



# SAN FRANCISCO PLANNING DEPARTMENT

## ADDENDUM TO SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT/SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT

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Date: January 31, 2013  
Case No.: 1996.0281E  
Project Title: Central Subway  
Zoning: North Beach NCD (North Beach  
Neighborhood Commercial District) Zoning District  
40-X Height and Bulk District  
Block/Lot: 0101/004  
Lot Size: 15,320 square feet (1731 Powell St)  
Project Sponsor: San Francisco Municipal Transportation Agency (SFMTA)  
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Lead Agency: San Francisco Planning Department  
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### INTRODUCTION AND PROJECT DESCRIPTION

This Addendum addresses the Central Subway project, as described in the 2008 Phase 2 Central Subway Supplemental Environmental Impact Statement/Supplemental Environmental Impact Report (2008 SEIS/SEIR) certified by the Planning Commission on August 7, 2008<sup>1</sup>.

California Environmental Quality Act (CEQA) allows for preparation of an addendum to a certified EIR when a change to a project is proposed that would not result in new or substantially more severe significant impacts. SFMTA has proposed a modification to the Central Subway project that would 1) change the location at which the tunnel boring machines (TBM) being used to excavate the subway tunnel are removed from the ground and 2) allow for redevelopment of the proposed new TBM retrieval shaft site, after the retrieval process is concluded.

As described in the 2008 SEIS/SEIR, as currently approved, the construction tunnel for the underground portion of the Central Subway would continue north from the Chinatown Station

<sup>1</sup> Federal Transit Administration and San Francisco Planning Department, *Final Central Subway Supplemental Environmental Impact Statement/Supplemental Environmental Impact Report*, August 7, 2008. This document is on file and available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 1996.281E.

(at Jackson and Stockton Streets) and extend under Columbus Avenue to a site north of Union Street, where the TBM would be extracted via a retrieval shaft located in the public right-of-way. The proposal analyzed in this Addendum would relocate this retrieval site to a privately-owned parcel at 1731 Powell Street (Assessor's Block 101, Lot 004), approximately 100 feet northwest of the original TBM extraction location. ("modified project"). The modified project would also involve redevelopment of the 1731 Powell Street site, currently occupied by a vacant, approximately 55-foot-tall structure formerly used as a theater ("Pagoda Theater").

The Pagoda Theater property is the site of an approved project (Planning Department Case File No. 2007.11117) (the "Pagoda Theater project") which would modify and convert the existing theater to a mixed-use building with 18 residential units and approximately 4,700 square feet (sf) of ground floor restaurant and retail use. Five stories (40,875 sf) of developed space over basement parking would be accommodated within the existing 56-foot high structure. The Planning Department issued a Certificate of Determination for a Class 32 Categorical Exemption for the Pagoda Theater project on January 6, 2009, and the Planning Commission adopted a conditional use authorization for the project in Motion 17797 on January 8, 2009. On October 28, 2010, the Planning Commission amended the Conditional Use Authorization, in Motion Number 18204, to allow the project sponsor to change the method by which the project sponsor complied with the City's affordable housing requirements.

Relocation of the TBM retrieval shaft site to 1731 Powell Street (hereinafter referred to as the "project site") as proposed in the modified project would require demolition of the Pagoda Theater building. In addition to TBM extraction at the project site, the modified project also would include the construction of a development substantially similar to the Pagoda Theater project. The new construction would include a building with substantially the same building envelope and development specifications as the Pagoda Theater project, with the exception of a different configuration of the ground floor commercial space as one 4,700 sf restaurant use.

## PROJECT BACKGROUND

SFMTA is constructing the Central Subway, a light-rail line that will operate independently from the Muni Market Street Metro as a new 1.7-mile cross town connector. The Central Subway is an extension of the existing 5.1-mile Phase 1 of the Third Street Light Rail Transit Program, which began service in April 2007.

The Central Subway will extend from the existing station at Fourth and King Streets as a surface line, transitioning to subway operation under the Interstate 80 Freeway, between Bryant and

Harrison Streets. The alignment will pass underneath the existing BART/Muni Market Street tube, and continue north under Stockton Street to the system terminus in Chinatown at Stockton and Jackson Streets. A double track, 200-foot tail track for storage will continue beyond the Chinatown station platform. Four stations will be located along the 1.7-mile alignment:

- A surface station on Fourth Street between Brannan and Bryant Streets;
- The Yerba Buena/Moscone (subway) Station at 4th and Folsom streets;
- Union Square/Market Street Station on Stockton Street at Union Square (subway) with a direct path linking to the Market Street Muni Metro and BART trains; and
- Chinatown Station at Stockton and Washington streets (subway).

North of the Chinatown Station, the project scope includes continuation of the twin tunnel excavation to the retrieval shaft site in North Beach. As described in this Addendum, SFMTA is currently proposing relocation of the approved TBM retrieval shaft site from Columbus Avenue to the property at 1731 Powell Street, affecting only the northernmost terminus of the Phase 2 alignment.

### *Central Subway EIS/EIR Timeline*

Milestones in the environmental review of the Central Subway project are summarized below:

**1998:** The *Third Street Light Rail Project Final Environmental Impact Study and Final Environmental Impact Report* (1998 FEIS/FEIR) is certified by the Planning Commission.

**1999:** The Federal Transit Administration (FTA) issues a Record of Decision (ROD) for Third Street Light Rail Project. The San Francisco Public Transportation Commission (predecessor to SFMTA) approves Third Street Light Rail Project.

**Spring 2007:** Third Street Light Rail opens for service.

**October 17 2007-December 10, 2007:** The *Central Subway Draft Supplemental Environmental Impact Statement/Supplemental Environmental Impact Report*, addressing Phase 2, is circulated for a 55-day public review as part of the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) processes.

**February 19, 2008:** SFMTA Board of Directors selects Central Subway Project Alternative 3B with the North Beach Construction Variant as the Locally Preferred Alternative.

**August 2008:** Planning Commission certifies the Final Supplemental EIS/EIR (2008 SEIS/SEIR). The SFMTA Board of Directors approves the 2008 SEIS/SEIR and (SFMTA Board Resolution 08-150) and adopts the Project CEQA Findings, the Mitigation Monitoring and Reporting Program (MMRP) and the Statement of Overriding Considerations.

**September 16, 2008:** On appeal, Board of Supervisors upholds Planning Commission's certification of 2008 SEIS/SEIR.

**November 2008:** The FTA issues an ROD, granting full environmental clearance to the project and directing implementation of the MMRP.

**March 2012:** Construction begins along alignment from Interstate 80 to Union Square to prepare for tunnel boring.

**December 4, 2012:** SFMTA Board of Directors instructs the Director of SFMTA to take actions necessary for implementation of TBM retrieval at 1731 Powell Street.

## SETTING

The project site is located on an irregularly-shaped block bounded by Powell Street on the east, Columbus Avenue on the northeast, Filbert Street on the north, Mason Street to the west, and Union Street to the south. The project site is located on the eastern portion of the block where Columbus Avenue and Powell Street intersect. Land uses adjacent to the project site include: a one-story restaurant ("Pellegrini") and surface parking on Lot 045 north of the site; a brick parking garage with second-story offices fronting on Filbert Street and abutting the rear of the project site (Lot 031); and 2-3 story residential over commercial buildings fronting on Powell Street south of the site. All other properties on the project block are developed with 2-4 story residential uses, including Lot 007 which abuts the western edge of the project site. Buildings of three or more stories are similar in height to the existing Pagoda Theater building, despite the differences in the number of stories, due to the prevailing construction practices at the time they were built. Other blocks in the vicinity have a similar development pattern, with mixed commercial and residential uses along Columbus Avenue and small scale multifamily residential uses elsewhere. Washington Square, an approximately 2.15-acre park, is located across Powell Street and Columbus Avenue from the project site.

The project site, and other properties along Columbus Avenue, are zoned North Beach Neighborhood Commercial District (NCD) and are in a 40-X height and bulk district. The project site is also within the North Beach Special Use District (SUD) and North Beach Limited Financial SUD. The residential portions of the project block and other nearby blocks are in the RM-2 (Residential Mixed etc.) zoning district. The project site is also within the North Beach historic resource survey area and the Washington Square Historic District.

## PROJECT SUMMARY

See Figures 1-12 for representations of the project site, proposed TBM retrieval shaft site, and proposed 1731 Powell Street Mixed Use Building.

The modified project would include the following components:

- Relocation of the TBM retrieval shaft site 100 feet northwest of the approved location, from the Columbus Avenue right-of-way between Powell and Union Street to the project site;
- Demolition of the existing Pagoda Theater building on the project site; and
- Construction of a 56-foot tall mixed-use residential/retail building with 18 residential units, up to 4,700 square feet of restaurant use, and 27 basement parking spaces.

The project components are described in further detail below.



