the weekday trade shows, respectively.

Because the LIRR East Side Access project is not expected to be completed until 2012, it will not be included as part of the 2010 analyses. Without LIRR access to Grand Central Terminal, it is assumed that all LIRR riders would continue to travel to/from Penn Station. However, for the 2025 condition with the proposed action (including the No. 7 subway extension), it is assumed that a portion of LIRR riders that currently use Penn Station would instead travel to Grand Central Terminal and utilize the No. 7 subway extension for direct access to the Convention Center. For the weekend public show, it is assumed that approximately 50% of LIRR riders would utilize the No. 7 line; for the weekday trade shows, it is assumed that approximately 40% of LIRR riders would utilize the No. 7 line¹³. Tables 15 and 16 show projected 2025 arrival/departure modal splits by region with both the No. 7 subway extension and LIRR East Side Access project, for the weekend public show and weekday trade shows, respectively.

Vehicle Occupancy

Table 17 shows the vehicle occupancies that will be utilized for attendees, exhibitors, and event staff for the weekend public show and weekday trade shows. The vehicle occupancies in Table 17 are based on the results of the EWT surveys.

Truck Trip Generation and Marshalling

The proposed Convention Center expansion would generate additional truck trips and require added space for truck marshalling. As part of the expansion, a new marshalling facility is proposed to be constructed in the area of the existing marshalling yard, on the block bounded by Eleventh Avenue, Route 9A (Twelfth Avenue), West 33rd Street, and West 34th Street. Arriving trucks would enter the marshalling facility from Route 9A, where they would be processed, security screened, and directed to a specific waiting space or available loading dock. Trucks would proceed from the marshalling facility to the two levels of loading docks via an underground tunnel that would run beneath Eleventh Avenue and West 41st Street. This particular truck circulation pattern would be entirely contained within the marshalling facility and would not utilize local streets. Some trucks would also be able to utilize the existing truck queuing lane along Route 9A between West 34th and West 39th Streets, from which they could enter both levels of loading docks via an entrance on West 41st Street. All departing trucks

¹³ Assumptions for LIRR diversions are based on the projected LIRR operating plan with the East Side Access project, which was discussed during the September 11, 2003 transportation committee meeting.

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¹¹ As an example, taxi usage from Metro-North riders at Grand Central Terminal and visitors from Midtown Manhattan hotels would be expected to decrease.

¹² This methodology was agreed to at the July 17, 2003 transportation committee meeting and was also used to project future modal splits with the extended No. 7 subway line in the Office Trip Generation Transportation Planning Assumptions Technical Memorandum. The Midtown Manhattan area is defined as the area bordered by 59th Street on the north, 23rd Street on the south, Third Avenue on the east, and Eighth Avenue on the west; reverse journey-towork data was computed for the 7:30-9:30 AM period.

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Lueenst 10.2% 35.5% 7.7% 7.7% 33.2% 5.8% 100.0% Long Island 13.2% 80.0% 6.8% 100.0%	Long 130,0% 132% 5.0% 37.2% 5.0% 100.0\% 100.
Westchester and Upstate (East of Hudson) 37.7% 6 62.3% 100.0% Rockland and Upstate (West of Hudson) 13.2% 20.0% 40.0% 6.8% 100.0%	Westchester and Upstate (East of Hudson) 49.5% 50.5% 100.0% Rockland and Upstate (West of Hudson) 66.0% 34.0% 100.0%
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Long Island 33.0% 25.0% 20.0% 17.0% 100.0%	Country LUUTe LUUTe 10.0% 46,4% 20.0% 100.0% Long Island 50.0% 50.0% 100.0%
Westchester and Upstate (East of Hudson) 66.0% 34.0% 100.0% Rockland and Upstate (West of Hudson) 66.0% 34.0% 100.0%	Westchester and Upstate (teast of Hudson) 66.0% 34.0% 100.0% Rockland and Upstate (teast of Hudson) 66.0% 34.0% 100.0%
Northern New Jersey 39.6% 20.4% 40.0% 190.0% Southern New Jersey 6.6% 34.0% 100.0% 100.0%	Northern New Jersey 66.0% 100.0% 100.0% 100.0%
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	Notes: Projection based on Enq-Woni Table & Sociales surveys

