3.0 ADDITIONAL INFORMATION

3.1 TRAFFIC AND CIRCULATION

Gibson Transportation Consulting, Inc. prepared a supplemental analysis of potential traffic and circulation impacts involving the existing alleyway that is adjacent to the Project site (located to the east), based on comments and requests made during the Project's public hearing process. (See Appendix AQ of the Subsequent EIR.)

The Los Angeles Department of Transportation (LADOT) does not require that unsignalized intersections be analyzed for potential impacts. Rather, according to *Traffic Study Policies and Procedures* (LADOT, August 2014), unsignalized intersections that are adjacent to a project or are integral to a project's site access and circulation plan should be identified. For these intersections, vehicular delay should be estimated using the *Highway Capacity Manual* (Transportation Research Board, 2010) (HCM) methodology. If any unsignalized intersection is projected to operate at level of service (LOS) E or F under Future with Project conditions, then the intersection should be evaluated for the need to install a traffic signal by conducting a signal warrant analysis.

While LADOT provides no impact thresholds for unsignalized intersections, there are analysis criteria and impact thresholds identified in the Los Angeles CEQA Thresholds Guide (City of Los Angeles, 2006). Similar to the LADOT guidelines, the Los Angeles CEQA Thresholds Guide requires that average vehicular delay be assessed using the HCM methodology to determine LOS. If any intersection is found to operate at LOS C, D, E, or F, then additional analysis is conducted using the Critical Movement Analysis (CMA) methodology that LADOT prescribes for the analysis of signalized intersections, with a reduced intersection capacity of 1,200 vehicles per hour per lane to simulate stop-controlled conditions. The results of the CMA analysis are used to identify potential significant impacts using the same sliding scale that is used for signalized intersections according to LADOT criteria. In this scale, a project's maximum allowable increase in volume-to-capacity (V/C) ratio at an intersection decreases as the LOS worsens. For an intersection operating at LOS C under Future with Project conditions, a significant impact is identified if the V/C ratio increases by 0.040 or more. For intersections operating at LOS D under Future with Project conditions, a significant impact is identified if the V/C ratio increases by 0.020 or more. For intersections operating at LOS E or F under Future with Project conditions, a significant impact is identified if the V/C ratio increases by 0.010 or more. There are no applicable requirements or thresholds to analyze queuing or queue lengths on alleyways.

The supplemental analysis was conducted of the unsignalized intersection of the alleyway forming the eastern border of the Project site and Constellation Boulevard. Afternoon peak-hour traffic counts were conducted at this intersection in September 2013 and were used for this analysis (see Attachment in Appendix AQ). Because the alley provides access to several office buildings and would provide access to the Century City Center project (primarily an office building), traffic at this intersection is heavily skewed toward morning arrivals into the alley and afternoon departures out of the alley. Because turns from higher-volume, uncontrolled Constellation Boulevard to the low-volume alley are not substantially delayed while stop-controlled turns from the alley onto higher-volume Constellation Boulevard may experience delay, the afternoon peak hour represents the worst-case operating condition for this intersection, and it is unnecessary to conduct analysis of the morning peak hour.

It is important to note that the supplemental analysis conservatively uses worst-case vehicular delay to estimate LOS, though the Los Angeles CEQA Thresholds Guide specifies that the less-conservative average vehicular delay may be used to assess LOS for all unsignalized intersections. At 2-way stop-controlled intersections such as the intersection of the alley and Constellation Boulevard, the worst-case delay is experienced by vehicles attempting to turn from the alley onto Constellation Boulevard. On the other hand, the average delay is weighted heavily by the larger number of vehicles travelling east and west on Constellation Boulevard, which experience no delay at all. Accordingly, by using the worst-case vehicular delay to estimate LOS, the supplemental analysis provided in Appendix AQ of the Subsequent EIR provides a more conservative analysis than could have been provided under the Los Angeles CEQA Thresholds Guide.

