Addendum No. 2 to Supplemental Environmental Impact Statement/ Supplemental Environmental Impact Report

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Project Title: Central Subway Project - Phase 2 of the Third Street Light

Rail Project - Modified Project

SEIR: Central Subway Project - Phase 2 of the Third Street Light

Rail Project Final SEIS/SEIR, certified August 7, 2008

Planning Case No: 1996.281E

Project Sponsor: San Francisco Municipal Transportation Agency (SFMTA)

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REMARKS

Background

A final supplemental environmental impact statement/environmental impact report (SEIS/SEIR) was prepared for the Central Subway Project - Phase 2 of the Third Street Light Rail Project (Central Subway Project) SEIS/SEIR.¹ The SEIS/SEIR was certified by the San Francisco Planning Commission on August 7, 2008, and the Federal Transportation Agency adopted the record of Decision on the SEIS on November 26, 2008.² The California Environmental Quality Act (CEQA) allows for the preparation of an addendum to a certified EIR when a change to a project that is proposed, would not result in new or substantially more severe significant impacts. The SFMTA has proposed a modification to the Central Subway Project and the following describes the proposed modifications to the Central Subway Project (herein referred to as "Modified Project") in comparison to the original project analyzed in the SEIS/SEIR. This addendum provides an analysis of the Modified Project in the context of the previous environmental review and summarizes the potential environmental effects that may occur as a result of implementing the Modified Project.

SFMTA is constructing the Central Subway, a light-rail line that will operate independently from the Muni Metro subway operating under Market Street as a new 1.7-mile cross town connector between 4th and Brannan Streets Station and Chinatown Station. 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.

Central Subway Central Subway Final Supplemental Environmental Impact Statement/Supplemental Environmental Impact Report, available online at: https://www.sfmta.com/reports/central-subway-final-seisseir

Federal Transit Administration Record of Decision on the Central Subway Final Supplemental Environmental Impact Statement/Supplemental Environmental Impact Report, November 26, 2008 and San Francisco Planning Commission Motion No. 17668, August 7, 2008. These documents are on file and available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 1996.281E.

A previous addendum to the SEIS/SEIR analyzed proposed changes related to the relocation of the extraction site for the subway tunnel boring machines from a private property to approximately 100 feet northwest of the location analyzed in the SEIS/SEIR. Also, the previous addendum analyzed the redevelopment of a vacant theater structure (the Pagoda Theater) to a mixed-use development. The project analyzed under the previous addendum is not located in the vicinity of the Modified Project.

The SFMTA has proposed an additional modification to one component of the Central Subway Project. The SFMTA proposes to reconfigure 4th Street, between Harrison and King streets, where light rail vehicles (LRVs) operate on the surface of 4th Street, south of Bryant Street. On August 19, 2008, the SFMTA Board of Directors approved the project through Resolution No. 08-150, including Alternative 3—Fourth/Stockton Alignment Option B (Modified LPA, Semi-Exclusive Suboption), as analyzed in the SEIS/SEIR (herein referred to as "Approved Project"). The Approved Project includes an exclusive rail right-of-way separating surface-running LRVs and general traffic on 4th Street, between King and Brannan Streets in both directions, continuing one further block between Brannan and Bryant streets in the northbound direction only, with LRVs and general traffic sharing a southbound lane between Bryant and Brannan streets. The Approved Project's trackway and roadway layout are described and shown in the evaluation memorandum.³

Proposed Revisions to the Approved Project

Subsequent to the certification of the final SEIS/SEIR and the issuance of the 2013 addendum⁴, and in order to optimize transit operations and safety, the SFMTA is proposing revisions to the Approved Project. The Approved Project's design requires an exclusive signal phase for southbound LRVs at the intersection of 4th/Bryant streets to allow LRVs and general traffic to safely merge into a shared lane. The Approved Project's design also requires protected left-turn signal phases for all approaches at the intersection of 4th/King streets.