PART A: ATTENDEE ARRIVAL MODAL SPLITS																	
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Staten Island	66.0%	34.2%		0.8%	11 3%				0.4%	3.6%	34.0%	1.6%		5.5%		15.0%	100.0%
Brooklyn	18.9%	3.1%		0.078	11.376				0.476	21.4%	47.0%	9.5%		3.376		13.076	100.0%
Bronx	44.00/	44.09/				40.70/				12.5%	67.5%	20.0%					100.0%
Long Island	24.0%	6.0%			9.1%	27.3%				13.0%	42.0%	3.0%					100.0%
Westchester and Upstate (East of Hudson)	38.5%										61.5%						100.0%
Rockland and Upstate (West of Hudson) Northern New Jersey	26.4%	6.6%	2.3%	2.3%				30.0%	20.5%		17.0%		9.1%		6.8%		100.0%
Southern New Jersey	39.6%							20.0%			20.4%				20.0%		100.0%
Connecticut and New England	31.4%	23.0%	0.5%	19.0%	7 1%	1.9%	0.0%	2.5%	2.7%	4 3%	35.2%	2.4%	1.0%	3 3%	1.0%	9.1%	100.0%
Togica Atoge	0.070	20.070	0.070	1.474	1.174	1.570	0.070	2.076	2.17	4.070	00.270	2.476	1.070	0.070	1.074	0.170	100.070
	PART B: ATTENDEE DEPARTURE MODAL SPLITS																
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Manhattan	3.0%	31.3%		0.8%	15.9%				0.4%	2.1%	22.8%	1.2%		3.7%		18.9%	100.0%
Brookiyn	14.1%	4.770								21.4%	40.3%	26.7%					100.0%
Queens	12.4%	14.4%				7.5%				15.6%	42.7%	5.0%		2.3%			100.0%
Long Island Westchester and Upstate (East of Hudson	24.8%				12.5%	30.0%					32.8% 53.8%						100.0%
Rockland and Upstate (West of Hudson)	26.4%		20.0%					40.0%			13.6%						100.0%
Northern New Jersey	26.4%		2.9%	2.9%	2.9%			17.1%	28.6%		13.6%		2.9%		2.9%		100.0%
Connecticut and New England	33.0%			22.2%				11.1%			33.7%						100.0%
Weighted Average	9.0%	22.7%	0.6%	1.4%	11.4%	1.1%	0.0%	2.6%	2.8%	3.0%	26.9%	2.3%	0.3%	2.7%	0.3%	13.0%	100.0%
					PART C	: EXHIBIT	OR ARRIV	AL MODAL	SPLITS								
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Brooklyn	16.5%								0.070	37.5%	46.0%	0.210					100.0%
Bronx	66.0%	21.19/			E 09/					0.00/	34.0%			0.00/		E 09/	100.0%
Long Island	7.078	51.176			3.376	50.0%				0.076	33.3%	16.7%		0.076		3.376	100.0%
Westchester and Upstate (East of Hudson)	37.7%										62.3%						100.0%
Rockland and Upstate (West of Hudson) Northern New Jersey	33.0%	10.7%			2.7%			50.0% 10.8%	21.6%		17.0%		2.7%		10.8%		100.0%
Southern New Jersey	33.0%							50.0%			17.0%						100.0%
Connecticut and New England	39.6% 8 3%	32.8%	0.0%	0.0%	12.6%	1.0%	0.0%	10.0%	2.9%	1.8%	50.4%	0.5%	0.3%	1.0%	1 3%	8.9%	100.0%
Weighted Average	0.376	32.078	0.078	0.078	12.0 /6	1.078	0.076	2.776	2.376	1.076	23.376	0.376	0.376	1.0 %	1.376	0.376	100.076
					PART D: E	XHIBITOF	DEPART	URE MOD/	AL SPLITS	-				1			
Trip Region	Auto	Taxi	Commuter Van	Charter Bus	Shuttle Bus	LIRR	Metro-North Railroad	NJ Transit Rail/Amtrak	NY Waterway Ferries	Subway (Other Lines)	Subway (No. 7 Extension)	Subway (Transfer to Bus)	РАТН	NY CT Bus	NJ Transit Bus	Walk	TOTAL BY REGION
Staten Island	5 10/	33.0%			100.0%					0.0%	21.2%			2.0%		17 20/	100.0%
Brooklyn	16.5%	33.078			20.378					37.5%	46.0%			2.076		17.376	100.0%
Bronx	66.0%	05 501				1.00/				7 70/	34.0%			6.00/			100.0%
Queens Long Island	10.2%	35.5%				4.6%				7.7%	36.2%			5.8%			100.0%
Westchester and Upstate (East of Hudson)	37.7%										62.3%						100.0%
Rockland and Upstate (West of Hudson)	13.2%	E E9/		20.0%	20.0%			40.0%	16 79/		6.8%		4 29/		12.5%		100.0%
Southern New Jersey	22.0%	0.070			4.270			33.3%	33.3%		11.3%		4.270		12.070		100.0%
Connecticut and New England	24.8%	07.00/	0.0%	0.3%	46.20/	4 49/	0.0%	12.5%	4 70/	4.49/	62.8%	0.0%	0.29/	4.00/	4.0%	42.20/	100.0%
weighted Average	9.5%	21.3%	0.0%	0.3%	10.3%	1.170	0.0%	2.1%	1.7%	1.170	23.0%	0.0%	0.3%	1.0%	1.0%	13.2%	100.0%
				PART	E: EVENT	STAFF AF	RRIVAL/DE	PARTURE	MODAL	SPLITS							
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Manhattan	10.2.70									33.3%	33.3%	20.078				33.3%	100.0%
Brooklyn	18.9%								_	7.1%	45.4%	28.6%		25.09			100.0%
Bronx Queens	16.5%					15.0%				25.0%	58.5%	10.7%		20.0%			100.0%
Long Island	33.0%					30.0%					67.0%						100.0%
Rockland and Upstate (East of Hudson)	66.0% 66.0%	l		l				l		l	34.0%						100.0%
Northern New Jersey	39.6%										20.4%				40.0%		100.0%
Southern New Jersey	66.0%										34.0%						100.0%
Weinberd Aussen	24.00/	0.0%	0.00/	0.00/	0.0%	2.5%	0.0%	0.00/	0.0%	10.00/	40.00/	0.0%	0.00/	E 404	E 0%/	0.00/	100.076