The supplemental analysis was conducted for years 2011, 2015, and 2021 for Alternative 9 (the Enhanced Retail Alternative), which was adopted by the City Planning Commission at its June 12, 2014, hearing. The analysis was conducted under "no Project" conditions and "with Project" conditions considering trip generation using the Empirical Rate, the Economy Adjustment Rate, and the Published Rates for Alternative 9 as provided in Section 3.1.1 of the Final Subsequent EIR. Further, for all "with Project" conditions, two possible Project access configurations were examined. In the first configuration, as shown in Figure 1 in Appendix AQ, the primary Project driveway on Constellation Boulevard (west of the alley) would operate as a full-access, signalized driveway allowing left and right-turns into and out of the Project site (Full Access Driveway). In the second configuration, as shown in Figure 2 in Appendix AQ, the primary Project driveway would be restricted to right-turns in and out only via a physical median on Constellation Boulevard, which would serve to restrict left-turns to and from the Project driveway while maintaining full access to 2000 Avenue of the Stars on the south side of Constellation Boulevard (RIRO Driveway). These are the two configurations proposed in the Subsequent EIR to mitigate a potential traffic and circulation impact at the intersection of Constellation Boulevard and the driveways of the Project and 2000 Avenue of the Stars. (See Draft Subsequent EIR, pp. 4.2-101 through 4.2-103 for discussion of the Full Access Driveway, and Final Subsequent EIR Topical Response 6 for discussion of the RIRO Driveway.)

As detailed above, both the LADOT analysis for potential signalization of unsignalized intersections and the Los Angeles CEQA Thresholds Guide analysis for potential significant traffic impacts begin with an HCM analysis to calculate delay at the subject intersection. The HCM analysis was conducted for each of the scenarios described above, and is summarized in Table 1 in Appendix AQ. As shown in Table 1 in Appendix AQ, under conditions without the Project, the intersection would operate at LOS B in years 2011, 2015, and 2021. With Alternative 9 in place, it would continue to operate at LOS B using the trip generation under the Empirical Rate or Economy Adjustment Rate in year 2011 with the Full Access Driveway configuration. In all other analysis years and trip generation scenarios, as well as all scenarios involving the RIRO Driveway, the intersection would operate at LOS C with Alternative 9. It should be noted that if the LOS were based on less conservative average delay (see discussion above), the intersection would operate at LOS A, using each trip generation rate and under each analysis year.

Based on the results, the worst-case operating LOS with Alternative 9 in place is projected to be LOS C. Based on LADOT guidelines, an unsignalized intersection should be further analyzed using signal warrants in the event that an unsignalized intersection is projected to operate at LOS E or F based on the HCM methodology. Because the intersection is projected to operate at LOS C, no further analysis is required to determine the need for signalization based on LADOT guidelines. The intersection does not require signalization pursuant to LADOT criteria.

The Los Angeles CEQA Thresholds Guide bases the need for further analysis of an unsignalized intersection on whether or not that intersection is projected to operate at LOS C, D, E, or F under Future with Project conditions *based on the peak hour average vehicular delay through the intersection.* Table 1 in Appendix AQ reports LOS based on the worst-case delay, a significantly more conservative metric, as discussed above. Nonetheless, based on that conservative metric the intersection would operate at LOS C, which would require additional analysis of the intersection using the CMA methodology and applying LADOT's signalized intersection significant impact thresholds.

Table 2 in Appendix AQ summarizes the results of the intersection analysis using the CMA methodology with a reduced capacity of 1,200 vehicles per hour per lane to simulate stop-controlled conditions. As Table 2 in Appendix AQ shows, based on the CMA methodology, the intersection would operate at LOS A under all analysis scenarios: both the Full Access Driveway and RIRO Driveway configurations, and each of the three trip generation rates, and under each analysis year. As described above, based on LADOT significant impact criteria, a project would not result in a significant intersection impact under the CMA methodology unless it operated at LOS C at a minimum. Because the intersection would operate at LOS A under the CMA methodology in the worst-case scenario with the addition of Alternative 9 traffic, no significant traffic impact would occur. Therefore, the results of this supplemental analysis do not result in a new significant impact or a substantial increase in the severity of a previously identified significant impact.