In addition, the Approved Project's design proposes two 10-foot-wide travel lanes on southbound 4th Street approaching Bryant Street along the west side of the subway portal that would be used by general traffic, including the 30 Stockton and 45 Union-Stockton Muni bus routes. However, following completion of the subway portal construction, field measurements indicate that there is only 19 feet of available roadway width between curbs – maintaining two 9.5-foot wide travel lanes in this location would create operational and safety challenges for Muni buses and other large vehicles.

In order to optimize transit operations and safety, the SFMTA is proposing a revised design that includes the following goals and design features:

 Minimize travel time for LRVs and conflicts with general traffic by providing a continuous exclusive rail right-of-way southbound on 4th Street between Bryant and Brannan streets and by removing the need for an exclusive signal phase for southbound LRVs at the intersection of 4th/Bryant streets.

³ All documents referred to in this addendum are available as part of Case 1996.281E_13 or are available online at the links noted.

⁴ The 2013 Addendum to the Central Subway SEIS/SIER analyzed the change in location of the tunnel boring machines removal from the ground and redevelopment of the site the removal site that would occur.

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- Provide more signal time to LRVs at the intersection of 4th/King streets by restricting left turns in all directions and removing the associated signal phases for these movements.
- Maintain the ability of Muni buses to safely travel south on 4th Street adjacent to the subway
 portal between Harrison and Bryant streets by providing one wider travel lane instead of two
 sub-standard width travel lanes.

Modified Project

To meet these above-mentioned goals and design features, the Modified Project includes the following changes to the Approved Project's design (see further details of the Modified Project shown in project plans dated June 6, 2018 in case file 1996.281E_13):

- Convert southbound lane assignments on 4th Street approaching Harrison Street to provide one through lane to the east side of the subway portal, one bus/taxi-only lane, one shared through/right turn lane feeding the I-80 westbound on-ramp and one shared right/hard right turn lane feeding the I-80 westbound on-ramp and Harrison Street.
- Remove one southbound lane on 4th Street between Harrison and Bryant streets on the west side
 of the subway portal.
- Convert one eastbound shared through/right lane on the I-80 eastbound off-ramp approaching 4th/Bryant streets to a through only lane feeding Bryant Street.
- Modify signal phasing at the intersection of 4th/Bryant streets to permit southbound LRVs and southbound general traffic to proceed during the same phase.
- Convert southbound shared LRV/general traffic lane on 4th Street between Bryant and Brannan streets to an exclusive rail right-of-way.
- Convert southbound curbside through lane on 4th Street between Brannan and Bluxome streets to parking (adds approximately four parking spaces).
- Remove left-turn only lanes, restrict left turns from all approaches and add an exclusive signal phase for southbound right turns at the intersection of 4th/King streets.

The lane configuration modifications for the Modified Project are summarized in Table 1 below.

Table 1. Central Subway Project - Lane Configuration Comparison (4th Street surface facilities)

	Location	Approved Project	Modified Project
		(Alternative 3 Option B)	
1	Fourth / Harrison	Lane Assignments:	Lane Assignments:
	streets	Through	Through
		Through/right	Transit/Taxi only through
		Right only	Through/right
		Hard right only	Right/hard right
2	Fourth / Harrison	Two southbound lanes west of portal	One southbound lane west of portal
	– Bryant streets		
3	I-80 Eastbound off-	Lane Assignments:	Lane Assignments:
	ramp at	Through	Through
	Fourth/Bryant	Through	Through