Notes: Projections based on Eng-Wong Taub & Associates surveys



PB Team

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would use the existing truck dock exit located on West 34th Street between Eleventh Avenue and Route 9A.

The expanded marshalling facility is proposed to accommodate a total of 194 trucks: the underground approach to the loading docks could also provide space for an additional 70 trucks. This design is expected to accommodate the demand associated with the peak utilization period. Convention Center management has indicated that the heaviest existing truck demands are associated with the New York International Gift Fair,¹⁴ which can attract up to 600 vehicles total (150 tractor trailers, 200 single body trucks, and 250 personally owned vehicles/trucks). The average demand for this trade show involves approximately 400 vehicles spread over a three-day period. However, the major activity days associated with truck arrivals and departures occur on the pre-event setup days and post-event breakdown days (these are typically dark days) and would not generally coincide with event days (days on which shows are open to the public, which are being analyzed for traffic in the DGEIS). To provide for a conservative estimate, based on these truck demands and a review of truck shipping requirements at recent trade shows (including the International Fancy Food & Confections Show and the Variety Merchandise Show), the traffic analyses will conservatively include an increase of 150 daily truck deliveries. This level of truck demand is also assumed to include other types of deliveries (e.g. food, beverages, and other types of materials). The temporal distribution of these trips will be based on surveys documented in the Coliseum Redevelopment FSEIS (1997) and shown in Table 18. These temporal distributions correspond with the schedule of the existing Convention Center marshalling yard, which typically operates from 8 AM - 5 PM.

Table 17: Vehic	e Occupano	cies
-----------------	------------	------

Weekend Public Show								
	Auto	Taxi						
Attendees	3.0	2.6						
Exhibitors	1.7	2.5						
Event Staff	1.3	-						
Weekday Trade Shows								
Auto Taxi								
Attendees	1.7	1.8						
Exhibitors	1.8	2.4						
Event Staff	1.2	-						
Street Frank Million Track & Assassing 2000								

Source: Eng-Wong Taub & Associates, 2003.

Table 18: Projected Distribution of Truck Deliveries to the Convention Center

Analyzed Peak Hour	Percent of Daily Deliveries
Weekday AM (8-9 AM)	7.9%
Weekday MD (12-1 PM)	14.7%
Weekday PM (5-6 PM)	1.1%
Weekday EVE (7-8 PM)	0.0%
Weekday EVE (8-9 PM)	0.0%
Sunday PM (4-5 PM)	1.1%

Source: Coliseum Redevelopment FSEIS, 1997, Table 12-15.

¹⁴ The New York International Gift Fair is currently too large to be entirely accommodated by the existing Convention Center and is concurrently held at the Show Piers at the New York City Passenger Ship Terminal. 8



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Convention Center Hotel

Trips associated with the 1,500-room hotel proposed as part of the Convention Center expansion will be calculated separately based on methodologies contained within the Hotel Trip Generation Transportation Planning Assumptions Technical Memorandum (August 7, 2003). As indicated in these assumptions, 2.0 daily trips per room will be assumed to be linked walk trips between the hotel and the Convention Center, which would be linked by a direct internal pedestrian connection.