1741 Powell St. Project Location Map

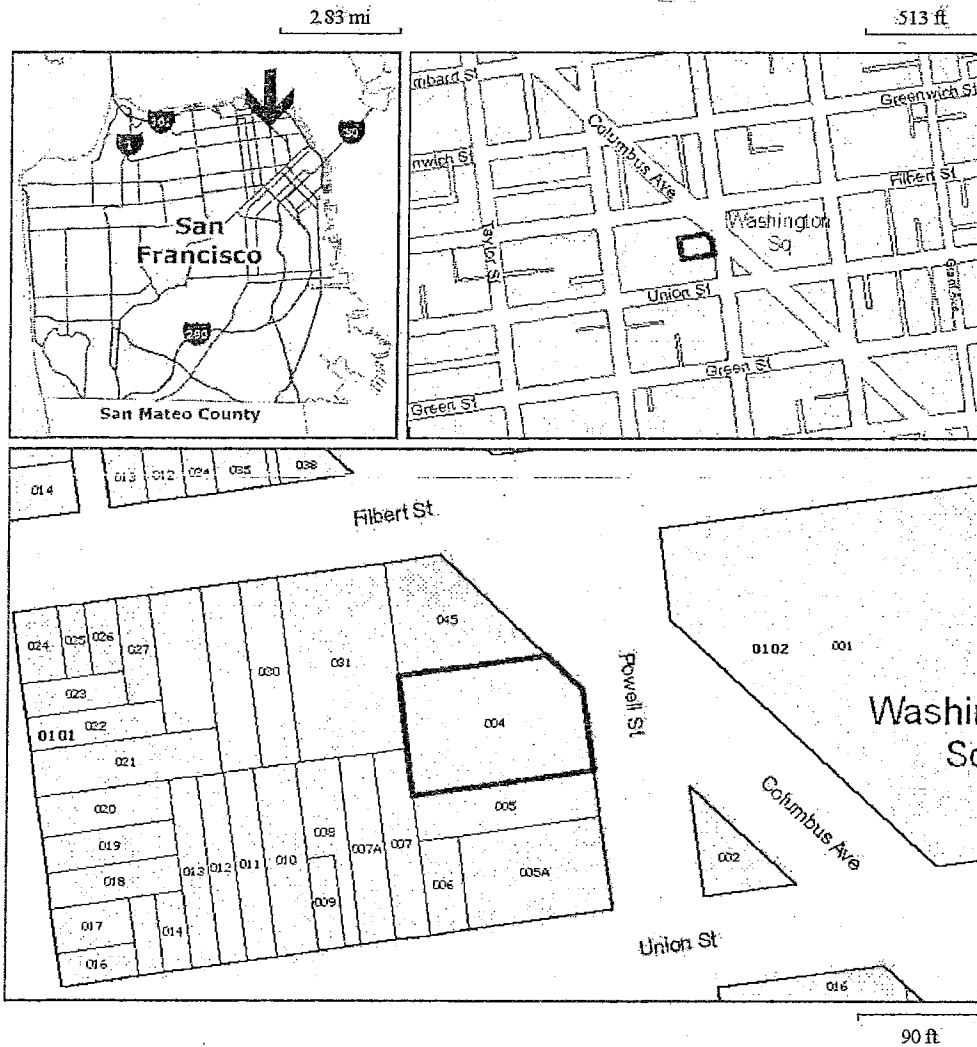


FIGURE 1: PROJECT LOCATION

Source: San Francisco Planning Department, January 2013

Not to Scale



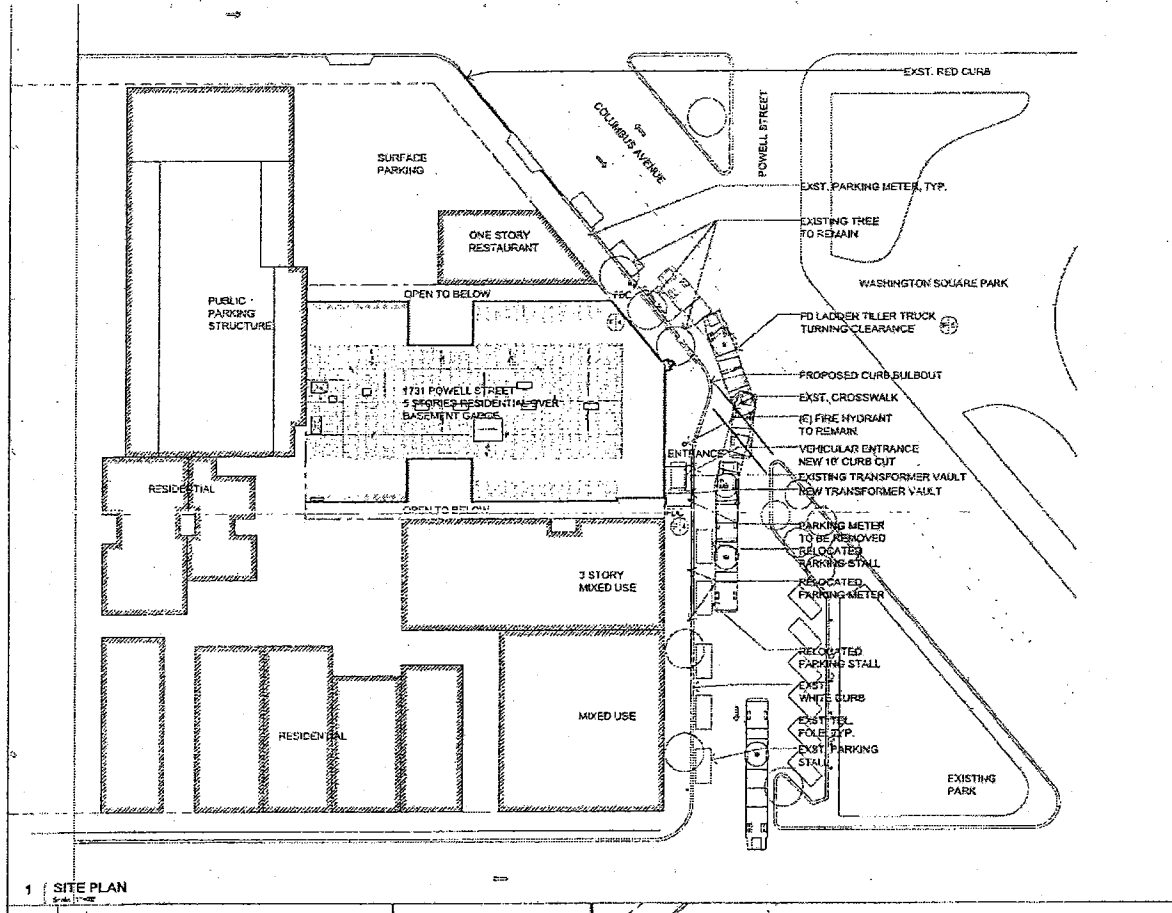


FIGURE 3: PROPOSED 1731 POWELL ST SITE PLAN

Source: SWS 1/7/13



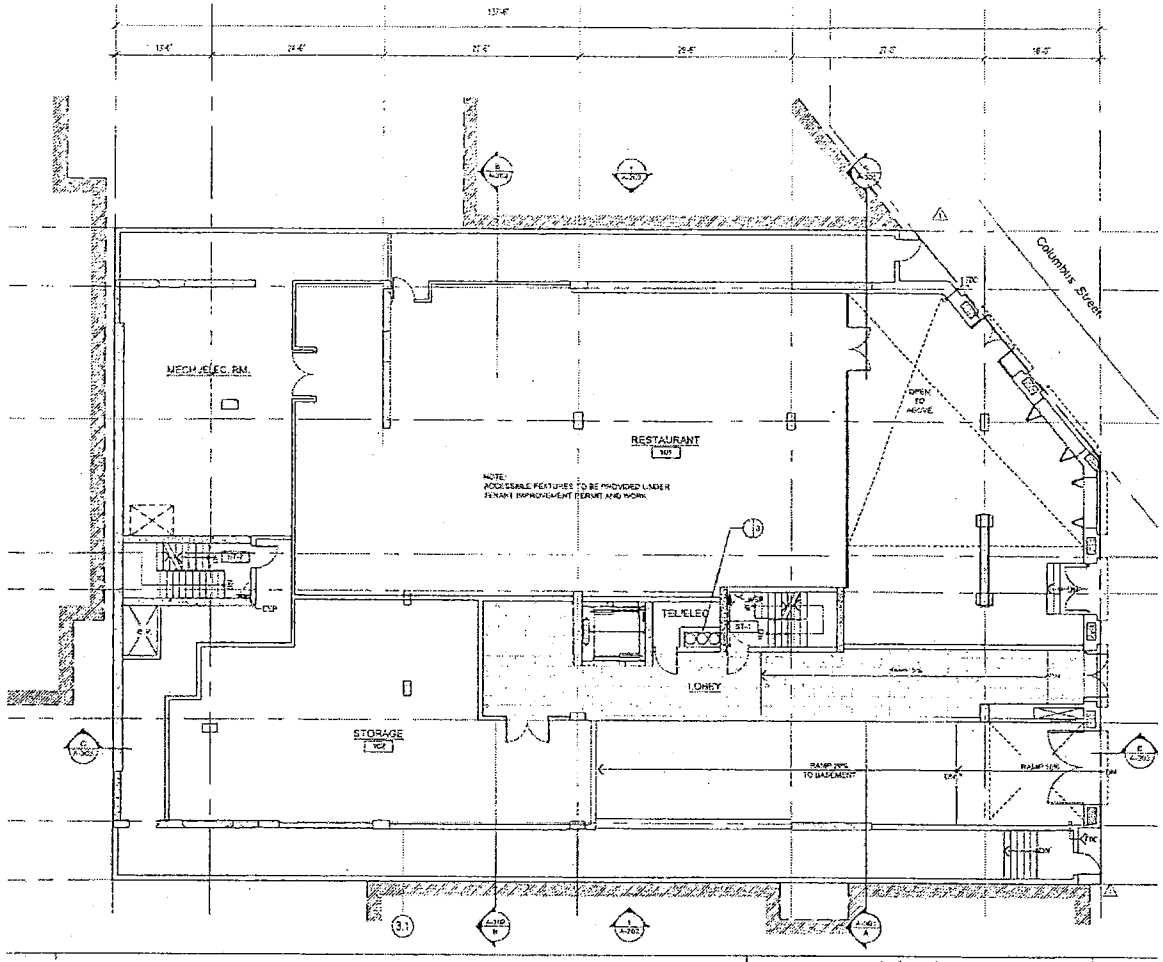


FIGURE 4: PROPOSED 1731 POWELL ST GROUND FLOOR PLAN  
 Source: SWS 1/7/13

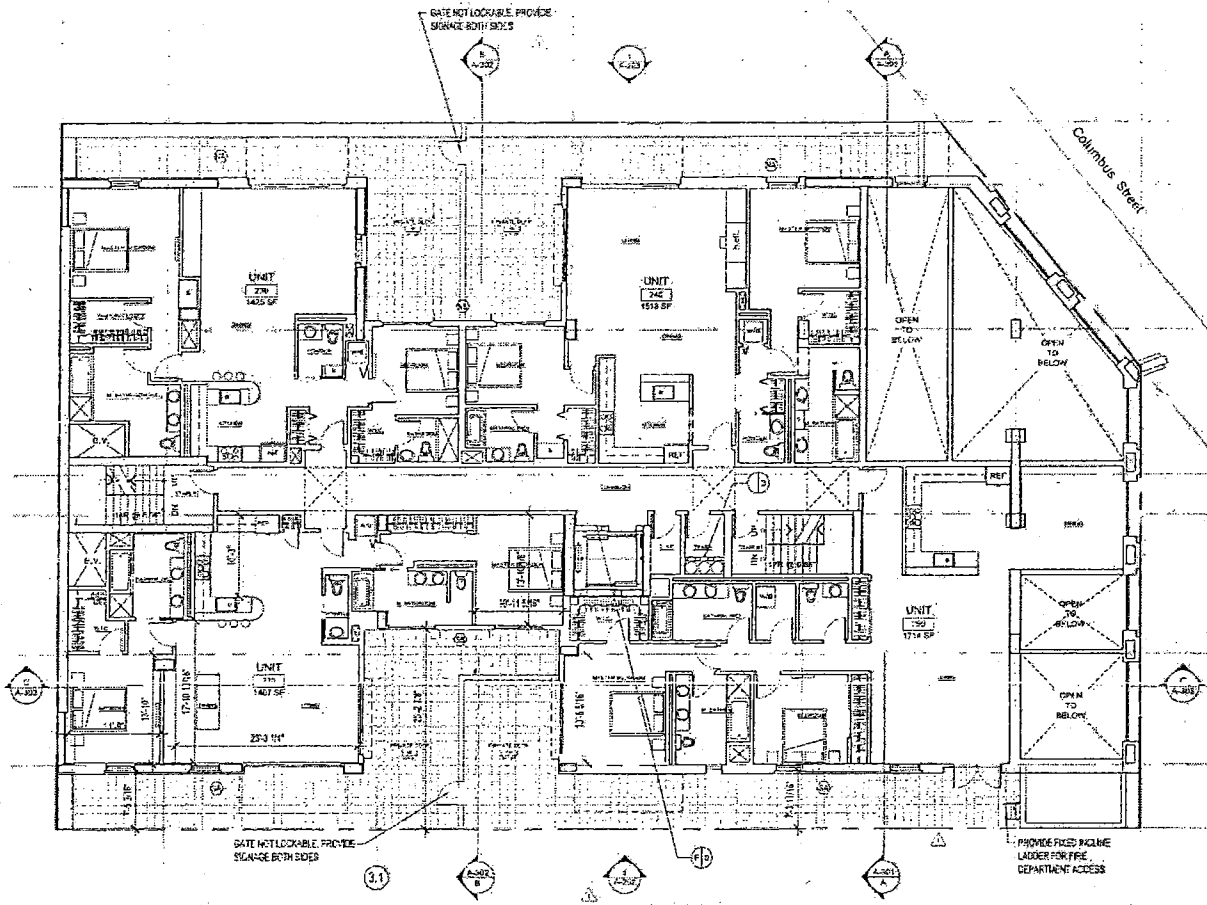


FIGURE 5: PROPOSED 1731 POWELL ST SECOND LEVEL PLAN

Source: SWS 1/7/13

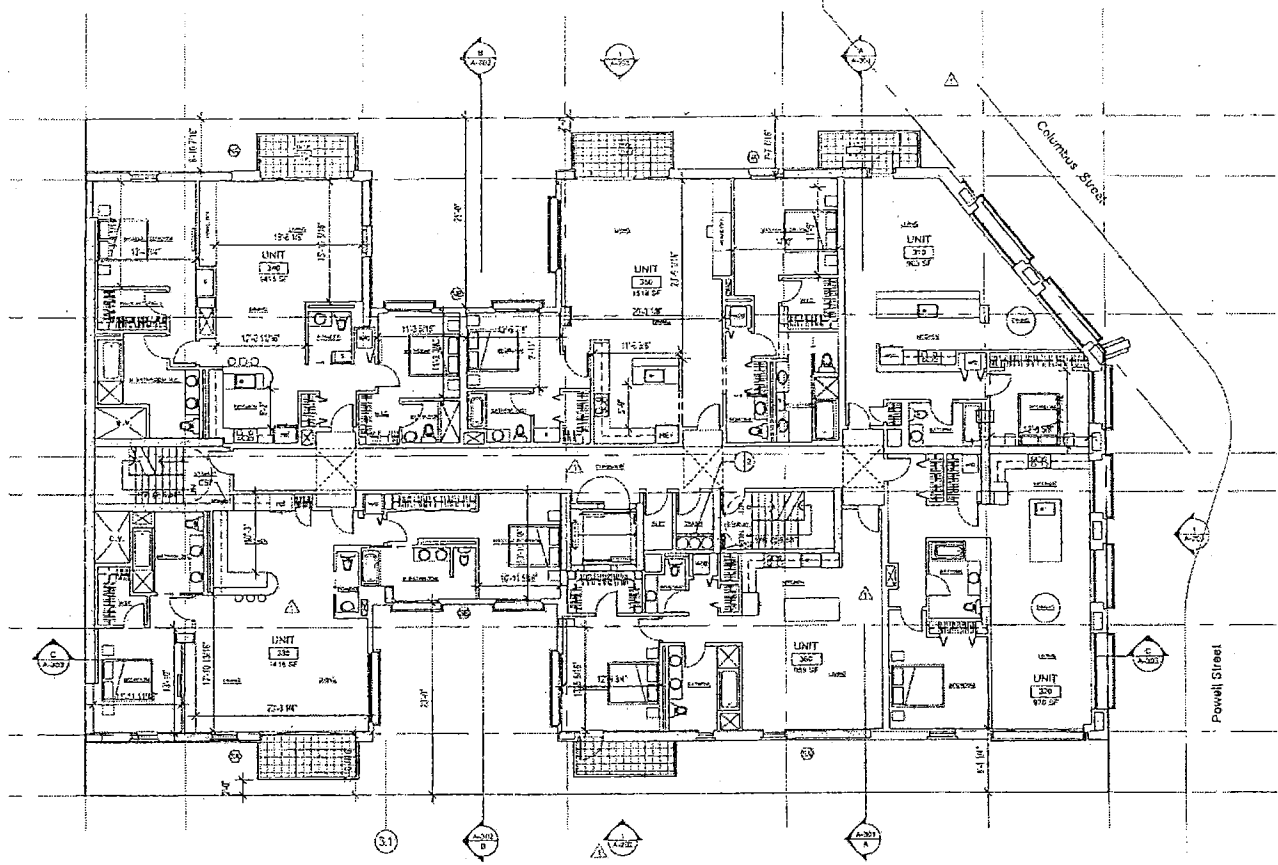
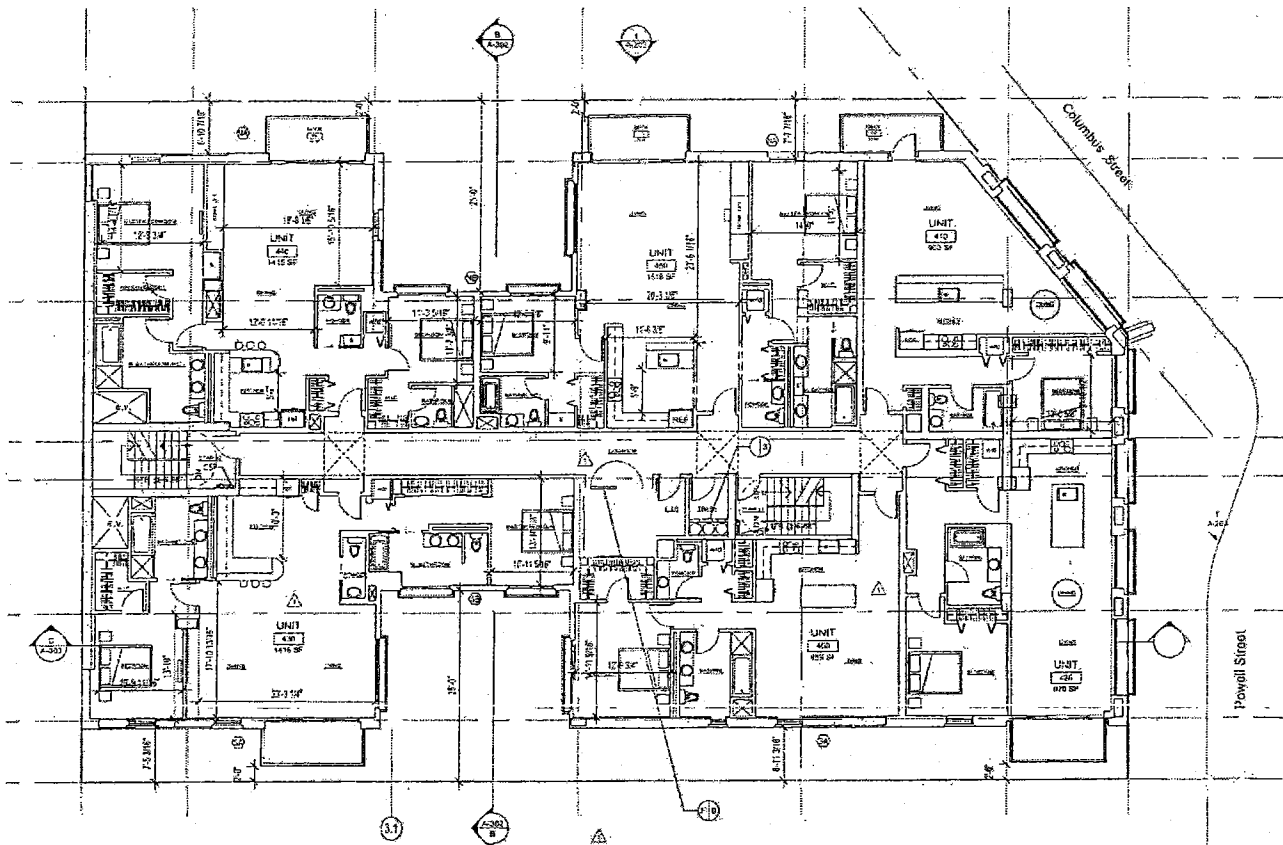
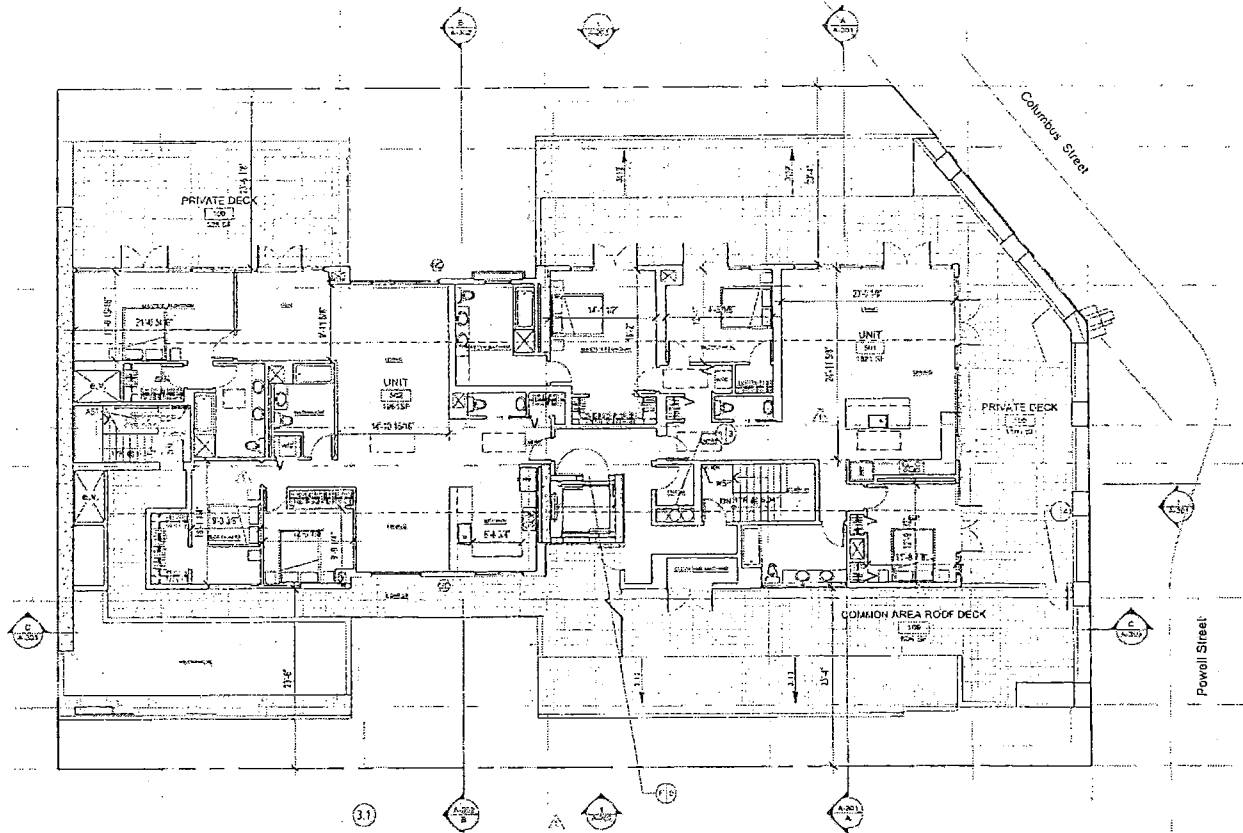