	Location	Approved Project	Modified Project
		(Alternative 3 Option B)	
	streets	Through/right	Through
		Right	Right
4	Fourth / Bryant	Exclusive signal phase for southbound	Modify signal to permit southbound
	streets (signals)	LRV's to proceed and safely merge into	LRV and general traffic to proceed in
		shared LRV/general traffic lane	same phase (LRV has exclusive lane)
5	Fourth / Bryant –	One southbound general travel lane and	Convert southbound shared LRV/
	Brannan streets	one southbound lane shared by LRVs	general traffic lane to exclusive rail
		and general traffic	ROW (separated from general travel
			lane by 3" high mountable curb),
			maintaining one southbound general
			travel lane
6	Fourth / Brannan	Two southbound general travel lanes	Add 3-inch high mountable curb to
	and Bluxome	and southbound exclusive LRV lane	separate southbound exclusive LRV
	streets	separated from general travel lanes by	lane from general travel lane;
		striping only	Convert southbound curbside
			through lane to parking
			(approximately four parking spaces)
7	Fourth / King		Restrict all left turns from all
	streets		approaches
		Southbound approach	Southbound approach
		Left	(Remove left turn lane)
		Through/right	Through
		Right only	Right only
			Add exclusive right signal phase for
			right turns
			Northbound approach
		Northbound approach	No Left
		Left	Through/Right
		Through/Right	Right
		Eastbound approach	Eastbound approach
		Left	No Left (Left previously removed
		Through	due to Central Subway construction
		Through	on 4th and would remain removed
		Through/Right	with Modified Project)
			Through
			Through
			Through/Right
		Westbound approach	Westbound approach
		Left	No Left
		Through	Through
		Through/right	

	Location	Approved Project	Modified Project
		(Alternative 3 Option B)	
			Through/right
(8)	Fourth / Bryant –	Northbound mountable/non-mountable	No changes to mountable/non-
	King streets	track curb along east side of northbound	mountable curb in northbound
		trackway to separate the trackway from	direction.
		the northbound general traffic lane.	Southbound mountable curb to
		Southbound non-mountable curb along	separate the trackway from the
		east side of southbound track way	general travel lane along west side of
		between Bryant and Bluxome streets;	southbound trackway between a
		east side Brannan and Bluxome streets;	point 80 feet south of Bryant and a
			point approximately 30 feet north of
			Bluxome

Source: San Francisco Planning Department, SFMTA, 2018.

The Modified Project would not include any elements that would require extensive excavation and would consist mostly of paint-only treatments to reconfigure the existing travel lanes and delineate parking and loading spaces. Further, the Modified Project would include the construction of features such as mountable curbs to facilitate LRV and vehicular travel along 4th Street, between King and Harrison streets.

The Approved Project, as analyzed in the SEIS/SEIR and 2013 addendum, included other project components: a new double-track segment⁵ along Fourth and Stockton Streets between Brannan and Market Streets as an alternative to the use of Third, Harrison, Kearny, and Geary Streets; extension of the planning horizon year from 2015 to 2030; the addition of above ground ventilation shafts for tunnel segments and stations; the use of off-street access to stations; a deep tunnel under Market Street; and the extension of a construction tunnel to the north end of the project site near Washington Square under Columbus Avenue for removal of the tunnel boring machine – addressed in the 2013 addendum. The Modified Project would not make any modifications to these elements and would involve roadway modifications to existing travel lanes on 4th Street, between King/Bryant and Harrison streets. Therefore, the other project components analyzed in the SEIS/SEIR will not be discussed further in this document.

Analysis of Potential Environmental Effects

Section 31.19(c)(1) of the San Francisco Administrative Code states that a modified project must be reevaluated and that, "If, on the basis of such reevaluation, the Environmental Review Officer determines, based on the requirements of CEQA, that no additional environmental review is necessary, this determination and the reasons therefor shall be noted in writing in the case record, and no further evaluation shall be required by this Chapter." CEQA Guidelines Section 15164 provides for the use of an addendum to document the basis of a lead agency's decision not to require a Subsequent or Supplemental EIR for a project that is already adequately covered in an existing certified EIR. The lead agency's decision to use an addendum must be supported by substantial evidence that the conditions that would trigger the preparation of a Subsequent EIR, as provided in CEQA Guidelines Section 15162, are not present.

⁵ A double-track segment refers to a segment of roadway which allow for light rail operations in two directions simultaneously.