Retail Space within the Convention Center

Travel demand associated with new retail space (proposed as part of the Convention Center expansion) that would be accessible via West 34th Street, West 42nd Street, or Eleventh Avenue will be forecasted using the methodologies provided within the Local Retail Trip Generation Transportation Planning Assumptions Technical Memorandum (August 7, 2003). All other new retail space within the Convention Center will be assumed to be utilized only by internal visitors; for this reason no additional trips will be forecasted for these retail components.

cc: L. Lennon D. Fields

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APPENDIX H

5TH/MISSION GARAGE PARKING UTILIZATION YEARS 2010 TO 2012

	Year	2010	Year	2011	Year	2012	3-Year Average		
January	1,536	5 9 .5%	1,407	54.5%	1,493	57.8%	1,479	57.2%	
February	1,422	55.0%	1,340	51. 9 %	1,439	55.7%	1,400	54.2%	
March	1,329	51.5%	1,267	49.1%	1,538	59.6%	1,378	53.3%	
April	1,287	49.8%	1,296	50.2%	1,362	52.7%	1,315	50.9%	
May	1,268	49.1%	1,284	49.7%	1,446	56.0%	1,333	51.6%	
June	1,259	48.7%	1,365	52.8%	1,727	66.9%	1,450	56.1%	
July	1,421	55.0%	1,445	55.9%	1,575	61.0%	1,480	57.3%	
August	1,305	50.5%	1,451	56.2%	1,651	63.9%	1,469	56.9%	
September	1,414	54.7%	1,367	52.9%	1,694	65.6%	1,492	57.7%	
October	1,292	50.0%	1,364	52.8%	1,634	63.3%	1,430	55.4%	
November	1,540	59.6%	1,526	59.1%	1,781	69.0%	1,616	62.6%	
December	1,865	72.2%	1,819	70.4%	2,057	79.7%	1,914	74.1%	
Annual Average	1,412	54.6%	1,411	54.6%	1,616	62.6%	1,480	57.3%	

5th and Mission Garage -- Monthly average parking utilization for years 2010, **2011 and 2012** Total parking supply = 2,583 spaces

Source: Moscone Center operator, October 2013

Fifth and Mission Garage 2010 to 2012 Average Monthly Parking Utilization



APPENDIX I

HOWARD ST TRAFFIC REROUTING PLANS

Dreamforce 2012 - Moscone Center

4 Day Event: Tuesday September 18th, 2012 8:00 AM to Friday September 21st, 2012 2:00 PM

*7 DAY STREET CLOSURE: HOWARD STREET BTW THIRD STREET & FOURTH STREET

Saturday September 15th, 2012 12:00 PM to Saturday September 22nd, 2012 12:00 PM



dreamforce







Street and Lane Closures

Howard Street between 3rd and 4th Streets – Full Street Closure

- Closure begins Thursday, Sepember 27th at 8:00pm
- Re-Opening Friday, October 5th at 1:00pm

3rd Street between Howard and Folsom Streets – #2 Western Traffic Lane

(Lane closure in effect during non commute hours – 9:00am to 3:00pm & 7:00pm to 7:00am)

- Closure begins Thursday, September 27th at 8:00pm
- Re-Opening Friday, October 5th at 1:00pm

Howard Street Between Hawthorne and 3rd Streets – 2 Southern Traffic Lanes Howard Street Between Hawthorne and 3rd Streets – Southern Curb Lane

- Closures begins Thursday, September 27th at 8:00pm
 - Re-Opening Friday, October 5th by 1:00pm

4th Street Between Howard and Moscone Loading Dock Entrance (Eastern Lane Closure – 5:00am to 3:00pm and 7:00pm and 5:00am each day – Open only for afternoon commute 3:00pm – 7:00 PM)

- Closure begins Friday, September 28th at 5:00am
- Re-Opening Thursday, October 4th at 3:00pm

Howard Street Between 4th and 5th Streets – Northern Parking Lane Howard Street Between 4th and 5th Streets – 2 Northern Traffic Lanes 4th Street between Minna and Howard Streets – Western Curb Lane

- Closures begins Sunday, September 30th at 6:00am
- Re-Opening Thursday, October 6th at 8:00pm

Crosswalk Closures

3rd and Howard Streets Northern Crosswalk, Between The W Hotel and YBCA Theater

- Closure begins Thursday, September 27th at 8:00pm
- Re-Opening Friday, October 5th at 4:00pm

Hawthorne Street Between Howard and Folsom Streets - Street Restriping

(East Side Parking of Hawthorne Lane will become Traffic Lane)

- Begins Thursday, September 27th at 8:00pm
- Re-Opening Friday, October 5th at 4:00pm

24-Hour Neighborhood Hotline

Operational during Howard Street closure dates: 877-363-4469

Moscone Center Transportation Operations Master Plan

April 22, 2014 Planning Department Case No. 2013.0154E

Each event at Moscone Center shall have its own unique Transportation Operations Event Plan (TOEP), tailored to the size, duration and characteristics of the individual event.