FIGURE 6: PROPOSED 1731 POWELL ST THIRD LEVEL PLAN

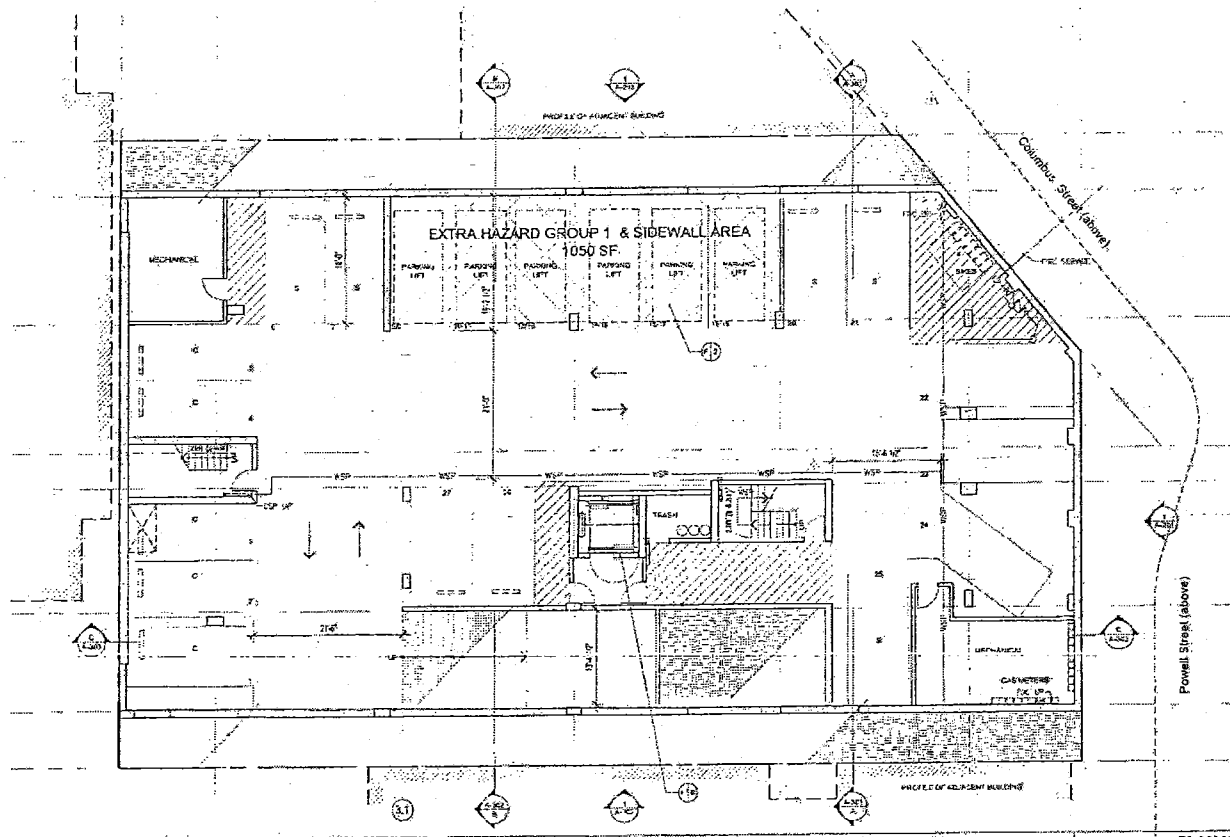
Source: SWS 117/13



**FIGURE 7: PROPOSED 1731 POWELL ST FOURTH LEVEL PLAN**  
**Source: SWS 1/7/13**



**FIGURE 8: PROPOSED 1731 POWELL ST FIFTH LEVEL PLAN**  
 Source: SWS 1/7/13



**FIGURE 9: PROPOSED 1731 POWELL ST BASEMENT LEVEL PLAN**  
 Source: SWS 1/7/13

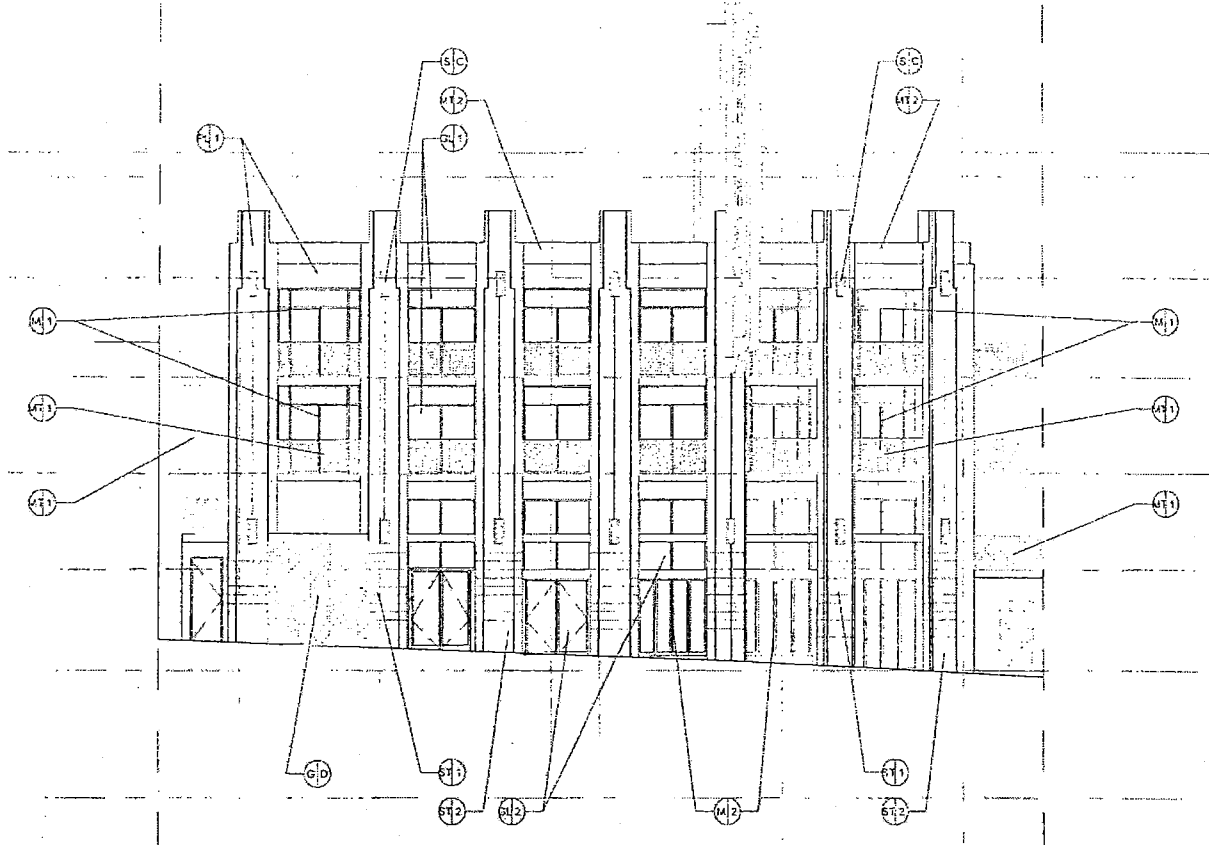


FIGURE 10: PROPOSED 1731 POWELL ST EAST (COLUMBUS AVENUE) ELEVATION

Source: SWS 1/7/13

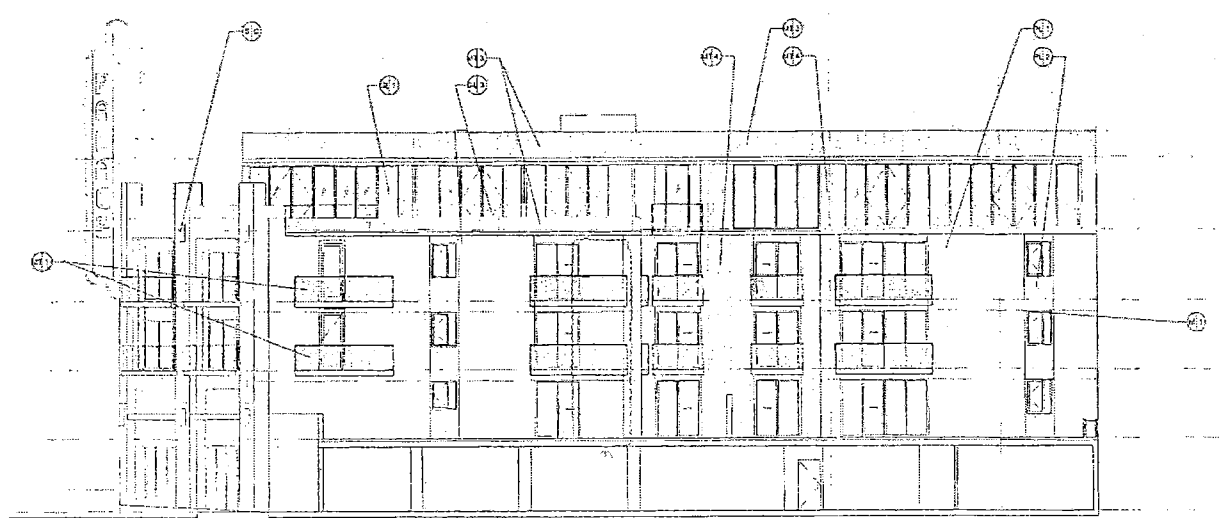


FIGURE 11: PROPOSED 1731 POWELL ST NORTH (FILBERT STREET) ELEVATION

Source: SWS 1/7/13

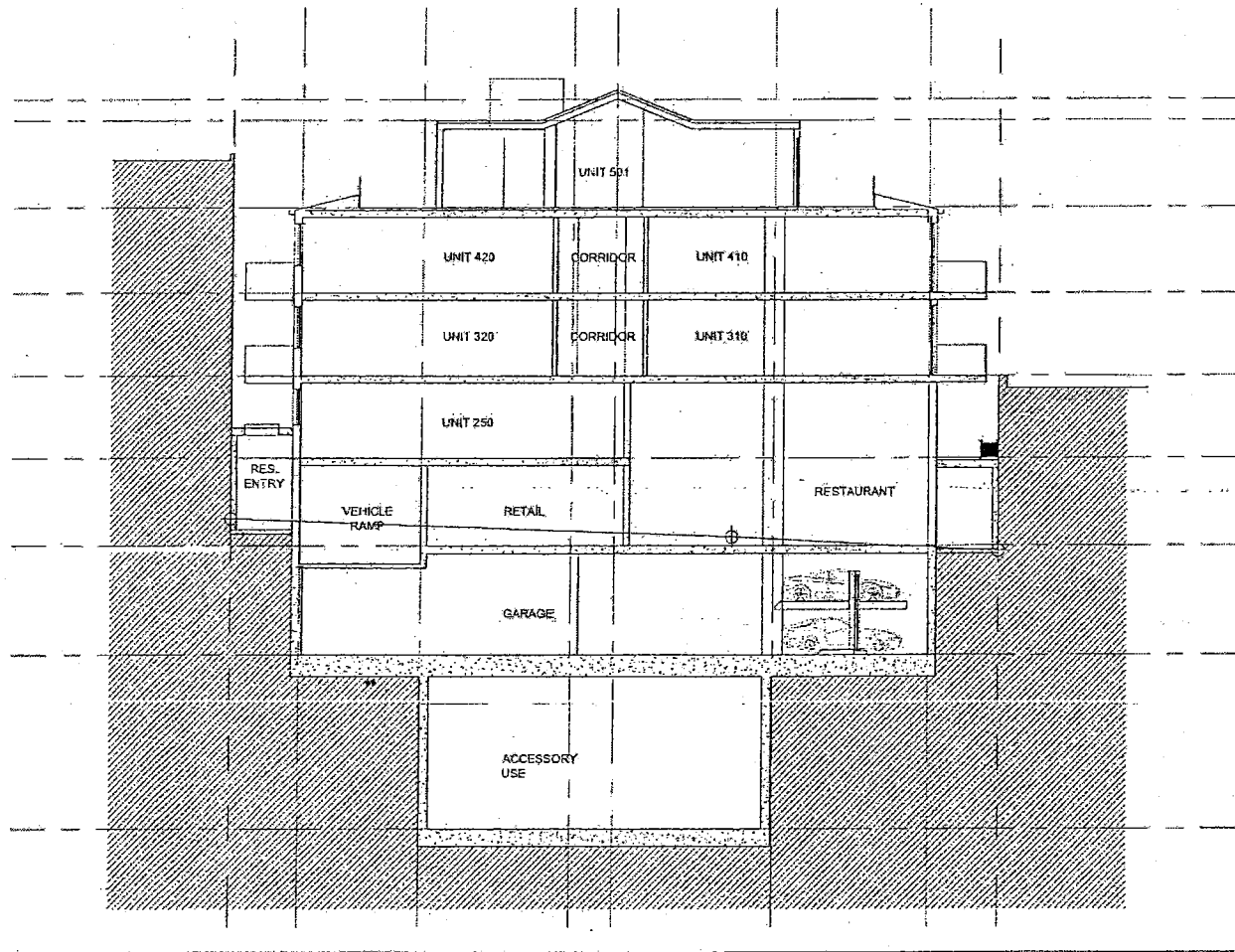


FIGURE 12: PROPOSED 1731 POWELL ST NORTH-SOUTH SECTION

Source: SWS 1/7/13



### *TBM Retrieval Shaft Relocation*

Currently, and as described in the 2008 SEIS/SEIR, the Central Subway Project includes TBM retrieval within the Columbus Avenue right-of-way, between Union and Powell Streets. The grade level at the current TBM extraction site on Columbus Avenue is at an elevation of approximately 70 feet SF Datum. As currently planned, the bored tunnel will rise gradually underground from 20 feet SF Datum to 30 feet SF Datum, with the depth change occurring over a distance of approximately 130 feet. A concrete shaft with a 1,600 sf footprint (40 feet by 40 feet) would be constructed and TBM retrieval would occur 40 feet below grade level (30 feet SF Datum). The retrieval shaft would essentially be a large concrete box, and would allow for access to the TBM and removal of the TBM via a crane. A treated zone, measuring 20 feet by 40 feet and 40 feet in depth, would be located immediately adjacent to the retrieval shaft at the point where the TBM would enter, and would consist of injected grouted columns within the soil that create a stable ground water barrier at the interface of the tunnel with the retrieval shaft. At the end of the TBM extraction process, the retrieval shaft would be covered with a hatch roof and the Columbus Avenue street surface would be restored.