The SEIS/SEIR analyzed all components of the Approved Project for environmental impacts with respect to the CEQA environmental topics and the environmental impacts are summarized here. The SEIS/SEIR identified significant impacts that would not be reduced to less-than-significant levels with mitigation (significant and unavoidable) for the following topics: traffic, population and housing, and cultural resources (archeological resources and historical resources). The SEIS/SEIR identified significant impacts and mitigation measures that would reduce potential impacts to less-than-significant levels (less than significant with mitigation) for the following topics: construction freight and loading, geology and seismicity, hydrology and water quality, hazardous materials, and noise and vibration. Significant impacts were identified for several topics primarily due to construction activities which would involve extensive below grade disturbance such as tunneling and other excavation. Other environmental topics analyzed in the SEIS/SEIR were determined to be less-than-significant with no mitigation required for the following topics: transit, parking, pedestrians, bicycles, emergency vehicle access, land use, community facilities, visual and aesthetic resources, utilities and energy, biology and wetland resources, and air quality.

As previously described, the Modified Project would not involve extensive excavation, and therefore, potential effects for the Modified Project along this segment of 4th Street with respect to cultural resources (archeological resources and historical resources), geology and seismicity, hydrology and water quality, and hazardous materials would remain similar to the project as analyzed in the SEIS/SEIR, and there would be no change to the finding of significant impact for these topics, nor would the severity of any of these impacts increase as a result of the Modified Project for the reasons given above. In addition, the mitigation measures identified for these abovementioned topics would not apply to the Modified Project since those mitigation measures were identified based on the construction and excavation related to the proposed underground tunnel, and construction of the proposed station at Stockton Street; and the Modified Project would not include any elements that would occur at those locations, and would not include excavation beyond that already anticipated for the Approved Project. The Modified Project would not include elements that would change the determination of less-than-significant impact for other topics such as land use, community facilities, visual and aesthetic resources, utilities and energy, biology and wetland resources, and air quality. Therefore, only Transportation and Circulation and Noise and Vibration are discussed further in this addendum.

Transportation and Circulation

The SEIS/SEIR described the transportation impacts and mitigation measures for the Approved Project. The following section describes the methodology for analyzing the Modified Project and how transportation impacts associated with the Modified Project compare to the Approved Project.

No significant impacts related to the following transportation categories were identified for the Approved Project in the SEIS/SEIR, and the Modified Project would not result in any new impacts under these categories, as further described below: transit, parking, pedestrians, bicycles and emergency vehicle access. No significant impacts related to operational freight and loading was identified for the Approved project. However, the SEIS/SEIR identified a construction-related cumulative freight and loading impact for the Approved Project for the block bounded by Third, Perry, Stillman, and 4th streets due to the sequential construction of the I-80 retrofit, Golden Gate Transit bus storage facility, and the Approved

Project. A mitigation measure for construction freight and loading was identified which would reduce the impact to less than significant levels. However, this mitigation measure would not be applicable to the Modified Project as discussed below under construction.

Vehicle Miles Traveled (VMT)

The SEIS/SEIR analyzed traffic impacts using intersection level of service (LOS) at three intersections along 4th Street in the vicinity of the Modified Project's design changes. However, On March 3, 2016, in anticipation of the future certification of the revised CEQA Guidelines, the San Francisco Planning Commission adopted the state Office of Planning and Research's (OPR)'s recommendation to use the VMT metric instead of automobile delay to evaluate the transportation impacts of projects (Resolution 19579). Level of service analysis is no longer a metric for analysis of transportation impacts under CEQA in San Francisco. Further, the installation, removal, or reconfiguration of traffic lanes is considered a Rightsizing (aka Road Diet) Project in accordance with CEQA Section 21099 - Modernization of Transportation Analysis, and is therefore presumed to not significantly impact VMT and no further VMT analysis is required.

Although level of service is no longer the metric used for transportation impact assessment under CEQA in San Francisco, a discussion of the change in LOS with the Modified Project is provided in the evaluation memorandum and is summarized at the end of this topic for informational purposes.

Traffic Hazards

The Modified Project would restrict left turns from all approaches at 4th/King. In order to assess these changes, traffic movements were redistributed within the project vicinity. The potential for these redistributed trips to affect other modes is discussed further below and maps depicting alternate routes are provided in Attachment H to the evaluation memorandum.