This Master Plan describes the fundamental transportation elements to which each individual TOEP shall adhere.

1. Plan Development and Approval

A TOEP must be produced by the event sponsor in coordination with the Moscone Center. The TOEP review and approval process is driven by the size, duration and characteristics of an event, as described below.

- Small events (fewer than 20,000 daily attendees) with no changes to traffic circulation:
 - TOEP is reviewed and approved by Moscone Center staff. These small events generally do not require any coordination with City agencies or any deployment of Parking Control Officers (PCOs) to manage pedestrian and general traffic operations; however, SFMTA may require deployment of PCOs for some of these small events, in which case SFMTA would also review and approve the TOEP.
- Large events (greater than 20,000 daily attendees) with no changes to traffic circulation:
 - TOEP is reviewed and approved by both Moscone Center staff and SFMTA staff. These events shall require SFMTA to deploy PCOs to manage pedestrian and general traffic operations, but generally do not require coordination with any other City agencies.
- Large events that include changes to traffic circulation:
 - TOEP is reviewed and approved by Moscone Center staff, SFMTA staff, and the Transportation Advisory Staff Committee (TASC). These large events shall require deployment of additional PCOs and temporary changes to traffic operations, and may require coordination with other City agencies (e.g. SFPD, SFFD, DPW).

The TOEP shall be prepared, reviewed and approved at least 30 days prior to the beginning of the event. While the Planning Department typically would not be involved in the review and approval of the TOEP for a Moscone Center event, the TOEP for any event shall be made available to the Environmental Review Officer of the Planning Department upon request.

2. Passenger Loading Zone Attendants

- The event sponsor shall retain a crew of passenger Loading Zone Attendants (LZAs) to manage passenger loading activities during the event. LZAs shall bear the primary responsibility to ensure that passenger loading activities during an event at Moscone Center are carried out safely, legally and effectively. In other words, the LZAs shall ensure that passenger loading activities do not create potentially hazardous traffic conditions or significant delays affecting traffic, transit, bicycles or pedestrians.
- The top priority for LZAs at all times shall be to ensure that no shuttle bus, taxi, truck, or other vehicle illegally stops or parks while blocking any portion of any bicycle lane or facility, travel lane, crosswalk or sidewalk at or near the Moscone Center passenger loading zones on Howard Street and Third Street. For enforcement, the LZAs shall be in communication with SFMTA Parking Control Officers (PCOs) that shall be patrolling the Moscone Center during the event (additional information about PCOs is provided below).
- LZAs shall be responsible for knowing and understanding LZA responsibilities, shuttle bus operations, and taxi operations. These responsibilities are outlined in sections 2, 3, and 4 of this document. LZA responsibilities regarding these aspects shall be described in detail specific to the event in the TEOP.
- Event sponsors shall be responsible for retaining competent LZAs that are experienced with industry-standard passenger loading operations, especially in a congested environment. Event sponsors shall be responsible for adequately training the LZAs on these aspects, and this training shall be specified in the TOEP.
- Moscone Center staff shall ensure that event sponsors are complying with the above provision, and that the TOEP adequately describes the responsibilities and training of the LZAs.
- The LZAs shall be in communication with each other, with shuttle bus drivers, and with PCO officers at all times in order to effectively coordinate passenger loading activities and enforcement as outlined in this Master Plan and the TOEP.
- During the hours that there is an event in progress within a Moscone Center building (i.e., within Moscone North, South or West), each passenger loading zone fronting the building, or otherwise in active use for an event, shall be actively managed by at least one LZA. There are a total of six passenger loading zones that serve the Moscone Center, each of which shall require at least one LZA. These six locations are:
 - 1. North curb of Howard Street between Third and Fourth streets east of the midblock crosswalk;
 - 2. North curb of Howard Street between Third and Fourth streets west of the midblock crosswalk;
 - 3. South curb of Howard Street between Third and Fourth streets east of the midblock crosswalk;
 - 4. South curb of Howard Street between Third and Fourth streets west of the midblock crosswalk;
 - 5. North curb of Howard Street between Fourth and Fifth streets; and