Under the modified project, the TBM extraction would occur at the project site, rather than the Columbus Avenue right-of-way. This change, involving an additional 100 feet of tunneling, would entail excavation of 530 additional cubic yards of soil.

In the modified project, there would be no grade change for the tunnel work. The bottom of the tunnel alignment would remain at an elevation of approximately 20 feet SF Datum over the length of the proposed extension. There is an existing downward-sloping grade over the length of the proposed extended tunnel alignment, so at the point of retrieval the bottom of the tunnel would be approximately 40 feet below the grade level of 60 feet SF Datum; in addition, the retrieval shaft structure would extend approximately 25 feet further below ground, to -10 feet SF Datum, 70 feet below grade level. A treated zone equivalent in size to the one currently planned would be located adjacent to the retrieval shaft at the point where the TBM would enter the shaft.

Construction and TBM retrieval equipment would be positioned on the project site, and may also require use of an existing surface parking lot abutting the project site to the west. TBM extraction activity would occur over a period of 15 months, including 4 months of building demolition, 6 months of shaft construction, and 5 months of TBM removal and shaft closing.

### *1731 Powell Street Mixed-Use Project*

A building permit (BPA 200908124636) for modifications to the existing building at the Pagoda Theater project site was approved by the Planning Department on November 2, 2012. The Pagoda Theater project as approved would convert the 56-foot high vacant structure to a mixed-use building with 18 residential units, two retail commercial spaces – including an approximately 3,875 square foot restaurant and a 1,000 square foot retail space – and 27 independently accessible parking spaces in a below-grade garage.

The proposed TBM retrieval would require demolition of the Pagoda Theater building, eliminating the possibility of alteration of the existing building as approved. After the retrieval work is completed, the property owner would construct a mixed-use building substantially similar to the approved project. In addition to the tunnel extension and TBM retrieval, this Addendum considers the demolition and construction of a new mixed-use building with up to 18 residential units, a 4,700 square foot restaurant, and 27 independently accessible parking spaces in a below-grade garage on the project site, following completion of the TBM retrieval. Total developed, usable space would be 40,875 sf. The TBM retrieval shaft would be converted to storage for residential use. The height of the new building would be approximately 55 feet, consistent with the height of the existing building. The roof line of the new building would be consistent with the roof line of the existing building. The existing building has a blade sign on its western façade; a blade sign with generally the same position and dimensions as the existing blade sign would be included in the new building design (see Figures 10 and 11).

The existing height limit on the project site is 40 feet. Built prior to the implementation of the 40-X height district, the current building, at approximately 55 feet, is a non-complying structure. Because the Pagoda Theater project involved modification of an existing, non-complying structure, the existing building height could be retained. However, because the project as proposed now involves demolition of the existing building and construction of a new building, a Special Use District (SUD) is proposed as part of the modified project to allow construction to a height of approximately 55 feet as measured under the Planning Code, maintaining the same roof line at the same height as the existing building. In addition, since the time of the approval of the Pagoda Palace project, the Planning Code has been amended several times in ways which would otherwise impede the construction of the Pagoda Palace project, if the project were to move forward under current code. The SUD would allow modifications to these otherwise applicable Planning Code provisions related to off-street parking, rear yard, ground floor ceiling heights, dwelling unit exposure, signage, establishment of a restaurant use, and maximum non-residential use size.

### *Approvals Required*

The modified project would require the following approvals:

- Conditional Use authorization (Planning Commission);
- Special Use District approval (Board of Supervisors);
- Height Reclassification from the 40-X Height and Bulk District to the 55-X Height and Bulk District (Board of Supervisors);
- Authorization of lease of 1731 Powell Street and authorization of Central Subway tunnel contract modification (SFMTA Board of Directors); and
- Approval of a building permit for 1731 Powell Street building (Department of Building Inspection).

### **CEQA REVIEW OF THE PROPOSED PROJECT**

Based on the application submitted to the Planning Department by SFMTA (for the proposed project), the Department must determine what level of environmental review is required to comply with CEQA. An Addendum may be prepared if (1) the proposed project is not substantially revised so as to result in new significant impacts or a worsening of significant impacts identified in the previously certified EIR; (2) the background conditions under which the proposed project would be constructed have not changed substantively from those conditions described in the previously certified EIR; and (3) new information of substantial importance has not surfaced (see California Public Resources Code Section 21081 and Section 15162 of the *CEQA Guidelines* for a detailed description of the conditions that trigger preparation of a subsequent EIR). The proposed project would not result in any new significant impacts compared to those identified in the 2008 SEIS/SEIR for the Third Street Light Rail/Central Subway project. Therefore, under Section 21081 and Section 15162 of the *CEQA Guidelines*, a subsequent EIR does not need to be prepared. This Addendum conforms to the requirements of CEQA Guidelines Section 15164 and discloses potential changes in physical effects relating to project modifications.

As described above, when compared to the approved Central Subway project, the currently proposed project would alter the location of the TBM retrieval shaft site by approximately 100

feet to the northwest, from the Columbus Avenue right-of-way to the privately-owned parcel at 1731 Powell Street. The project would also alter the existing approvals for the conversion of the Pagoda Theater building from a theater to a mixed-use residential and commercial building, instead providing for demolition of the existing building and construction of a new mixed-use project.

The project site and its surroundings have remained largely the same as when they were analyzed within the 2008 SEIS/SEIR. New significant effects or increases in the severity of previously identified significant effects are not expected to result from the proposed project, and a subsequent or supplemental EIR is, therefore, not necessary. Accordingly, an Addendum provides an appropriate level of CEQA analysis for the modified project.

## **ENVIRONMENTAL ANALYSIS**

### **LAND USE, PLANS, AND ZONING**

The existing building on the 15,320 square foot project site was used as a film and live performance theater from its construction in 1908 until 1985. The project site is located on the southwest corner of Powell Street and Columbus Avenue across Columbus Avenue from Washington Square. The surrounding North Beach neighborhood is characterized by a mix of small commercial uses and single and small-scale multifamily residential uses, and has experienced relatively little new development. Aside from the approved Pagoda Theater conversion, the North Beach Library project one block northwest of the project site on Columbus Avenue is the only major new development pending in the area. Predominant building heights are 2-4 stories.

The modified project introduces a new component of the Central Subway project, redevelopment of the project site with residential and commercial uses. The environmental impacts of the uses proposed on the site were analyzed in a Class 32 Categorical Exemption for the Pagoda Theater conversion project, issued on January 6, 2009. In that determination, the Planning Department concluded that the addition of 18 units and 3,875 sf of restaurant use would not create any significant impacts, including significant land use impacts, because the proposed project would be consistent with the type of uses in the area and would not disrupt or divide the existing community. At the time that the Pagoda Theater project was considered for approvals, it was consistent with then-applicable Planning Code requirements.

The proposed project includes the adoption of a special use district. With the adoption of the SUD, the modified project would be consistent with the San Francisco Planning Code. There have been no major changes in the vicinity since that determination that would alter this conclusion with regard to land use, and the proposed residential and restaurant uses, residential density, and building height continue to be consistent with buildings and activities in the surrounding neighborhood. Although commercial uses would exceed those analyzed in the categorical exemption by approximately 800 sf, the proposed building on the project site would contain substantially the same uses as the previously approved Pagoda Theater project.

Relocation of the TBM retrieval shaft site from Columbus Avenue to the project site would reduce disruption of vehicular and pedestrian traffic on Columbus Avenue, potentially reducing the less-than-significant effects on neighboring commercial and residential uses. Although no significant land use impact associated with this activity was identified in the 2008 SEIS/SEIR, the modified project would reduce any such impact on the viability of Columbus Avenue commercial uses.

The modified project would have less-than-significant land use impacts.

### *Compatibility with Existing Zoning and Plans*

#### *Planning Code*

At approximately 55 feet in height, the existing Pagoda Theater building is a nonconforming structure within the 40-X Height and Bulk district. The building was constructed in 1908, prior to the creation of the height and bulk district. Numerous buildings on the project block and in the surrounding area similarly exceed the 40-foot height limit.

The approved Pagoda Theater project involved modification of the extant structure, allowing for retention of the existing building height. The modified project involves demolition of the building to enable excavation and operation of the TBM retrieval shaft, and construction of a new approximately 55-foot-high building. This new building is not consistent with the 40-X Height and Bulk District. The modified project includes a proposed Central Subway Tunnel Boring Machine Extraction Site Special Use District (SUD), applying the provisions of the 55-X Height and Bulk District to the site.

The SUD also exempts the proposed new building from recently amended Planning Code provisions that otherwise would preclude the construction of the existing entitled building program. In contrast with the existing zoning on the site, the SUD as proposed would allow:

- Use of the ground floor commercial space as a restaurant;
- Nonresidential use exceeding 4,000 sf in size;
- Provision of a maximum of 27 vehicle parking spaces;
- Minimum ceiling height of 8.5 feet for ground floor nonresidential uses;
- Modification of the rear yard requirements
- Modification of the dwelling unit exposure requirement; and
- Exemption the proposed blade sign from height limitation.

Other provisions of the SUD address administrative and permitting requirements and would not affect the physical environment.

The SUD as proposed would allow construction of a building with the same overall specifications as the approved Pagoda Theater project. Potential physical environmental impacts of the demolition, excavation, and new construction that would be permitted under the SUD are addressed in this Addendum.

#### *General Plan*

The City's *General Plan*, which provides general policies and objectives to guide land use decisions, contains some policies that relate to physical environmental issues. *General Plan* policies pertaining to other issues but not affecting the physical environment are not discussed in this document, but will be considered by decision makers as part of their decision whether to approve or disapprove the proposed project. No substantial conflict with any environmental objective or policy within the *General Plan* was identified in the 2008 SEIS/SEIR for the project. Similarly, the proposed project would not result in substantial conflict with any environmental *General Plan* objective or policy. The issue of *General Plan* conformity will be reconsidered by the Planning Commission during their deliberations over the proposed project. Any potential conflicts with the *General Plan* identified as part of that process would not alter the physical and environmental effects of the proposed project. Further, the conclusions reached in the 2008 SEIS/SEIR that the original project would not conflict with relevant plans would remain

applicable to the proposed project. Thus, the modified project would have similar less-than-significant land use impacts, as was identified in the 2008 SEIS/SEIR.

## VISUAL QUALITY

Equipment used for construction and operation of the TBM retrieval shaft will be visible from the surrounding area, including Washington Square. Relocation of the TBM extraction site by 100 feet will not substantially change this impact. Moreover, the impact is temporary and was not considered significant in the 2008 SEIS/SEIR; an improvement measure requiring screening of construction areas was included in the 2008 SEIS/SEIR (See Mitigation Measures p. 57).

The modified project would involve redevelopment of the Pagoda Theater site with a new structure equal in size to the existing vacant building. Because the new structure would not exceed the existing structure in size, any change resulting from the modified project in views from publicly-accessible vantage points would be minimal. The project site is not considered a scenic resource, and construction of a new building on the site would not have a substantial, demonstrable negative effect on the visual character of the project site or its surroundings. The project would be subject to restrictions on the use of reflective or mirrored glass, and night lighting would be at a level consistent with the proposed uses and other lighting in the area.

The above analysis indicates that the modified project would not degrade the visual character of this urbanized portion of San Francisco; would not have a demonstrable adverse aesthetic effect; and would not result in substantial light or glare. Therefore, the proposed modification to the Central Subway project would not have significant aesthetic impacts.

## CULTURAL RESOURCES

### *Archeological Resources*

The Planning Department reviewed the Pagoda Theater project for impacts to CEQA-significant archeological resources.<sup>2</sup> The existing basement slabs extend to a depth of 7 to 15 feet below grade, and the Pagoda Theater project involved a further 7 feet of excavation.

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<sup>2</sup> Archeological Response for 1735-1741 Powell Street, Memorandum from Don Lewis, Major Environmental Analysis, January 5, 2009. This document is on file and available for public review at the Planning Department, 1650 Mission Street, 4<sup>th</sup> Floor, as part of Case File No. 1996.281E and Case File No 2007.1117E.

By the mid-1860s, the project site was occupied by San Francisco's only Eastern Orthodox church, which was destroyed in the 1906 earthquake and fire. The site contains deposits indicating significant fill episodes dating from prior to the construction of the Orthodox church, and again from the time period between 1906 and the construction of the theater in 1908. The Department concluded that any historical remains were likely removed at the time that the basement of the Pagoda Theater was constructed, and the Pagoda Theater project would not affect CEQA-significant archeological resources.

According to the geotechnical report prepared for the site, the project site soils may contain alluvial deposits, which have a moderate sensitivity for prehistory remains. The Colma Formation may also be present under the site, the upper 3-5 feet of which is considered sensitive for prehistoric deposits of the Middle and Late Holocene era.<sup>3</sup>

While it is not expected that the redevelopment of the project site with the 1731 Powell Street mixed-use building would result in any greater impact to CEQA-significant archeological resources than the Pagoda Theater project, the modified project would increase the depth of excavation on the project site at the tunnel and TBM retrieval shaft locations. If archeological resources are present at greater depths than previously considered for the Pagoda Theater proposal, they could be affected by construction of the tunnel, treated zone, and/or TBM retrieval shaft.

Potential archeological resource impacts of the Central Subway project are described in Section 4.4, 6.7, and 7.3.3 of the 2008 SEIS/SEIR. The analysis identified two known prehistoric and five known historic archeological sites within the Area of Potential Effect (APE) for the Central Subway alignment alternatives. Columbus Avenue and the TBM retrieval shaft site were identified as potential historic archeological resource sites because the roadway cut through multiple city lots that were already developed at the time of roadway construction in the 1870s, and because of the early use of Washington Square as a public space. As a project subject to Section 106 of the National Historic Preservation Act of 1966, the project was subject to a Programmatic Agreement (PA) and further mitigation as part of the 2008 SEIS/SEIR process. Extension of the excavation to 1731 Powell Street as proposed would require further consultation with SHPO to make modifications to the APE and develop an Archeological Monitoring Plan for the newly affected area.