Existing left turn volumes northbound at 4th/King streets are relatively low (22 during the a.m. peak hour and 20 during the p.m. peak hour) and the only option for vehicles making this movement is to enter southbound I-280 (there are no driveways, and parking or loading is not permitted along the north side of King Street west of 4th Street). Therefore, these trips were assumed to use one of several alternate routes to access southbound I-280 from points further south or via upstream diversions to make northbound left turns at 3rd/King or 5th/King streets. Given the relatively low volume distributed among several alternate routes, these redistributed trips are not expected to result in traffic hazards or adversely affect other modes.

Existing left turn volumes southbound at 4th/King streets are relatively low (45 vehicles during the a.m. peak hour and 60 vehicles during the p.m. peak hour). Because there are no driveways, and parking or loading is not permitted along the south side of King Street between 4th and 2nd streets, these trips were assumed to use alternate routes to access destinations further east and north along The Embarcadero, with 50 percent making southbound right turns at 4th/King streets and westbound U-turns at 5th/King streets; 25 percent diverting upstream via southbound left turns at 4th/Bryant streets; and 25 percent diverting downstream via southbound left or right turns at 4th/Berry streets. Given the relatively low

volume distributed among several alternate routes, these redistributed trips are not expected to result in traffic hazards or adversely affect other modes.

Eastbound left turns at 4th/King streets have been restricted since April 2015 due to construction of the Central Subway Project. Volumes for this movement from 2012 to 2013 (latest available data prior to restriction) are relatively high (86 vehicles during the a.m. peak hour and 151 vehicles during the p.m. peak hour). There are no driveways, parking or loading is not permitted along the east side of 4th Street between King and Townsend streets, and all northbound traffic must turn right 4th/Townsend streets. Therefore, all of the trips that previously made the eastbound left turn at 4th/King streets were assumed to use alternate routes to access destinations east of 4th/King streets by making eastbound left turns at 3th/King streets or other downstream intersections along King Street or The Embarcadero. The intersection of 3th/King streets is designed to handle a high volume of eastbound left turns, with a protected left turn signal phase and three eastbound left turn lanes. Therefore, these redistributed trips are not expected to result in traffic hazards or adversely affect other modes.

Existing westbound left turn volumes at 4th/King streets are relatively low (57 during the a.m. peak hour and 33 during the p.m. peak hour). Because there are no driveways and parking or loading is not permitted along the west side of 4th Street between King and Channel streets, these trips were assumed to use alternate routes to access destinations on Berry Street or further south, with 50 percent making westbound left turns at 5th/King streets; and 50 percent diverting upstream via westbound right turns at 3rd/King streets, northbound left turns at 3rd/Townsend streets, or westbound left turns at 4th/Townsend streets. Given the relatively low volume distributed among several alternate routes, these redistributed trips are not expected to result in traffic hazards or adversely affect other modes, including transit.

Transit

Under the Modified Project, Muni's 81X Caltrain Express and 82X Levi Plaza Express bus routes would include modifications to their routing due to the prohibition of southbound left turns at 4th/King streets intersection as described on page seven of the evaluation memorandum. The modified routes would be within the same vicinity of the existing routes similar to existing conditions and therefore, effects on the 81X and 82X bus routes would be minimal.

The Modified Project would not include any transit service frequency changes compared to the Approved Project, and therefore, no additional analysis for transit ridership or capacity is necessary. Compared to the Approved Project, the Modified Project would remove one southbound travel lane on 4th Street approaching the intersections of Harrison, Bryant and Brannan streets, where Muni would operate the 30 Stockton and 45 Union-Stockton bus routes following completion of the project. In order to assess these changes, the delays for each affected transit movement were evaluated, using outputs from Synchro models. Average delay for LRVs was estimated by calculating the portion of the signal cycle available for LRV movements at the two intersections where the Modified Project includes signal phasing that differs from the Approved Project (4th/Bryant and 4th/King streets). Average delay for buses were estimated by calculating delay on each segment of 4th Street where a travel lane would be removed. The delay results for LRVs are presented in Table 2 below, and delay results for buses (30 Stockton and 45 Union-Stockton) are presented in Table 3 below.