- 6. West curb of Third Street between Folsom and Howard streets (overflow taxi stand)
- The Howard Street loading zone LZAs shall monitor and coordinate curbside loading and unloading operations for shuttle bus operations. The attendants shall ensure that adequate curbside space is available to receive an incoming shuttle bus in order to avoid the situation where the shuttle bus would illegally stop and load or unload within the roadway or bike facility. When curbside space needs to be created, the LZA shall direct buses that are not actively loading or unloading to depart the loading zone (and shall direct those buses to layover within the underground truck ramp network, or other off-street facility).
- At times when taxis are permitted to utilize the Howard Street passenger loading zones (as described below in Section 4), the Howard Street loading zone LZAs shall coordinate taxi operations, ensuring that space is available to receive an incoming taxi. When taxis are not permitted to utilize the Howard Street passenger loading zones (and shall instead utilize the Third Street taxi stand, as described below), the LZAs stationed on Howard Street shall direct taxis to the Third Street taxi stand.
- The LZAs shall deploy and maintain adequate signage at each active passenger loading zone in order to indicate to both drivers and passengers the functionality of the loading zone (i.e., taxi stand versus shuttle bus stand).

3. Shuttle Bus Operations

- A shuttle bus shall be defined in this document as a passenger vehicle with eight or more seats for passengers, and is not a public transit vehicle.
- The TOEP shall identify the location of shuttle stops within the Howard Street passenger loading zones. The TOEP shall identify the shuttle bus operational procedures (e.g. headway-based, schedule-based, or other operations type). The TOEP shall identify communications procedures, including the method of communication between shuttle bus drivers and LZAs.
- Shuttle buses shall load and unload only within the designated passenger loading zones along the north and south curbs of Howard Street between Third and Fourth streets, and also the north curb of Howard Street between Fourth and Fifth streets. Shuttle bus operations within the Howard Street passenger loading zones shall be coordinated by LZAs as described above.
- During normal operations, within the passenger loading zones along the north and south curbs of Howard Street between Third and Fourth streets, shuttle buses shall load and unload passengers only within the zones east of the midblock crosswalk on this block (i.e., the sections along the north and south curb between the midblock crosswalk and Third Street). Taxis would load and unload passengers only within the zones west of the midblock crosswalk (as further described below).
- "Peak periods" of passenger loading activity during an event shall be identified in the TOEP based on the event schedule. During these peak periods, shuttle buses operations and taxi operations would need to expand. During these periods, shuttle bus operations on Howard Street would expand into the passenger loading zones west of the midblock

crosswalk along the north and south curbs of Howard Street. During these periods, taxi operations would be relocated to the Third Street taxi stand (as further described below).

- At all times, LZAs shall ensure that shuttle buses depart the loading zones according to schedule (or otherwise adhere to the established shuttle bus operational procedure) in order to ensure that curbside space is available to receive an incoming shuttle bus. LZAs shall be in communication with each other, with shuttle bus drivers, and the PCOs in order to coordinate activities and carry out this provision.
- Shuttle buses shall not load or unload on any other street in the vicinity of the Moscone Center besides within the Howard Street passenger loading zones. Shuttle buses shall not illegally park or stop while blocking any portion of any bicycle lane or facility, travel lane, crosswalk or sidewalk, regardless of whether the bus is loading or unloading passengers or not. This shall be enforced by PCOs patrolling the event, working in coordination with the LZAs.
- During the peak morning period of an event when a high volume of attendees are arriving, "overflow" shuttle bus passenger unloading zones shall be available. The existing passenger loading zone along the north curb of Howard Street in front of Moscone West shall function as an overflow unloading zone to ensure that curbside space is available for all inbound shuttle buses to safely unload passengers.
 - If a full shuttle bus arrives at the passenger loading zones on Howard Street adjacent to the Moscone North or Moscone South lobbies, and there is no available curbside space to unload passengers, the LZA at that passenger loading zone shall direct the shuttle bus to continue west and unload the passengers at the existing passenger loading zone along the north curb of Howard Street in front of Moscone West.
 - Parking or commercial vehicle loading or unloading shall not be permitted within the existing passenger loading zone in front of Moscone West during the morning period of an event to ensure that the curb is available as an overflow unloading zone. The TOEP shall cite this provision.
- Large events may require additional curbside space than is available within the Howard Street passenger loading zones, especially for shuttle bus layover activities.
 - During these occurrences, shuttle buses that need to layover shall not layover on any surface streets (except within the designated Howard Street passenger loading zones, as managed by the LZAs when space is available). Shuttle buses shall only layover within one or more off-street facilities, the location(s) of which shall be identified in the TOEP.
 - Shuttle buses may layover within the Moscone Center underground truck ramp network, when this does not interfere with underground truck loading operations. In addition to or instead of the underground truck ramp network, shuttle buses may layover at an off-site facility.
 - Shuttle buses that layover underground shall enter the underground truck ramp network from the Third Street ramp, layover underground within a truck loading dock space, and then exit via the Fourth Street ramp, similar to truck operations. The driveway attendant on the Third Street ramp would direct the

inbound shuttle bus to the appropriate underground loading dock stall in which to layover. The driveway attendant shall ensure that shuttle bus layover operations do not conflict with any concurrent truck loading operations within the underground truck ramp network.