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<sup>3</sup> Memorandum from Randall Dean, San Francisco Planning Department to Sarah Jones, San Francisco Planning Department, January 18, 2013. This document is on file and available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 1996.281E.



An archeological mitigation measure was applied to the Central Subway project, requiring limited testing along the selected alignment, monitoring during construction in sections of the alignment determined to have moderate to high sensitivity for significant archeological resources, completion of a technical report following assessment, and requirements associated with discovery of any unexpected resources during construction (see Mitigation Measures, p. 57). This mitigation measure would continue to be implemented for the project as modified.

The modified project would not result in any new significant impacts or require mitigation beyond that identified in the 2008 SEIS/SEIR.

### *Historical Architectural Resources*

#### *TBM Retrieval Shaft Relocation*

The 1731 Powell Street site is located within the Washington Square Historic District. The TBM retrieval shaft would not result in any permanent physical change; therefore, with regard to the TBM retrieval shaft compatibility with the surrounding district, impacts would be similar to the approved project, would not affect the use or historic character of Washington Square, and would be temporary and less than significant.

The 2008 SEIS/SEIR analyzed the impacts of project construction on historic buildings and concluded that vibration from tunnel and station construction, and ground settlement near cut-and-cover construction locations, could result in minor architectural or structural damage. Accordingly, construction mitigation measures were identified to reduce impacts to a less than significant level, including vibration monitoring and adjustments in construction methods if warranted to ensure that vibration remains below 0.12 inches/second peak particle vibration (PPV).<sup>4</sup> The mitigation measures were included in the mitigation monitoring and reporting program (MMRP) adopted for the project (see Mitigation Measures, p. 57).

The TBM retrieval shaft relocation would increase the potential for construction activities to affect the building at 721 Filbert Street, which abuts the project site to the west. 721 Filbert Street is a two-story masonry garage building constructed in 1907. It is included in the UMB (Unreinforced Masonry Building) Survey and was rated "1" (on a scale of -2 to 5, with 5 being the most important) in the 1976 Architectural Survey. It is considered a potential historic resource by the Planning Department and is a historic resource for the purposes of CEQA. The

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<sup>4</sup> 2008 SEIS/SEIR pp. 6-72-6-82.

proposed retrieval shaft site is also adjacent to a potential historic resource at 1717-1719 Powell Street to the south of the project site, a three-story frame building constructed in 1914 with a survey rating of "2" on the North Beach Survey and a National Register historic status code of "6L."

Mitigation measures adopted for the Central Subway project to reduce construction vibration impacts on historic buildings to less-than-significant levels would be applied to the extension of the tunnel and construction of the TBM retrieval shaft. As with the approved project, impacts associated with historical architectural resources from the proposed TBM retrieval shaft relocation would be less than significant with mitigation.

### *1731 Powell Redevelopment*

Because the Pagoda Theater project proposed substantial alteration to the Pagoda Theater Building, the Planning Department required preparation of a Supplemental Information Form for Historical Resource Evaluation<sup>5</sup> and completed a Historic Resource Evaluation Response (HRER).<sup>6</sup> The HRER concluded that the building is located in the Washington Square Historic District, but due to removal of the marquee and all interior partitions and finishes, and creation of new openings on the primary building elevation, the building lacks the necessary integrity to be considered eligible individually or as a contributor to the district for the California Register of Historic Resources (CRHR). Therefore, no resource is present on the site. The determination that the proposed alterations would not have an adverse effect on the Washington Square Historic District was based on the Pagoda Theater project's maintenance of the overall size, massing, and architectural features such as the blade sign.

The modified project would result in demolition of the Pagoda Theater building. This would not result in a significant impact as the existing building is not a historical resource. The Planning Department considered the effect of the proposed new mixed-use development on the Washington Square Historic District, and concluded that the modified project would be a

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<sup>5</sup> Page & Turnbull, Inc, *Supplemental Information Form, Pagoda Theatre, 1731-1741 Powell Street, San Francisco CA*, 14 June 2007. This document is on file and available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2007.1117E and Case File No. 1996.281E.

<sup>6</sup> Historic Resource Evaluation Response prepared by Tim Frye, San Francisco Planning Department, December 24, 2008. This document is on file and available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2007.1117E and Case File No. 1996.281E.

compatible infill development due to the replication of similar size, scale, and detailing, with inclusion of the blade sign.<sup>7</sup>

### *Summary*

The adopted mitigation measures for Central Subway construction impacts on cultural resources would effectively reduce impacts from the modified project to less than significant. The modified project would not result in significant impacts on cultural resources beyond those addressed in the 2008 SEIS/SEIR.

## **TRANSPORTATION**

### *TBM Retrieval Site Relocation*

The 2008 SEIS/SEIR acknowledged that there would be temporary, less than significant traffic and transit impacts on Columbus Avenue during construction and operation of the TBM retrieval shaft. Columbus Avenue is a four-lane, two-way major arterial with multiple transit lines and sidewalks and on-street parking on both sides of the street. The modified project would avoid these less than significant impacts.

As currently proposed under the modified project, the project site (and potentially the neighboring surface parking lot) would accommodate most work areas for TBM retrieval shaft construction and operation. However, periodic lane and street closure of Powell Street between Columbus Avenue and Union Street may be required. The tunnel contractor and SFMTA would maintain all current and approved practices for traffic control and loading zone relocation, and no new significant impacts would occur. It is expected that the transportation impacts of TBM retrieval shaft relocation would be less substantial than those of the approved project, as Powell Street in this location accommodates less traffic than Columbus Avenue, and no relocation of overhead bus lines for the 30-Stockton bus would be required.

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<sup>7</sup> Historic Resource Evaluation Response (revised Part II) prepared by Rich Sucre, San Francisco Planning Department, January 18, 2013. This document is on file and available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 1996.281E.

## 1731 Powell Street

This section provides an updated assessment of the trip generation associated with the proposed 1731 Powell Street redevelopment.<sup>8</sup>

Trip generation was conducted to estimate the total trips from the 1731 Powell Street project and assess the impact of the net new trips on the surrounding roadway network. Trip generation calculations and assumptions were based on the 2002 San Francisco Transportation Impact Analysis Guidelines for Environmental Review (*SF Guidelines*) and assumed a daily trip rate of 10 trips for every residential unit, and 150 trips per 1,000 gross square feet of retail space. Trip generation calculations also assumed that 17.3 percent of the daily residential trips, and 9 percent of the retail trips, would occur during the PM peak hour. Average vehicle occupancy factors obtained from the *SF Guidelines* were applied to the auto mode split to obtain the vehicle trips due to the proposed project. Resultant vehicle trips are shown in Table 3 along with the person trips for other modes of travel. Mode split and vehicle occupancy information for the proposed project land uses was based on the *SF Guidelines*.<sup>9</sup> Residential mode split data were obtained from the 2000 Census for Census Tract 107. Table 1, below, summarizes expected trips.

As shown in Table 1, the modified project would result in 17 peak hour vehicle trips and 21 peak hour transit trips attributable to the redevelopment of 1731 Powell Street. Seventeen vehicle trips distributed to local intersections would not have the potential to contribute substantially to traffic levels, and the modified project would not create new significant traffic impacts.

The project site is served by eight MUNI lines with stops within two blocks of the site. The projected 21 peak hour transit trips would be distributed over those lines, and the project would not have the potential to increase transit ridership beyond capacity levels.

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<sup>8</sup> San Francisco Planning Department, *Transportation Calculations for 1741 Powell Street*, January 15, 2013. These calculations are on file and available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 1996.281E.

<sup>9</sup> San Francisco Planning Department, *Transportation Impact Analysis Guidelines for Environmental Review*, October 2002. This document is also known as *SF Guidelines*.

TABLE 1

## TRIP GENERATION AND PARKING DEMAND – 1731 POWELL STREET

	Residential Component		Commercial Component		Total	
	Daily	Peak Hour	Daily	Peak Hour	Daily	Peak Hour
<b>Auto</b>						
Person Trips	47	8	253	23	300	31
Vehicle trips	41	7	107	10	148	17
Transit	59	10	119	11	178	21
Pedestrian	67	12	246	22	313	34
Other	7	1	87	8	94	9
Parking Space Demand	27		9 short term/3 long term		39	
Loading trips	.06 average/.07 peak		.05 average/.06 peak		.11 average/.13 peak	

The proposed building would be accessed via a single driveway entrance/egress on Powell Street, near the intersection with Columbus Avenue to the north. There is adequate space for queuing of vehicles within the garage and vehicles entering the site would not be expected to result in traffic flow impacts on Powell Street or Columbus Avenue.

The proposed project is expected to generate 34 peak-hour pedestrian trips. This increase in pedestrian trips would not be substantial, and the project would not result in pedestrian impacts. Bicycle Route #11, a Class III Bicycle route, runs along Columbus Avenue but, because the project's driveway would be located off the bicycle route on Powell Street, conflicts between vehicle and bicycle traffic would not be expected to occur.

### *Parking*

The proposed project includes 27 parking spaces. This proposal is consistent with the amount of parking approved for the site in 2009. One off-street loading space would be provided in the underground garage; no off-street loading is required under Planning Code Section 155 for a project of this size.

Based on *SF Guidelines* estimates, the proposed project would generate demand for 39 parking spaces, resulting in a demand-based parking deficit of 12 spaces. San Francisco does not consider parking supply as part of the permanent physical environment. Parking conditions are not static, as parking supply and demand varies over time. Hence, the availability of parking space is not a permanent physical condition, but changes over time as people change their modes and patterns of travel.

Parking deficits are considered to be social effects, rather than impacts on the physical environment as defined by CEQA. Under CEQA, a project's social impacts need not be treated as significant impacts on the environment. Environmental documents should, however, address the secondary physical impacts that could be triggered by a social impact. (CEQA Guidelines § 15131(a).) The social inconvenience of parking deficits, such as having to hunt for scarce parking spaces, is not an environmental impact, but there may be secondary physical environmental impacts, such as increased traffic congestion at intersections, air quality impacts, safety impacts, or noise impacts caused by congestion. In the experience of San Francisco transportation planners, however, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, taxis, bicycles or travel by foot) and a relatively dense pattern of urban development, induces many drivers to seek and find alternative parking facilities, shift to other modes of travel, or change their overall travel habits. Any such resulting shifts to transit service in particular, would be in keeping with the City's "Transit First" policy.

The transportation analysis accounts for potential secondary effects, such as cars circling and looking for a parking space in areas of limited parking supply, by assuming that all drivers would attempt to find parking at or near the project site and then seek parking farther away if convenient parking is unavailable. Moreover, the secondary effects of drivers searching for parking is typically offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area. Hence, any secondary environmental impacts which may result from a shortfall in parking in the vicinity of the proposed project would be minor, and the traffic assignments used in the transportation analysis, as well as in the associated air quality, noise and pedestrian safety analyses, reasonably addresses potential secondary effects.

The modified project would not result in any temporary or permanent new significant transportation impacts not identified in the 2008 SEIS/SEIR.

## NOISE AND VIBRATION

### *TBM Retrieval Shaft Site Relocation*

The 2008 SEIS/SEIR identified mitigation measures for the impacts of construction vibration on historic buildings, and improvement measures to further reduce the less-than-significant impacts of construction noise. With TBM retrieval shaft relocation, noise from shaft construction and operation would occur at closer proximity to sensitive receptors (residences) surrounding the project site. Although residents surrounding the project site would experience greater noise levels than under the approved project, the impacts would be similar to those analyzed in the 2008 SEIS/SEIR for other residences proximate to the TBM retrieval shaft location on Columbus Avenue or other aboveground construction areas for the Central Subway project. TBM retrieval would use similar equipment to construction activities, and the operation of the shaft would likewise have similar noise impacts as construction. The adopted construction vibration mitigation measures and noise improvement measures would be applied to the modified project (see Mitigation Measures p. 57 and Improvement Measures p. 59), and noise and vibration impacts from TBM retrieval shaft relocation would remain less than significant.

### *1731 Powell Street Mixed-Use Building*

Noise levels on Columbus Avenue exceed 75 Ldn (level day-night weighted decibels) and are in the range of 65-70 Ldn on Powell Street, Union Street, and Filbert Street<sup>10</sup>. The addition of 18 units and 4,700 sf of restaurant use from redevelopment of the 1741 Powell Street site would not create a sufficient increase in vehicle trips to result in substantial increases to existing noise levels in the vicinity of the project site. Other operational noise, such as restaurant ventilation systems, would be at levels typically present in an urban area. Operational and building construction noise would be regulated under the City's Noise Ordinance (Article 29 of the Police Code).

The modified project would add sensitive receptors to the project site due to the residential component of the project. The project site frontages on Columbus Avenue and Powell Street are subject to noise levels in excess of the recommended noise levels for residential use identified in the General Plan's Land Use Compatibility Guidelines for Community Noise<sup>11</sup>; a small portion

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<sup>10</sup> San Francisco Planning Department Geographic Information System, accessed January 22, 2013.

<sup>11</sup> San Francisco General Plan, Environmental Protection Element, Policy 11.1.

of the project site closest to Columbus Avenue is subject to noise levels exceeding 75 Ldn, the level at which noise analysis prior to building permit issuance is required per the mitigation measures adopted for the 2009 Housing Element. The building would be subject to detailed noise analysis as part of the building permit process, and would be required to meet the California Noise Insulation Standards in Title 24 of the California Code of Regulations, and no significant impacts would occur from this component of the modified project.

## **AIR QUALITY**

In accordance with the state and federal Clean Air Acts, air pollutant standards are identified for the following six criteria air pollutants: ozone, carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>) 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. The Bay Area Air Quality Management District (BAAQMD) has established thresholds of significance to determine if projects would 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 San Francisco Bay Area Air Basin. To assist lead agencies, the BAAQMD, in their CEQA Air Quality Guidelines (May 2011), has developed screening criteria. If a proposed project meets the screening criteria, then the project would result in less-than-significant criteria air pollutant impacts. A project that exceeds the screening criteria may require a detailed air quality assessment to determine whether criteria air pollutant emissions would exceed significance thresholds. The proposed project would not exceed criteria air pollutant screening levels for operation or construction.

In addition to criteria air pollutants, individual projects may emit toxic air contaminants (TACs). TACs collectively refer to a diverse group of air pollutants that are capable of causing chronic (i.e., of long-duration) and acute (i.e., severe but of short-term) adverse effects to human health, including carcinogenic effects. 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 pollution hot spots," 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<sub>2.5</sub> concentrations greater than 10 micrograms per cubic meter. Land use



projects within these air pollution hot spots require special consideration to determine whether the project's activities would expose sensitive receptors to substantial air pollutant concentrations.

The 1731 Powell Street project site is not within an air pollution hot spot. Therefore, the proposed project would result in a less than significant impact with respect to exposing sensitive receptors to substantial levels of air pollution.

Prior to the finalization of the current BAAQMD screening criteria, the 2008 SEIS/SEIR analyzed construction and operational emissions associated with the Central Subway project and concluded that dust and emission control measures would be incorporated into the project in compliance with BAAQMD requirements, and construction impacts would be less than significant. As noted on page 6-113 of the SEIS/SEIR, the TBM retrieval shaft in proximity to Washington Square would not result in substantial adverse impacts because "the exposed area is relatively small and control measures are being included in the Project to reduce dust emissions." The proposed new location for the TBM retrieval shaft would be in closer proximity to the residences on the project block than the original location, but the project would continue to be subject to required dust and emission control measures and no new significant impacts would occur.