As summarized in Table 2 below, modified signal phasing at the intersections of 4th/Bryant streets and 4th/King streets under the Modified Project would result in LRV travel time savings of 54 seconds during the a.m. peak hour and 53 seconds during the p.m. peak hour, compared to the Approved Project. As summarized in Table 3 below, the Modified Project when compared with the Approved Project would result in additional delays for bus routes along this roadway segment of 18 seconds during the a.m. peak hour and 19 seconds during the p.m. peak (per the footnote in Table 4 – these delays are conservative and do not consider bus travel time savings resulting from a bus/taxi-only lane proposed at 4th/Harrison streets). The estimated additional delay for buses would not result in additional transit impacts under the Modified Project that were not identified in the SEIS/SEIR.

Table 2 – Transit (LRV) Delay			
	Approved Project	Modified Project	
	Delay (seconds)	Delay (seconds)	
Intersection Approach	AM/PM	AM/PM	
4 th /Bryant – Southbound	45/38	28/20	
4 th /Bryant – Northbound	23/14	28/20	
4 th /King - Southbound	45/45	25/25	
4 th /King - Northbound	45/45	25/25	
Totals	159/143	105/89	

Source: San Francisco Planning Department, SFMTA, 2018.

Table 3 – Transit (Bus) Delay		
	Approved Project	Modified Project
	Delay (seconds)	Delay (seconds)
Intersection Approach	AM/PM	AM/PM
4 th /Harrison – Southbound Through ⁶	34/42	36/45
4 th /Bryant – Southbound Through	42/38	44/35
4 th /Brannan – Southbound Right	9/8	23/28
Totals	85/89	103/108

Source: San Francisco Planning Department, SFMTA, 2018.

The Modified Project would reduce conflicts between buses and other vehicles traveling south on 4th Street between Harrison and Bryant streets by providing one wider travel lane instead of two narrow travel lanes included in the Approved Project. The Modified Project would also reduce conflicts between LRVs and other vehicles traveling south on 4th Street between Bryant and Brannan streets by providing an exclusive rail right-of-way separated from other vehicles by a mountable curb.

Therefore, the changes proposed as part of the Modified Project would not alter the transit analysis conducted for the proposed project and are within the scope of the analysis in the SEIS/SEIR. Additionally, no transit mitigation measures were identified in the SEIS/SEIR for the Approved Project, and none would be required for the Modified Project.

Freight and Loading

Under the Modified Project, freight and loading conditions would be similar to the Approved Project analyzed in the SEIS/SEIR. The Modified Project would construct a mountable curb along the west side of the exclusive rail right-of-way on southbound 4th Street, between Bryant and Brannan streets – this mountable curb would allow trucks to access Welsh and Freelon streets west of 4th Street. The Modified Project would not result in any new significant impacts related to freight and loading.

Parking

Compared to the Approved Project analyzed in the SEIS/SEIR, the Modified Project would not displace any additional parking spaces. As discussed in the SEIS/SEIR, a total of 58 vehicle parking spaces would be removed as part of the Approved Project on 4th Street, between King and Harrison streets. The Modified Project would add four on-street vehicle parking spaces on the west side of 4th Street, between Brannan and Bluxome streets. The Modified Project would result in a net loss of 54 vehicle parking spaces along 4th Street. No significant impacts related to parking were identified for the Approved Project in the SEIS/SEIR, and the Modified Project would not result in any new significant impacts related to parking. Additionally, no mitigation measures were identified in the SEIS/SEIR for the Approved Project and none would be required for the Modified Project.

Pedestrians

Under the Modified Project, pedestrian conditions would be similar to the Approved Project analyzed in the SEIS/SEIR. The Modified Project would not make any changes to sidewalk widths or crosswalk locations. No significant impacts related to pedestrians were identified for the Approved Project in the SEIS/SEIR, and the Modified Project would not result in any new significant impacts related to pedestrians.

Bicycles

Under the Modified Project, bicycle conditions would be similar to the Approved Project analyzed in the SEIS/SEIR. The Modified Project would reduce the number of southbound travel lanes on 4th Street between Harrison and Bluxome streets, but would provide a single wider travel lane shared by vehicles and bicycles. No significant impacts related to bicycles were identified for the Approved Project in the SEIS/SEIR, and the Modified Project would not result in any new significant impacts related to bicycles.