• Shuttle bus drivers that are laying over in the underground truck ramp network shall be in communication with the LZAs so that the driver knows when curbside space has become available.

4. Taxi, Rideshare and Private Vehicle Passenger Loading Operations

- Taxis, rideshare services, private vehicles, and any other types of vehicle that picks up or drops off passengers, and that is not a shuttle bus (having eight or more passenger seats) or a public transit vehicle, shall be collectively defined as "taxis" in this document.
- The default location for pick-up and drop-off taxi operations shall be the Howard Street passenger loading zones along the north and south curbs of Howard Street, west of the midblock crosswalk on this block (i.e., the sections along the north and south curb between the midblock crosswalk and Fourth Street). Shuttle bus operations would operate in the passenger loading zones east of the midblock crosswalk, as described above. Wayfinding signage within Moscone Center shall indicate the location for passengers to find taxis.
- When permitted to operate within the Howard Street passenger loading zones, taxi operations shall be actively managed by the LZAs, ensuring that space is always available to receive an incoming taxi. Taxis shall not be permitted to stand or otherwise wait for a passenger within the Howard Street passenger loading zones; taxis shall unload passengers and/or load a waiting passenger only, as quickly as possible.
- "Peak periods" of passenger loading activity during an event shall be identified in the TOEP based on the event schedule. During these peak periods, shuttle bus operations and taxi operations would both need to expand. During these times, taxi operations shall be relocated to the overflow taxi stand along the west curb of Third Street between Folsom and Howard streets, and shuttle bus operations shall expand on Howard Street into the passenger loading zones west of the midblock crosswalk (the former taxi zones). At these times, the wayfinding signage within Moscone Center shall be updated to direct passengers to find taxis on Third Street, and Moscone Center staff shall notify taxi operators when the taxi stand on Third Street is to be utilized for passenger loading activities.
- Taxis shall be permitted to stand and wait for passengers at the Third Street taxi stand (but not at the Howard Street loading zones as described above). However, if the taxi stand is full of queued taxis, the LZA shall not permit additional taxis to queue and block the travel lane or bicycle facility; the LZA would direct these taxis to leave or return later when the taxi queue has decreased.
- Taxis shall not illegally park or stop while blocking any portion of any bicycle lane or bicycle facility (except to load and unload disabled passengers, per SFMTA policy), travel lane, crosswalk or sidewalk. This shall be enforced by PCOs patrolling the event working in coordination with the LZAs.

5. Truck Operations

- At all hours that the underground loading dock is open, at least one Moscone staff attendant shall be on duty and stationed within the driveway attendant booth on Third Street.
- Truck access through the underground loading dock shall operate in a one-way loop, with vehicles entering via Third Street and departing via Fourth Street. No truck shall be permitted to reverse in to or out of the Third Street or Fourth Street driveways at any time.
- No vehicle longer than 53' or taller than 14' shall be allowed to enter the Third Street driveway.
- Large events may require the provision of an off-site truck layover area, as directed by Moscone and SFMTA staff. Location of truck layover area and truck access routes shall be identified by event sponsor in the TOEP.
- Trucks shall not stage or layover on any residential street at any time. Any required truck layover shall occur in an off-site location as described in the TOEP.
- There is only a limited ability for trucks to queue underground within the truck ramp, as identified in Figure 1 below. The driveway attendant shall manage inbound truck operations, including truck queuing within the underground facility.
- There shall be no queuing of trucks on any portion of the Third Street right-of-way, at any time for any duration of time. Any truck that is destined to the Third Street driveway and is stopped within any portion of the Third Street public right-of-way, including any travel lane or bicycle facility, shall be in violation of this provision. This shall be enforced by the driveway attendant and by the PCOs patrolling the event.
- If a truck arrives at the entrance ramp and the driver is informed by the driveway attendant that the truck is unable to proceed into the underground loading driveway because the facility is full, the driveway attendant shall direct the truck driver to depart and return later when space is available. Such situations shall be avoided to the maximum extent possible through advance communication between the underground loading dock attendant and truck operators. Whether within a legal curbside space or not, Moscone-bound trucks shall not queue or layover on Third Street, Folsom Street, Howard Street, or any other street within the vicinity of Moscone Center.