Construction of both the TBM retrieval shaft construction and the proposed 1731 Powell Street building would be subject to the Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008). The Construction Dust Control Ordinance was adopted with the intent of reducing the quantity of dust generated during site preparation, demolition and construction work in order to protect the health of the general public and of onsite workers, minimize public nuisance complaints, and to avoid orders to stop work by the Department of Building Inspection (DBI).

The San Francisco Building Code Section 106A.3.2.6.3 requires a "no visible dust" requirement with the intent of reducing the quantity of dust generated during site preparation, demolition and construction work in order to protect the health of the general public and of on-site workers, minimize public nuisance complaints, and to avoid orders to stop work by the Department of Building Inspection (DBI).

The Building Code requires that all site preparation work, demolition, or other construction activities within San Francisco that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specified dust control measures whether or not the activity requires a permit from DBI.

Below are the following regulations and procedures set forth in Section 106A.3.2.6.3 of the San Francisco Building Code's General Dust Control Requirements:

- Water all active construction areas sufficiently to prevent dust from becoming airborne. Increased watering frequency may be necessary whenever wind speeds exceed 15 mile per hour. Reclaimed water must be used if required by Article 21, Section 1100 et seq. of the San Francisco Public Works Code. If not required, reclaimed water should be used whenever possible;
- Provide as much water as necessary to control dust (without creating run-off) in an area of land clearing, earth movement, excavation, drillings, and other dust-generating activity;
- During excavation and dirt-moving activities, wet sweep or vacuum the streets, sidewalks, paths, and intersections where work is in progress at the end of the workday;
- Cover any inactive (no disturbance for more than seven days) stockpiles greater than ten cubic yards or 500 square feet of excavated materials, backfill material, import material, gravel, sand, road base, and soil with a 10 mil (0.01 inch) polyethylene plastic or equivalent tarp and brace it down or use other equivalent soil stabilization techniques; and
- Use dust enclosures, curtains, and dust collectors as necessary to control dust in the excavation area.

Compliance with the San Francisco Building Code's General Dust Control Requirements would ensure that the project's fugitive dust impacts would be less than significant.

Article 38 was added to the San Francisco Health Code to require that all newly constructed buildings containing ten or more units within the Potential Roadway Exposure Zone perform an Air Quality Assessment to determine whether the PM 2.5 concentration at the project site is greater than 0.2 micrograms per cubic meter (0.2 ug/m<sup>3</sup>).<sup>13</sup> Sponsors of projects on sites where the PM 2.5 concentration exceeds the 0.2 ug/m<sup>3</sup> action level are required to install ventilation systems or otherwise redesign the project to reduce PM 2.5 concentrations for habitable areas of dwelling units by a performance standard of 80 percent. The Class 32 categorical exemption prepared for the Pagoda Theater project indicates that the project site is not within the Potential

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<sup>12</sup> PM 2.5 is a measure of smaller particles in the air that are 2.5 microns or less in diameter. PM 10 (10 microns or greater in diameter) has been the pollutant particulate level standard against which EPA has been measuring Clean Air Act compliance. On the basis of newer scientific findings, the Agency is considering regulations that will make PM 2.5 the new "standard".

<sup>13</sup> See Board of Supervisors Ordinance No. 281-08, effective January 5, 2009.

Roadway Expose Zone, and therefore the project would not expose new project residents to substantial concentrations of air pollutants.<sup>14</sup>

The 1731 Powell Street project would result in further construction activities subsequent to the closure of the TBM retrieval shaft. However, construction emissions would be temporary and variable in nature and, because the project site is not within a hot spot, would not be expected to expose sensitive receptors to substantial air pollutants. Furthermore, the proposed project would be subject to, and comply with, California regulations limiting idling to no more than five minutes, which would further reduce nearby sensitive receptors exposure to temporary and variable TAC emissions; in addition, the project would be subject to applicable building permit requirements at the time of building permit issuance and as stipulated by the Department of Building Inspection. Therefore, construction period TAC emissions would result in a less than significant impact with respect to exposing sensitive receptors to substantial levels of air pollution.

The modified project would not result in new significant impacts related to air quality.

## GREENHOUSE GASES

Current requirements related to greenhouse gas (GHG) analysis were established in 2010, subsequent to the certification of the 2008 SEIS/SEIR. Therefore, GHGs are discussed below consistent with current procedures and requirements.

Gases that trap heat in the atmosphere are referred to as 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 GHG's has been implicated as the driving force for global climate change. The primary GHGs are carbon dioxide, methane, nitrous oxide, ozone, and water vapor.

While the presence of the primary GHGs in the atmosphere are naturally occurring, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) are largely emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of carbon dioxide are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHGs

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<sup>14</sup> San Francisco Planning Department Certificate of Determination, Exemption from Environmental Review, 1735-1741 Powell Street, January 6, 2009. This document is on file and available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2007, 1117E and Case File No. 1996.281E.

include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes. Greenhouse gases are typically reported in “carbon dioxide-equivalent” measures (CO<sub>2</sub>E).<sup>15</sup>

There is international scientific consensus that human-caused increases in GHGs have and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.<sup>16</sup>

The Air Resources Board (ARB) estimated that in 2006 California produced about 484 million gross metric tons of CO<sub>2</sub>E (MMT<sub>CO2E</sub>), or about 535 million U.S. tons.<sup>17</sup> The ARB found 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 22 percent and industrial sources at 20 percent. Commercial and residential fuel use (primarily for heating) accounted for 9 percent of GHG emissions.<sup>18</sup> In the Bay Area, fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) and the industrial and commercial sectors are the two largest sources of GHG emissions, each accounting for approximately 36% of the Bay Area’s 95.8 MMT<sub>CO2E</sub> emitted in 2007.<sup>19</sup> Electricity generation accounts for approximately 16% of the Bay Area’s GHG emissions followed by residential fuel usage at 7%, off-road equipment at 3% and agriculture at 1%.<sup>20</sup>

In 2006, the California legislature passed Assembly Bill No. 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires ARB to design and implement emission limits, regulations, and

<sup>15</sup> Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in “carbon dioxide-equivalents,” which present a weighted average based on each gas’s heat absorption (or “global warming”) potential.

<sup>16</sup> California Climate Change Portal. Frequently Asked Questions About Global Climate Change. Available online at: <http://www.climatechange.ca.gov/publications/faqs.html>. Accessed November 8, 2010.

<sup>17</sup> California Air Resources Board (ARB), “California Greenhouse Gas Inventory for 2000-2006 – by Category as Defined in the Scoping Plan.” [http://www.arb.ca.gov/cc/inventory/data/tables/ghg\\_inventory\\_scopingplan\\_2009-03-13.pdf](http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_2009-03-13.pdf). Accessed March 2, 2010.

<sup>18</sup> Ibid.

<sup>19</sup> 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](http://www.baaqmd.gov/-/media/Files/Planning%20and%20Research/Emission%20Inventory/regionalinventory2007_2_10.ashx). Accessed March 2, 2010.

<sup>20</sup> Ibid.

other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).

Pursuant to AB 32, ARB adopted a Scoping Plan in December 2008, outlining measures to meet the 2020 GHG reduction limits. In order to meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business as usual emissions levels, or about 15 percent from today's levels.<sup>21</sup> The Scoping Plan estimates a reduction of 174 million metric tons of CO<sub>2</sub>E (MMTCO<sub>2</sub>E) (about 191 million U.S. tons) from the transportation, energy, agriculture, forestry, and high global warming potential sectors, see Table 5, below. ARB has identified an implementation timeline for the GHG reduction strategies in the Scoping Plan.<sup>22</sup> Some measures may require new legislation to implement, some will require subsidies, some have already been developed, and some will require additional effort to evaluate and quantify. Additionally, some emissions reductions strategies may require their own environmental review under CEQA or the National Environmental Policy Act (NEPA).

AB 32 also anticipates that local government actions will result in reduced GHG emissions. ARB has identified a GHG reduction target of 15 percent from current levels for local governments themselves and notes that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions.

The Scoping Plan relies on the requirements of Senate Bill 375 (SB 375) to implement the carbon emission reductions anticipated from land use decisions. SB 375 was enacted to align local land use and transportation planning to further achieve the State's GHG reduction goals. SB 375 requires regional transportation plans, developed by Metropolitan Planning Organizations (MPOs), to incorporate a "sustainable communities strategy" in their regional transportation plans (RTPs) that would achieve GHG emission reduction targets set by ARB. SB 375 also includes provisions for streamlined CEQA review for some infill projects such as transit-oriented development. SB 375 would be implemented over the next several years and the Metropolitan Transportation Commission's 2013 RTP would be its first plan subject to SB 375.

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<sup>21</sup> California Air Resources Board, California's Climate Plan: Fact Sheet. Available online at: [http://www.arb.ca.gov/cc/facts/scoping\\_plan\\_fs.pdf](http://www.arb.ca.gov/cc/facts/scoping_plan_fs.pdf). Accessed March 4, 2010.

<sup>22</sup> California Air Resources Board. AB 32 Scoping Plan. Available Online at: [http://www.arb.ca.gov/cc/scopingplan/sp\\_measures\\_implementation\\_timeline.pdf](http://www.arb.ca.gov/cc/scopingplan/sp_measures_implementation_timeline.pdf). Accessed March 2, 2010.

**Table 2. GHG Reductions from the AB 32 Scoping Plan Sectors<sup>23</sup>**

GHG Reduction Measures By Sector	GHG Reductions (MMT CO <sub>2</sub> E)
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
<b>Total</b>	<b>174</b>
<b>Other Recommended Measures</b>	
Government Operations	1-2
Agriculture- Methane Capture at Large Dairies	1
Methane Capture at Large Dairies	1
Additional GHG Reduction Measures	
Water	4.8
Green Buildings	26
High Recycling/ Zero Waste	
• Commercial Recycling	
• Composting	
• Anaerobic Digestion	9
• Extended Producer Responsibility	
• Environmentally Preferable Purchasing	
<b>Total</b>	<b>42.8-43.8</b>

Senate Bill 97 (SB 97) required the Office of Planning and Research (OPR) to amend the state CEQA guidelines to address the feasible mitigation of GHG emissions or the effects of GHGs. In response, OPR amended the CEQA guidelines to provide guidance for analyzing GHG emissions. Among other changes to the CEQA Guidelines, the amendments add a new section to the CEQA Checklist (CEQA Guidelines Appendix G) to address questions regarding the project's potential to emit GHGs.

BAAQMD is the primary agency responsible for air quality regulation in the nine county San Francisco Bay Area Air Basin (SFBAAB). As part of their role in air quality regulation, BAAQMD has prepared the CEQA air quality guidelines to assist lead agencies in evaluating air quality impacts of projects and plans proposed in the SFBAAB. The guidelines provide procedures for evaluating potential air quality impacts during the environmental review process consistent with CEQA requirements. On June 2, 2010, the BAAQMD adopted new and revised CEQA air quality thresholds of significance and issued revised guidelines that supersede the 1999 air quality guidelines. The 2010 CEQA Air Quality Guidelines provide for the first time CEQA thresholds of significance for greenhouse gas emissions. OPR's

<sup>23</sup> Ibid.

amendments to the CEQA Guidelines as well as BAAQMD's 2010 CEQA Air Quality Guidelines and thresholds of significance have been incorporated into this analysis accordingly.

The most common GHGs resulting from human activity are CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O.<sup>24</sup> State law defines GHGs to also include hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. These latter GHG compounds are usually emitted in industrial processes, and therefore not applicable to the proposed project. 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 through 1) construction and operation of the TBM retrieval shaft, and 2) demolition of the Pagoda Theater building and redevelopment of the site with a mixed use building containing 18 units and 4,700 sf of restaurant use. The TBM retrieval and new development could result in an incremental increase in overall energy and also water usage which generates indirect emissions from the energy required to pump, treat and convey water. The demolition and construction could also result in an increase in discarded landfill materials. Therefore, the proposed project would contribute to annual long-term increases in GHGs as a result of increased vehicle trips (mobile sources) and operations associated with energy use, water use and wastewater treatment, and solid waste disposal.

As discussed above, the BAAQMD has adopted CEQA thresholds of significance for projects that emit GHGs, one of which is a determination of whether the proposed project is consistent with a Qualified Greenhouse Gas Reduction Strategy, as defined in the 2010 CEQA Air Quality Guidelines. On August 12, 2010, the San Francisco Planning Department submitted a draft of the City and County of San Francisco's Strategies to Address Greenhouse Gas Emissions to the BAAQMD.<sup>25</sup> This document presents a comprehensive assessment of policies, programs and ordinances that collectively represent San Francisco's Qualified Greenhouse Gas Reduction

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<sup>24</sup> 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 at the Office of Planning and Research's website at: <http://www.opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf>. <http://www.opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf>. Accessed March 3, 2010.

<sup>25</sup> San Francisco Planning Department. *Strategies to Address Greenhouse Gas Emissions in San Francisco*. 2010. The final document is available online at: <http://www.sfplanning.org/index.aspx?page=1570>.

Strategy in compliance with the BAAQMD's 2010 CEQA Air Quality Guidelines and thresholds of significance.

San Francisco's GHG reduction strategy identifies a number of mandatory requirements and incentives that have measurably reduced greenhouse gas 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 taxis) and a mandatory composting ordinance. The strategy also identifies 42 specific regulations for new development that would reduce a project's GHG emissions.

San Francisco's climate change goals as are identified in the 2008 Greenhouse Gas Reduction Ordinance as follows:

- By 2008, determine the City's 1990 GHG emissions, the baseline level with reference to which target reductions are set;
- Reduce GHG emissions by 25 percent below 1990 levels by 2017;
- Reduce GHG emissions by 40 percent below 1990 levels by 2025; and
- Reduce GHG emissions by 80 percent below 1990 levels by 2050.

The City's 2017 and 2025 GHG reduction goals are more aggressive than the State's GHG reduction goals as outlined in AB 32, and consistent with the State's long-term (2050) GHG reduction goals. San Francisco's Strategies to Address Greenhouse Gas Emissions identifies the City's actions to pursue cleaner energy, energy conservation, alternative transportation and solid waste policies, and concludes that San Francisco's policies have resulted in a reduction in greenhouse gas emissions below 1990 levels, meeting statewide AB 32 GHG reduction goals. As reported, San Francisco's 1990 GHG emissions were approximately 8.26 million metric tons (MMT) CO<sub>2</sub>E and 2005 GHG emissions are estimated at 7.82 MMT CO<sub>2</sub>E, representing an approximately 5.3 percent reduction in GHG emissions below 1990 levels.

The BAAQMD reviewed San Francisco's Strategies to Address Greenhouse Gas Emissions and concluded that the strategy meets the criteria for a Qualified GHG Reduction Strategy as outlined in BAAQMD's CEQA Guidelines (2010) and stated that San Francisco's "aggressive



GHG reduction targets and comprehensive strategies 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."<sup>26</sup>

Based on the BAAQMD's 2010 CEQA Air Quality Guidelines, projects that are consistent with San Francisco's Strategies to Address Greenhouse Gas Emissions would result in a less than significant impact with respect to GHG emissions. Furthermore, because San Francisco's strategy is consistent with AB 32 goals, projects that are consistent with San Francisco's strategy would also not conflict with the State's plan for reducing GHG emissions. As discussed in San Francisco's Strategies to Address Greenhouse Gas Emissions, new development and renovations/alterations for private projects and municipal projects are required to comply with San Francisco's ordinances that reduce greenhouse gas emissions. Applicable requirements are shown below in Table 3 (TBM retrieval) and Table 4 (1731 Powell Street mixed use building.)