Emergency Vehicle Access

Under the Modified Project, emergency vehicle access conditions would be similar to the Approved Project analyzed in the SEIS/SEIR. The Modified Project would add a mountable curb along the west side of the exclusive light rail right-of-way on southbound 4th Street between Bryant and Brannan streets – this mountable curb would continue to allow emergency vehicles to access Welsh and Freelon streets west of 4th Street. No significant impacts related to emergency vehicle access were identified for the

⁶ Delays presented are the average for all vehicles. Under the Modified Project, a bus/taxi only lane is proposed on southbound 4th Street approaching Harrison Street, and therefore bus delay is expected to be less.

Approved Project in the SEIS/SEIR, and the Modified Project would not result in any new significant impacts related to emergency vehicle access.

Construction

The changes proposed as part of the Modified Project would not result in changes to the construction-related transportation analysis conducted for the Approved Project. The construction activities for the improvements along 4th Street between King and Harrison streets would consist of restriping for travel lane reductions to result in wider lanes and turn restrictions, and installation of mountable curb adjacent to the LRV tracks; none of which involve activities related to tunneling or excavation. Therefore, overall the Modified Project would be similar in scope and duration as for the Approved Project along this segment of 4th Street. Significant impacts related to freight and loading during construction were identified in the SEIS/SEIR and a mitigation measure was identified which would reduce the impact to less than significant levels. However, the mitigation measure for construction freight and loading would not apply to the Modified Project, given that the Modified Project would not require roadway closures that would prohibit access to properties on 4th Street, between King and Harrison streets. In addition, the Modified Project would be subject to the same City requirements with respect to construction transportation management and regulations for working within City streets. Therefore, the changes proposed as part of the Modified Project are within the scope of the construction-related transportation analysis in the SEIR.

Noise and Vibration

The changes proposed for Modified Project are within the scope of the analysis in the SEIS/SEIR and would not alter the construction noise and vibration conclusions of the SEIS/SEIR for the following reasons. The construction activities for the Modified Project would be similar in scope and duration as for the Approved Project along this segment of 4th Street between King and Harrison streets. Therefore, the potential construction noise and vibration impacts of the Modified Project would be similar to those of the Approved Project. Because construction of the Modified Project would occur at a location where the SEIS/SEIR identified exceedances of the ground-borne noise and vibration criteria related to impacts on several mixed-use buildings, mitigation measures identified in the SEIS/SEIR related to noise and vibration would still apply to the Modified Project. With implementation of noise and vibration mitigation measures, as described in the SEIS/SEIR, the noise and vibration impacts would be reduced to less-than significant.

The SEIS/SEIR identified a significant impact related to operational ground-borne noise of the Approved Project which would affect the property at 570 4th Street. A mitigation measure was identified which requires vibration propagation testing and selection of either high-resilience or direct fixation fasteners for embedded tracks (at-grade rail) during final design. Implementation of this mitigation measure would reduce the operational noise and vibration impact to less-than-significant levels. The Modified Project would be similar in scope as the Approved Project along this segment of 4th Street, between Brannan and Bryant streets, and includes at-grade LRV operations. Therefore, the potential for operational noise and vibration impacts of the Modified Project would be similar to those of the Approved Project. The mitigation measure identified in the SEIS/SEIR related to operational noise and vibration would still apply to the Modified Project. With implementation of operational noise and vibration mitigation

measures, as described in the SEIS/SEIR, the operational noise and vibration impacts would be reduced to less-than significant.

Vehicular Delay (For Informational Purposes Only)

The SEIS/SEIR identified a significant level of service (LOS) impact at 4th/Harrison streets during the p.m. peak hour and a cumulatively considerable contribution to a cumulative traffic impact at 4th/King during the p.m. peak hour. These findings are shown in bold in **Table 4** below for informational purposes. As discussed below, the Modified Project would not result in any new significant traffic impacts.