6. Parking Control Officer (PCO) Operations

- PCOs perform multiple functions during Moscone Center events to ensure safe and efficient pedestrian, bicycle, bus, truck, taxi and general traffic operations. SFMTA shall determine the necessary deployment of PCOs during an event.
- Small event: generally, no PCOs are required, unless otherwise directed by SFMTA.
- Large event without traffic changes: stationary and mobile PCOs shall be deployed. The number of officers required to staff the PCO beat(s) and the hours that the beat(s) would be staffed shall be determined by SFMTA based on the size and hours of the event. SFMTA shall be financially compensated by the event sponsor for all costs associated with the PCO deployment.

• Large event, including traffic circulation changes: Additional stationary and mobile PCOs shall be deployed. The number of officers required to staff the PCO beat(s) and the hours that the beat(s) would be staffed shall be determined by SFMTA based on the size and hours of the event. SFMTA shall be financially compensated by the event sponsor for all costs associated with the PCO deployment.

7. Pedestrian Operations

- At all times, pedestrian access shall be maintained on existing sidewalks surrounding the Moscone Center on Mission, Howard, Folsom, Third and Fourth streets. Obstructions such as signage shall not be placed within the throughway zone of the sidewalk. This shall be enforced by the LZAs and the PCOs.
- LZAs shall strive to ensure that passenger loading activity within the passenger loading zones does not unduly interfere with pedestrian circulation along sidewalks, and that adequate sidewalk throughway clearance on the sidewalk is maintained, and that queues of passengers awaiting a shuttle bus or taxi are managed in order to not block the sidewalk.

8. Bicycle Operations

• For certain Moscone Center events, bicycle parking for attendees may be necessary, as determined by Moscone and SFMTA staff and the event sponsor. For these events, the TOEP shall identify a secure, monitored valet bicycle parking area, and shall identify the capacity of the bicycle parking. The TOEP may also identify the need to augment the capacity of the existing Bay Area Bike Share station on the north side of Howard Street, west of Third Street.

9. Emergency Vehicle Operations

• The TOEP shall identify emergency vehicle access routes to and from Moscone Center. Adequate emergency vehicle access shall be provided at all times.

10. Large Events That Include Changes to Traffic Operations

- For large events that propose changes to traffic operations, such as the closure of Howard Street, the TOEP shall identify traffic rerouting operations in consultation with SFMTA. Event sponsor shall be responsible for obtaining necessary permits for street closure.
- Pedestrian through-traffic along Howard Street shall be maintained at all times, including provision of adequate throughway clearance.
- Bicyclists shall be permitted to walk their bicycle along the sidewalks of Howard Street at all times. Signage shall also be provided to direct cyclists to alternate routes.
- SFMTA shall be financially compensated by the event sponsor for all costs associated with changes to traffic operations.

11. Adherence

As noted above in Section 2, responsibility for adherence to this Master Plan and individual TOEPs shall rest with the LZAs, the event sponsor, and Moscone Center staff.

However, Moscone Center staff shall have the overall responsibility to ensure compliance with this Master Plan and individual TOEPs. Moscone Center staff shall be responsible for identifying problematic situations resulting from either non-compliance with a TOEP or an inadequate TOEP. Furthermore, Moscone Center staff shall be responsible for remedying problematic situations and for avoiding recurrences of problematic situations by developing procedures for closer supervision and more detailed TOEPs.

If the Environmental Review Officer (ERO), or his or her designee, suspects that problematic situations have arisen resulting from either non-compliance with a TOEP or an inadequate TOEP, the ERO shall notify the owner/operator (the Department of Public Works and Moscone Center staff, respectively) in writing describing the nature of the problematic situation. The owner/operator shall hire a qualified transportation consultant to evaluate the conditions at the site related to the problematic situation for no fewer than three days of a large Moscone Center event, totaling not fewer than 15 hours of observation, or as otherwise directed by the ERO.

The consultant shall submit a report to the ERO documenting conditions. Upon review of the report, the ERO shall determine whether or not a problematic situation exists, and shall notify the owner/operator of the determination in writing.

If the ERO determines that a problematic situation exists, upon notification, the owner / operator shall have 90 days from the date of the written determination to carry out abatement measures.

12. Revisions to Master Plan

Revisions shall be made to this Transportation Operations Master Plan as necessary to reflect changes in generally accepted technology or operation protocols, or changes in conditions. All revisions shall be reviewed and approved by the ERO of the Planning Department (or his or her designee), SFMTA and Moscone Center.