TABLE 3.

**GHG REGULATIONS APPLICABLE TO MODIFIED PROJECT – TBM RETRIEVAL**

Regulation	Requirement	Project Compliance	Discussion
<b>Transportation sector</b>			
Clean Construction Ordinance (San Francisco Administrative Code, Section 6.25)	Effective March 2009, all contracts for large (20+ day) City projects are required to: <ul style="list-style-type: none"> <li>•Fuel diesel vehicles with B20 biodiesel, and</li> <li>•Use construction equipment that meet USEPA Tier 2 standards or best available control technologies for equipment over 25 hp.</li> </ul>	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	Tunnel Contract Section 01 57 19 Part 1.06 requires compliance with Admin. Code Section 6.25: Contractors shall adopt clean construction practices including biodiesel fuel and 5 emissions controls.
<b>Waste Reduction Sector</b>			
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%	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	Tunnel Contract Section 01 35 36 Conformed June 8, 2011 edition.  See sub section 1.07.

<sup>26</sup> Letter from Jean Roggenkamp, BAAQMD, to Bill Wycko, San Francisco Planning Department. October 28, 2010. This letter is available online at: <http://www.sfplanning.org/index.aspx?page=1570>.  
<http://www.sfplanning.org/index.aspx?page=1570>. Accessed November 12, 2010.

Regulation	Requirement	Project Compliance	Discussion
	diversion. The ordinance specifies requires for all city buildings to provide adequate recycling space		
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% diversion requirement. Each City department shall prepare a Waste Assessment. The ordinance also requires the Department 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.	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	Tunnel Contract Section 01 35 36 Conformed June 8, 2011 edition.
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.	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	Tunnel Contract Section 01 35 36 Conformed June 8, 2011 edition.  See subsection 1.01 E
Construction Recycled Content Ordinance (San Francisco Administrative Code, Section 6.4)	Ordinance requires the use of recycled content material in public works projects to the maximum extent feasible and gives preference to local manufacturers and industry.	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	Tunnel Contract Section 01 35 36 Conformed June 8, 2011 edition.  See subsection 1.08.
<b>Environment/Conservation Sector</b>			

Regulation	Requirement	Project Compliance	Discussion
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.	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	Tunnel Contract General Provisions GP 15.09 Section 802 with references to City Ordinance.
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.	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	CCR Article 4.8 Section 2449 General Requirements for In-Use of Road Diesel fueled fleets, ARB AB 1085. ( <a href="http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm">http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm</a> )

TABLE 4.

**GHG REGULATIONS APPLICABLE TO MODIFIED PROJECT – 1731 POWELL REDEVELOPMENT**

Regulation	Requirements	Project Compliance	Discussion
<b>Transportation Sector</b>			
Car Sharing Requirements (San Francisco Planning Code, Section 166)	New residential projects or renovation of buildings being converted to residential uses within most of the City's mixed-use and transit-oriented residential districts are required to provide car share parking spaces.	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	Project will have one car share parking space.
<b>Energy Efficiency Sector</b>			
San Francisco Green Building Requirements for Energy Efficiency (San Francisco	Under the Green Point Rated system and in compliance with the Green Building Ordinance, all new residential buildings will be required to be at a minimum 15% more	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable	

Regulation	Requirements	Project Compliance	Discussion
Building Code, Chapter 13C)	energy efficient than Title 24 energy efficiency requirements.	<input type="checkbox"/> Project Does Not Comply	
San Francisco Green Building Requirements for Stormwater Management (San Francisco Building Code, Chapter 13C) Or San Francisco Stormwater Management Ordinance (Public Works Code Article 4.2)	Requires all new development or redevelopment disturbing more than 5,000 square feet of ground surface to manage stormwater on-site using low impact design. Projects subject to the Green Building Ordinance Requirements must comply with either LEED® Sustainable Sites Credits 6.1 and 6.2, or with the City's Stormwater Management Ordinance and stormwater design guidelines.	X Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	Project site is greater than 5000 sf, and shall comply.
Indoor Water Efficiency  (San Francisco Building Code, Chapter 13C sections 13C.5.103.1.2, 13C.4.103.2.2, 13C.303.2.)	<b>If meeting a GreenPoint Rated Standard:</b>  Reduce overall use of potable water within the building by 20% for showerheads, lavatories, kitchen faucets, wash fountains, water closets and urinals.	X Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	
Residential Water Conservation Ordinance (San Francisco Building Code, Housing Code, Chapter 12A)	Requires all residential properties (existing and new), prior to sale, to upgrade to the following minimum standards:  1. All showerheads have a maximum flow of 2.5 gallons per minute (gpm) 2. All showers have no more than one showerhead per valve 3. All faucets and faucet aerators have a maximum flow rate of 2.2	X Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	

Regulation	Requirements	Project Compliance	Discussion
	<p>gpm</p> <p>4. All Water Closets (toilets) have a maximum rated water consumption of 1.6 gallons per flush (gpf)</p> <p>5. All urinals have a maximum flow rate of 1.0 gpf</p> <p>6. All water leaks have been repaired.</p> <p>Although these requirements apply to existing buildings, compliance must be completed through the Department of Building Inspection, for which a discretionary permit (subject to CEQA) would be issued.</p>		
<p>Residential Energy Conservation Ordinance (San Francisco Building Code, San Francisco Housing Code, Chapter 12)</p>	<p>Requires all residential properties to provide, prior to sale of property, certain energy and water conservation measures for their buildings: attic insulation; weather-stripping all doors leading from heated to unheated areas; insulating hot water heaters and insulating hot water pipes; installing low-flow showerheads; caulking and sealing any openings or cracks in the building's exterior; insulating accessible heating and cooling ducts; installing low-flow water-tap aerators; and installing or retrofitting toilets to make them low-flush. Apartment buildings and hotels are also required to insulate steam and hot water pipes and tanks, clean and tune their boilers, repair boiler leaks, and install a time-clock on the burner.</p> <p>Although these requirements apply to-existing buildings, compliance must be completed through the Department of Building Inspection,</p>	<p><input checked="" type="checkbox"/> Project Complies</p> <p><input type="checkbox"/> Not Applicable</p> <p><input type="checkbox"/> Project Does Not Comply</p>	

Regulation	Requirements	Project Compliance	Discussion
	for which a discretionary permit (subject to CEQA) would be issued.		
<b>Waste Reduction Sector</b>			
Mandatory Recycling and Composting Ordinance (San Francisco Environment Code, Chapter 19) and San Francisco Green Building Requirements for solid waste (San Francisco Building Code, Chapter 13C)	<p>All persons in San Francisco are required 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.</p> <p>Pursuant to Section 1304C.0.4 of the Green Building Ordinance, all new construction, renovation and alterations subject to the ordinance are required to provide recycling, composting and trash storage, collection, and loading that is convenient for all users of the building.</p>	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	Project will have waste chutes for each separate waste stream, leading to a trash collection area with containers dedicated to each chute.
San Francisco Green Building Requirements for construction and demolition debris recycling (San Francisco Building Code, Chapter 13C)	Projects proposing demolition are required to divert at least 75% of the project's construction and demolition debris to recycling.	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	
San Francisco Construction and Demolition Debris Recovery Ordinance (San Francisco Environment Code, Chapter 14)	Requires that a person conducting full demolition of an existing structure to submit a waste diversion plan to the Director of the Environment which provides for a minimum of 65% diversion from landfill of construction and demolition debris, including materials source separated for	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	

Regulation	Requirements	Project Compliance	Discussion
	reuse or recycling.		
<b>Environment/Conservation Sector</b>			
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.	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	
Light Pollution Reduction (San Francisco Building Code, Chapter 13C5.106.8)	For nonresidential projects, comply with lighting power requirements in CA Energy Code, CCR Part 6. Requires that lighting be contained within each source. No more than .01 horizontal lumen footcandles 15 feet beyond site, or meet LEED credit SSc8.	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	
Construction Site Runoff Pollution Prevention for New Construction (San Francisco Building Code, Chapter 13C)	<p>Construction Site Runoff Pollution Prevention requirements depend upon project size, occupancy, and the location in areas served by combined or separate sewer systems.</p> <p>Projects meeting a LEED® standard must prepare an erosion and sediment control plan (LEED® prerequisite SSP1).</p> <p>Other local requirements may apply regardless of whether or not LEED® is applied such as a stormwater soil loss prevention plan or a Stormwater Pollution Prevention Plan (SWPPP).</p> <p>See the SFPUC Web site for more information:</p>	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	Project is not subject to LEED but will have construction site runoff pollution plan.

Regulation	Requirements	Project Compliance	Discussion
	www.sfwater.org/CleanWater		
Low-emitting Adhesives, Sealants, and Caulks (San Francisco Building Code, Chapters 13C.5.103.1.9, 13C.5.103.4.2, 13C.5.103.3.2, 13C.5.103.2.2, 13C.504.2.1)	<p><b>If meeting a GreenPoint Rated Standard:</b></p> <p>Adhesives and sealants (VOCs) must meet SCAQMD Rule 1168.</p>	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	Project will meet Green Point rating standards.
Low-emitting materials (San Francisco Building Code, Chapters 13C.4. 103.2.2,	<p>For Small and Medium-sized Residential Buildings - Effective January 1, 2011 meet GreenPoint Rated designation with a minimum of 75 points.</p> <p>For New High-Rise Residential Buildings - Effective January 1, 2011 meet LEED Silver Rating or GreenPoint Rated designation with a minimum of 75 points.</p> <p>For Alterations to residential buildings submit documentation regarding the use of low-emitting materials.</p> <p><b>If meeting a GreenPoint Rated Standard:</b></p> <p>Meet the GreenPoint Rated Multifamily New Home Measures for low-emitting adhesives and sealants, paints and coatings, and carpet systems,</p>	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not Applicable <input type="checkbox"/> Project Does Not Comply	Project will meet Green Point rating standards.
Low-emitting Paints and Coatings (San Francisco Building	<p><b>If meeting a GreenPoint Rated Standard:</b></p> <p>Interior wall and ceiling paints must</p>	<input checked="" type="checkbox"/> Project Complies <input type="checkbox"/> Not	Project will meet Green Point rating standards.



Regulation	Requirements	Project Compliance	Discussion
Code, Chapters 13C.5.103.1.9, 13C.5.103.4.2, 13C.5.103.3.2, 13C.5.103.2.2 13C.504.2.2 through 2.4)	meet <50 grams per liter VOCs regardless of sheen. VOC Coatings must meet SCAQMD Rule 1113.	Applicable <input type="checkbox"/> Project Does Not Comply	
Low-emitting Flooring, including carpet (San Francisco Building Code, Chapters 13C.5.103.1.9, 13C.5.103.4.2, 13C.5.103.3.2, 13C.5.103.2.2, 13C.504.3 and 13C.4.504.4)	<b>If meeting a GreenPoint Rated Standard:</b>  All carpet systems, carpet cushions, carpet adhesives, and at least 50% of resilient flooring must be low-emitting.	X Project Complies  <input type="checkbox"/> Not Applicable  <input type="checkbox"/> Project Does Not Comply	Project will meet Green Point rating standards.
Low-emitting Composite Wood (San Francisco Building Code, Chapters 13C.5.103.1.9, 13C.5.103.4.2, 13C.5.103.3.2, 13C.5.103.2.2 and 13C.4.504.5)	<b>If meeting a GreenPoint Rated Standard:</b>  Must meet applicable CARB Air Toxics Control Measure formaldehyde limits for composite wood.	X Project Complies  <input type="checkbox"/> Not Applicable  <input type="checkbox"/> Project Does Not Comply	Project will meet Green Point rating standards.
Wood Burning Fireplace Ordinance (San Francisco Building Code, Chapter 31, Section 3102.8)	Bans the installation of wood burning fire places except for the following: <ul style="list-style-type: none"><li>o Pellet-fueled wood heater</li><li>o EPA approved wood heater</li><li>o Wood heater approved by the Northern Sonoma Air Pollution Control District</li></ul>	X Project Complies  <input type="checkbox"/> Not Applicable  <input type="checkbox"/> Project Does Not Comply	There are no wood burning fire places in the project.

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, nor impact the City's ability to meet San Francisco's local GHG reduction targets. Given that: (1) San Francisco has implemented regulations to reduce greenhouse gas emissions specific to new construction and renovations of private developments and municipal projects; (2) San Francisco's sustainable policies have resulted in the measured success of reduced greenhouse gas emissions levels; (3) San Francisco has met and exceeded AB 32 greenhouse gas reduction goals for the year 2020; (4) current and probable future state and local greenhouse gas 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 BAAQMD's requirements for a Qualified GHG Reduction Strategy, projects that are consistent with San Francisco's regulations would not contribute significantly to global climate change. The proposed project would be required to comply with these requirements, and was determined to be consistent with San Francisco's Strategies to Address Greenhouse Gas Emissions.<sup>27</sup> As such, the modified project would result in a less than significant impact with respect to GHG emissions.

## SHADOW

No significant shadow impacts were identified in the 2008 SEIS/SEIR. Relocation of the TBM retrieval shaft site would not create any new shadow impacts compared to the approved Central Subway project.

The existing Pagoda Theater building is located directly west of Washington Square across Columbus Avenue. The modified project proposes an SUD on the project site increasing the height limit from 40-X to 55-X, and Conditional Use approval for construction of a building up to approximately 55 feet in height as measured by the Planning Code, with a roof line consistent with the roof line of the existing building, and with a blade sign extending beyond the roof of the building. Section 295 of the Planning Code describing height restrictions on structures shadowing property under the jurisdiction of the Recreation and Park Commission would normally be applicable to the construction of any building exceeding 40 feet in height. However, as specified the Conditional Use application, neither the roof nor the blade sign of the

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<sup>27</sup> Greenhouse Gas Analysis: Compliance Checklist. April, 2012. This document is on file in Case File No. 2011.1043E and available for public review at the Planning Department, 1650 Mission Street, Suite 400.

new building would exceed the height of the corresponding component of the existing building. Section 295(a)(4) specifies that structures of the same height and in the same location as structures in place on June 6, 1984 are not subject to the provisions of Section 295. Moreover, CEQA requires analysis of the environmental impacts resulting from physical changes to the existing setting. The modified project would not increase shadow on Washington Square compared to current conditions, and therefore there would be no impacts from shadow from approval of the modified project.

## GEOLOGY AND SOILS

### *TBM Retrieval Site Relocation*

A geotechnical investigation for the Pagoda Theater project was prepared on December 1, 2008.<sup>28</sup> The report found that the project site is underlain by fill consisting of medium dense sand and stiff clay to a depth of up to 15 feet, below which is medium-very stiff sandy clay and dense-very dense silty sand. It is expected that weathered sandstone of the Franciscan formation may be found to a depth of 40-50 feet below ground surface (bgs), where the tunnel would be constructed. Shallow groundwater at a depth of eight feet bgs was encountered.

The 2008 SEIS/SEIR recognized the potential for settlement of geologic materials during construction of the Central Subway. Design-level geotechnical analysis conducted as part of the project considers the potential for settlement and identifies construction methods to minimize it as appropriate given the soil conditions in applicable locations along the alignment. The 2008 SEIS/SEIR includes mitigation to minimize settlement through monitoring of movement and sequential support for excavation as necessary (through use of ground improvement techniques such as jet grouting or underpinning) (see Mitigation Measures, p. 57). This mitigation measure would be applicable to the proposed extension of the tunnel and construction of the retrieval shaft, and no new significant impact would occur.