Table 4 - SEIS/SEIR 4th Street LOS Summary			
	SEIS/SEIR	SEIS/SEIR	SEIS/SEIR
	Baseline	No Project	Approved
	(2008)	(2030)	Project (2030)
Intersection	AM/PM	AM/PM	AM/PM
4 th /Harrison	B/B	C/C	C/F
4 th /Bryant	B/B	B/C	D/D
4 th /King	E/F	E/F	E/F

Source: Central Subway Final SEIS/SEIR 2008, and SFMTA, 2018.

The SEIS/SEIR analyzed the intersection LOS using Traffix software at three intersections in the vicinity of the Modified Project's design changes (4th/Harrison streets, 4th/Bryant streets, 4th/King streets). This LOS analysis was updated using Synchro software and more recent traffic volumes gathered between 2013 and 2017. In addition to the three intersections along 4th Street analyzed in the SEIS/SEIR, the intersections of 4th/Brannan streets and 4th/Townsend streets were also analyzed. In order to directly compare the Approved Project with the Modified Project, both scenarios were modeled using the same base traffic volumes, with volume adjustments reflecting the traffic circulation changes that each scenario would require, as detailed in Attachment C.

The updated Synchro models are more refined than the Traffix models used for the SEIS/SEIR; for example, the Synchro models include signal timings that account for minimum required pedestrian crossing times, and allow for analysis of complex signal phasing where exclusive phases are required for LRV movements. In order to optimize progression along 4th Street, the Synchro models include 110 second cycle lengths for all signalized intersections along 4th Street between Bryant and King streets, matching the existing cycle length at the intersection of 4th/King streets. Detailed Synchro outputs are provided in Attachments D-G.

As shown in **Table 5** below, when compared to the Approved Project, the Modified Project results in slightly improved LOS at 4th/Bryant streets during the a.m. peak hour, slightly worsened LOS at 4th/Brannan streets during the p.m. peak hour and substantially improved LOS at the intersection of 4th/King streets during both the a.m. and p.m. peak hours. The improved LOS at 4th/Bryant streets during the a.m. peak hour is attributable to the removal of an exclusive signal phase for southbound LRVs, which allows more green time to be provided to other movements (note that total intersection delay also improves slightly during the p.m. peak hour, but not enough to change the LOS letter grade). The

improved LOS at 4th/King streets during both a.m. and p.m. peak hours is attributable to the removal of exclusive left-turn signal phases in all directions, which allows more green time to be provided to other movements and which reduces the lost time by reducing the number of signal phases. The worsened LOS at 4th/Brannan streets during the p.m. peak is attributable to the reduction in capacity on the southbound approach (note that total intersection delay also worsens slightly during the a.m. peak hour, but not enough to change the LOS letter grade).

Table 5 - 4th Street LOS Summary			
	Approved Project	Modified Project	
Intersection	AM/PM	AM/PM	
4 th /Harrison	C/C	C/C	
4 th /Bryant	E/D	D/D	
4 th /Brannan	C/C	C/D	
4 th /Townsend	C/C	C/C	
4 th /King	E/F	C/C	

Source: San Francisco Planning Department, SFMTA, 2018

Conclusion

Based on the foregoing, it is determined that the analyses conducted and the conclusions reached in the final Supplemental EIR certified on August 7, 2008 remain valid. The proposed revisions to the project (Modified Project) would not cause new significant impacts that were not identified in the SEIS/SEIR or in the 2013 addendum, and no new mitigation measures would be necessary to reduce significant impacts. No changes have occurred with respect to circumstances surrounding the Modified Project that would cause significant environmental impacts to which the project would contribute considerably, and no new information has become available that shows that the Modified Project would cause significant environmental impacts. Therefore, no supplemental environmental review is required beyond this addendum.

Date of Determination:

I do hereby certify that the above determination has been made pursuant to state and local requirements.

Lisa Gibson

Environmental Review Officer

cc: Dustin White, SFMTA
Andrea Contreras, SFMTA
Albert Ho, SFMTA

September 28, 2018

Roberta Boomer, SFMTA Board of Directors Secretary Bulletin Board / Master Decision File Distribution List