### *1731 Powell Street Mixed-Use Building*

The geotechnical report for the Pagoda Theater project recommended that the following features be incorporated into the project design: use of a foundation that can withstand

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<sup>28</sup> Treadwell & Rollo, *Draft Geotechnical Investigation, 1731-1741 Powell Street, La Corneta Palace*, 1 December 2008. This document is on file and available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2007.1117E and Case File No. 1996.281E.

hydrostatic uplift; waterproofing of below-grade walls and slabs; use of tiedown anchors; underpinning, shoring, waterproofing, dewatering, and monitoring during construction. The 2008 SEIS/SEIR addresses dewatering in the topic of Hazardous Materials; accordingly, dewatering is addressed in the Hazards and Hazardous Materials discussion below. Geotechnical issues are addressed through the Department of Building Inspection's building permit review process, and necessary measures are taken to ensure that the project meets all applicable codes and requirements. The proposed 1731 Powell Street project would be required to undergo this review as part of the building permit process. Therefore, no significant impacts would occur from this aspect of the project and no mitigation is required.

## HAZARDS AND HAZARDOUS MATERIALS

Article 20 of the San Francisco Municipal Code (also known as the Maher Ordinance) requires oversight by the Department of Public Health (DPH) for excavation on properties located bayward of the 1851 high tide line (the "Maher Zone"). The 2008 SEIS/SEIR imposed requirements similar to the Article 20 provisions as mitigation for hazardous materials for those sites affected by the Central Subway project that are not within the Maher Zone. The mitigation requires establishment of a groundwater monitoring protocol to avoid exposure to groundwater containing hazardous materials (p. 6-107). The project site is outside the Maher Zone, and therefore the mitigation established through the 2008 SEIS/SEIR, including the requirements associated with dewatering, would be applicable to the tunnel extension and TBM retrieval shaft construction (see Mitigation Measures, p. 57). No further mitigation is required.

The 1731 Powell Street project site is not included on any database of hazardous materials sites. The site contained a leaking underground storage tank (LUST) containing fuel oil, which was cleaned up and closed through the DPH Cleanup Program.<sup>29</sup>

No new significant impacts with respect to hazardous materials would occur as a result of the modified project.

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<sup>29</sup> San Francisco Planning Department Geographic Information System, accessed on January 22, 2013.

## OTHER ENVIRONMENTAL EFFECTS

This section addresses the remaining topic areas for environmental review included in San Francisco's Initial Study checklist. Modified project impacts would be minimal, as described below.

### Population and Housing

Relocation of the TBM retrieval shaft would not result in any change in impacts associated with population and housing.

Redevelopment of the 1731 Powell Street site as proposed would result in construction of 18 new residential units, resulting in a population increase of approximately 42 persons based on San Francisco's average household size of 2.30 persons per household. No existing housing would be removed, and the addition of 4,700 sf of commercial space (with an estimated 13 employees) would not create a substantial demand for new housing. Development of 18 units at this site first received Planning Department authorization in 2009, indicating that the incremental increase in population in the vicinity is consistent with projected growth. The modified project would not result in new significant impacts related to population and housing.

### Recreation

The project site is located directly west of Washington Square, across Columbus Avenue, and is less than two blocks (approximately 500 feet) south of Joe DiMaggio Playground. Other nearby parks include Ina Coolbrith Park (1,600 feet to the southwest) and Woh Hei Yuen Park (1,800 feet to the south). Addition of 18 units on the project site would have a less-than-significant impact on recreation, because it would not substantially increase demand for or use of neighborhood parks or citywide facilities, such as Golden Gate Park, in a manner that would cause substantial physical deterioration of these facilities. Relocation of the TBM retrieval shaft site would have similar less than significant impacts on Washington Square as the approved project.

### Wind

Relocation of the TBM extraction site 100 feet to the northwest would not change the wind impacts of the project, which were determined to be less than significant in the 2008 SEIR/SEIS.

At 56 feet, the existing building on the project site is similar in size to many neighboring structures. Redevelopment at 1731 Powell Street as proposed in the modified project would result in a building with substantially the same height and massing as the existing structure on the project site.

Substantial increases in pedestrian-level winds can result from the construction of new building of substantial height (generally exceeding 85-100 feet) protruding above surrounding buildings. No such height increase would occur under the modified project, and therefore the modified project does not have the potential to create new significant impacts relative to wind not addressed in the 2008 SEIR/SEIS.

### **Utilities and Public Services**

The 2008 SEIS/SEIR states that the TBM construction method would not require relocation of utilities above TBM tunnels (p. 6-86). Diversion of utilities would occur for construction of the TBM retrieval shaft at the approved site on Columbus Avenue. The modified project would not result in any more utility diversion than the approved project, and may require less diversion as the TBM shaft would be located on private property rather than in the public right-of-way.

The addition of 18 units and 4,700 sf of restaurant use would be incremental infill development in a location well served by existing urban utilities and public services (e.g. police, fire, libraries, schools). This development has been foreseeable at this site since 2007 and was granted authorization in 2009, and is within projected growth in the area.

The modified project would not create any new significant impacts associated with utilities or public services.

### **Biological Resources**

According to the Tree Disclosure Form submitted by the 1741 Powell Street property owner, there are three existing street trees on the project site frontage and one additional street tree would be required to meet current standards. Street trees may be used by nesting birds, which are fully protected under Fish and Game Code Sections 3503 and 3503.5 and the federal Migratory Bird Treaty Act (MBTA). As mitigation for any tree removal or damage associated with the Central Subway project, the 2008 SEIS/SEIR requires that any street trees affected by the project be replaced at a 1:1 ratio, and a certified arborist be present during TBM retrieval shaft construction to avoid any tree roots (p. 6-99) (see Mitigation Measures, p. 57). There are no adopted habitat conservation plans applicable to the project site, nor does the site include any riparian habitat or other significant biological resources.

In September 2011, the Board of Supervisors approved *Planning Code* Section 139, Standards for Bird-Safe Buildings. The standards apply to buildings located within 300 feet of, and having a direct line of sight to, an urban bird refuge. As an open space larger than 2 acres dominated by vegetation, Washington Square is considered an urban bird refuge and the proposed 1731 Powell Street building would be subject to the requirements of *Planning Code* Section 139. Bird-safe elements would be required to be incorporated into the building design, and no significant impact would occur.

### **Hydrology and Water Quality**

The Central Subway project is subject to San Francisco Public Utilities Commission (SFPUC) requirements, which mandate preparation of a Storm Water Pollution Prevention Plan (SWPPP) specifying construction storm water management controls, and erosion and sediment control (p. 6-96-97). Construction of the TBM retrieval site in the proposed location would be subject to the SWPPP. No significant impacts would occur, and no mitigation is required. The 1741 Powell Street building would not have the potential to result in significant impacts associated with hydrology and water quality; issues associated with dewatering have been addressed above in the discussions of geology and hazardous materials.

### **Mineral and Energy Resources**

Relocation of the TBM retrieval shaft would have no effect on energy use during project construction or operation. There are no mineral resources within the area that would be affected by extension of the TBM tunnel to the project site.

The proposed 1741 Powell Street project would meet current State and local codes concerning energy consumption, including Title 24 of the California Code of Regulations, enforced by the Department of Building Inspection. Impacts to mineral and energy resources from the modified project would be less than significant.

### **Agricultural Resources**

The modified project would have no impacts associated with agricultural resources. No such resources are located on or in proximity to the project site.

## **GROWTH INDUCEMENT**

Growth inducement under CEQA considers the ways in which proposed projects could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Projects that are traditionally or most commonly

considered growth inducing are those that would remove obstacles to population growth (for example, a major expansion of a wastewater treatment plant may allow more construction in its service area, or a new freeway may allow growth at freeway exits).

Growth-inducing impacts of the Central Subway project were discussed in the 2008 SEIS/SEIR at 7-51, and found to be less than significant. The modified project would extend the Central Subway tunnel an additional 100 feet beyond the approved terminus, and locate the TBM retrieval shaft on private property rather than in the Columbus Avenue right-of-way. SFMTA is seeking a limited-term lease from the 1731 Powell Street property owner to use the site for TBM retrieval, after which SFMTA would vacate the property and it would be available for redevelopment. Like the approved project, the modified project would not be expected to have significant growth-inducing impacts.

As a separate project, SFMTA could consider extension of the Central Subway further north and/or construction of a subway station in North Beach. Neither the Columbus Avenue retrieval shaft site nor the proposed 1731 Powell Street site would preclude either of these additions to the system. Any such proposal is not part of the current effort and would be subject to additional environmental review.

The proposed height reclassification and granting of approvals to allow construction of 18 units and 4,700 square feet of restaurant use would not enable substantial additional growth beyond the amount of development already approved on the project site.

The modified project would not result in significant growth-inducing impacts.

## **MITIGATION AND IMPROVEMENT MEASURES**

This section presents those mitigation measures that address significant environmental impacts identified in the 2008 SEIS/SEIR that are relevant to the portion of the Central Subway project currently proposed for modification. It also includes relevant improvement measures, which are not necessary to avoid significant environmental impacts but were included in the 2008 SEIS/SEIR to further reduce impacts that were less than significant. As noted throughout this document, the modified project would not result in any new significant impacts, compared to those identified in the 2008 SEIS/SEIR.



## MITIGATION MEASURES

### *Cultural Resources*

**M CNPRE-1a:** Consistent with the SHPO MOA with the City, FTA, and SFMTA shall work with a qualified archaeologist to ensure that all state and federal regulations regarding cultural resources and Native American concerns are enforced.

**MM CNPRE-1b:** Limited subsurface testing in identified archaeologically sensitive areas shall be conducted once an alignment has been selected.

**MM CNPRE-1c:** During construction, archaeological monitoring shall be conducted in those sections of the alignment identified in the completed HCASR and through pre-construction testing as moderately to highly sensitive for prehistoric and historic-era archaeological deposits.

**MM CNPRE-1d:** Upon completion of archaeological field investigations, a comprehensive technical report shall be prepared for approval by the San Francisco Environmental Review Officer that describes the archaeological findings and interpretations in accordance with state and federal guidelines.

**MM CNPRE-1e:** If unanticipated cultural deposits are found during subsurface construction, soil disturbing activities in the vicinity of the find shall be halted until a qualified archaeologist can assess the discovery and make recommendations for evaluation and appropriate treatment to the ERO for approval in keeping with adopted regulations and policies.

**MM CNHARC-2A:** Pre-drilling for pile installation in areas that would employ secant piles with ground-supporting walls in the cut-and-cover areas would reduce the potential effects of vibration.

**MM CNHARC-2b:** Vibration monitoring of historic structures adjacent to tunnels and portals will be specified in the construction documents to ensure that historic properties do not sustain damage during construction. Vibration impacts would be mitigated to a less-than-significant level. If a mitigation monitoring plan provides the following:

- The contractor will be responsible for the protection of vibration-sensitive historic building structures that are within 200 feet of any construction activity.
- The maximum peak particle vibration (PPV) velocity level, in any direction, at any of these historic structures should not exceed 0.12 inches/second for any length of time.

- The Contractor will be required to perform periodic vibration monitoring at the closest structure to ground disturbing construction activities, such as tunneling and station excavation, using approved seismographs.
- If at any time the construction activity exceeds this level, that activity will immediately be halted until such time as an alternative construction method can be identified that would result in lower vibration levels.

### *Geology and Soils*

**MM CNSET-1a:** Provisions such as concrete diaphragm walls to support the excavation and instrumentation to monitor settlement and deformation would be used to ensure that structures adjacent to tunnel alignments are not affected by excavations.

**MM CNSET-1b:** Tunnel construction methods that minimize ground movement, such as pressure-faced TBMs, Sequential Excavation Method, and ground improvement techniques such as compensation grouting, jet grouting or underpinning will be used.

**MM CNSET-1c:** Rigorous geomechanical instrumentation would be used to monitor underground excavation and grouting or underpinning will be employed to avoid displacement of structures.

### *Hazardous Materials*

**MM CNHAZ-1a:** Implementation of mitigation measures similar to those required for properties under the jurisdiction of Article 20: preparation of a Site History Report; Soil Quality Investigation, including a Soils Analysis Report and a Site Mitigation Report (SMR); description of Environmental Conditions; Health and Safety Plan (HSP); Guidelines for the Management and Disposal of Excavated Soils; and a Certification Statement that confirms that no mitigation is required or the SMR would mitigate the risks to the environment of human health and safety. This measure would ensure that the project impacts are mitigated to a less-than-significant level.

### *Noise and Vibration*

**MM CNNV-1a:** The Contractor shall be required to perform periodic vibration monitoring using approved seismographs at the historic structure closest to the construction activity. If the construction activity exceeds a 0.12 inches/second level, the construction activity shall be

immediately halted until an alternative construction method that would result in lower vibration levels can be identified.

MM CNNV-1b: During construction, an acoustical consultant will be retained by the contractor to prepare a more detailed construction noise and vibration analysis to address construction staging areas, tunnel portals, cut-and-cover construction, and underground mining and excavation operations.

## IMPROVEMENT MEASURES

### *Visual Resources*

IM CNVAES-1a: Construction staging areas and excavation sites in these areas may be screened from view during construction to minimize potential visual impacts.

### *Biological Resources*

IM CNBIO-1a: Any street trees removed or damaged as part of construction would be replaced along the street at a 1:1 ratio.

IM CNBIO-2a: A certified arborist would be present as needed during excavation of the Columbus Avenue TBM retrieval shaft to monitor protection of tree roots.

### *Noise and Vibration*

IM CNNV-2a: The incorporation of noise control measures would minimize noise impacts during construction: noise control devices such as equipment mufflers, enclosures, and barriers; stage construction as far away from sensitive receptors as possible; maintain sound reducing devices and restrictions throughout construction period; replace noisy with quieter equipment; schedule the noisiest construction activities to avoid sensitive times of the day.

The contractor will hire an acoustical consultant to oversee the implementation of the Noise Control and Monitoring Plans; prepare a Noise Control Plan; and comply with the nighttime noise variance provisions.

The consultant will conduct and report on periodic noise measurements to ensure compliance with the Noise Monitoring Plan using up to date equipment certified to meet specified lower noise level limits during nighttime hours.

## CEQA CONCLUSION

Based on the analysis and discussion presented in this document, no supplemental or subsequent environmental analysis is needed pursuant to the *CEQA Guidelines*, Sections 15162, 15163, and 15164. It is concluded that the analyses conducted and the conclusions reached in the SEIS/SEIR, certified August 7, 2008 remain valid. The modified proposed project would not cause new significant impacts not identified in the 2008 SEIS/SEIR or result in a substantial increase in the severity of previously identified significant impacts, and no new mitigation measures would be necessary to reduce significant impacts. No changes have occurred with respect to circumstances surrounding the project that would cause significant environmental impacts to which the modified project would contribute considerably, and no new information has become available that shows that the approved or modified project would cause significant environmental impacts. Therefore, no supplemental environmental review is required beyond this Addendum.

January 31, 2013

Date of Determination      I do hereby certify that the above determination has been made pursuant to State and Local requirements.



Bill Wycko

Environmental Review Officer

Cc: Project Sponsor; Supervisor Chiu, District 3; Distribution List; Bulletin Board