3.2 AIR QUALITY MODELING – OPERATIONS (CALEEMOD 2013.2.2)

As discussed in Section 4.4 of the Draft Subsequent EIR, CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The mobile source emission factors used in the model (EMFAC2011) include the Assembly Bill 1493 (Pavley) standards and the Low Carbon Fuel Standard. Assembly Bill 1493 required the California Air Resources Board (CARB) to set GHG emission standards for passenger vehicles and light-duty trucks. The Low Carbon Fuel Standard requires producers of petroleum-based fuels to reduce the carbon intensity of their products, beginning with a quarter of a percent in 2011 and culminating in a 10 percent total reduction in 2020. Further, the model identifies mitigation measures to reduce criteria pollutant and GHG emissions in addition to calculating the benefits achieved from measures chosen by the user. The model calculates the emission reduction benefits from implementing the same GHG mitigation measures identified and adopted by the California Air Pollution Control Officers Association (CAPCOA).

The model is a tool for quantifying air quality emissions from land use projects throughout California. The model can be used for a variety of situations for which an air quality analysis is necessary or desirable, such as California Environmental Quality Act (CEQA) documents, National Environmental Policy Act (NEPA) documents, pre-project planning, and compliance with local air quality rules and regulations, etc.

The model was developed in collaboration with the air districts and metropolitan planning organizations of California. Default data (e.g., emission factors, trip lengths, meteorology, and source inventory, etc.) specific to a region have been provided by the various California air districts to account for local requirements and conditions.

At the time the Draft Subsequent EIR was prepared and released for public review (March 2013), CalEEMod 2011.1.1 was the most current land use emissions computer model available, and was therefore the appropriate model used for calculation of the air pollutant and GHG emissions associated with development of the proposed Modified Project. CalEEMod 2013.2 and CalEEMod 2013.2.1 were released in July and September 2013 respectively, and CalEEMod 2013.2.2 was released in October 2013. According to the South Coast Air Quality Management District (SCAQMD), major revisions and updates to CalEEMod 2013.2.2 compared to the 2011.1.1 version include the following:

- New AP-42 emission factors for paved roads, California Air Resources Board (CARB) EMFAC2011 and off-road inventory added
- Different default trip lengths for the same geographical area corrected
- New water and solid waste defaults for industrial land uses
- Ability to quantify emissions from off-road equipment during operation
- Ability to quantify energy use from elevators/lighting/ventilation for parking land uses
- Latest carbon intensity value of utilities added
- Volatile organic compounds (VOC) calculation from parking lot painting modified
- Wastewater treatment methodology modified

To provide additional information for decision-makers and the public, emissions associated with development of Alternative 9 were recalculated using CalEEMod 2013.2.2. As part of this effort, Gibson Transportation Consulting, Inc. conducted an analysis of the commercial-work (C-W) trip length for the proposed Project, which is included in Appendix AM of the Subsequent EIR. By analyzing zip code data that was obtained from the Century City Chamber of Commerce, the analysis determined that the average C-W trip length in the project area is 12.7 miles. This distance is lower than the default C-W trip length included in CalEEMod 2013.2.2. Table 3.A summarizes the results of the C-W trip length analysis provided by Gibson Transportation Consulting, Inc.

Table 3.A: Commercial-Work (C-W) Trip Length Analysis

Radius (miles)	# of Employees	Percentage	Maximum Distance	Total Miles Driven
0 - 2	432	9.4%	2	864
2 - 5	1,390	30.3%	5	6,950
5 - 10	1,142	24.9%	10	11,420
10 - 15	644	14.0%	15	9,660
15 - 20	383	8.3%	20	7,660
20 - 25	251	5.5%	25	6,275
25 - 40	275	6.0%	40	11,000
40 - 60	73	1.6%	60	4,380
Total	**4,590**			**58,209**
Overall Average Distance				**12.7**

Source: Gibson Transportation Consulting, Inc. (September 2014).

Tables 3.B through 3.G list the operational emissions for Alternative 9 for 2015 and 2021 using the three different vehicle trip rates utilized in the air quality analysis in the Subsequent EIR (Empirical Rate, Economy Adjustment Rate, and Published Rates)[1] using the CalEEMod 2013.2.2 model and the 12.7-mile C-W trip length. Note that for Tables 3.B through 3.G and all analyses in the Subsequent EIR, the CalEEMod modeling does not include the 93,040 square foot green roof, which consists of open and planted space on the roof of the parking structure, for both the proposed Modified Project and Alternative 9. This proposed green roof would minimize the development's impact on the surrounding city and ecosystem by trapping small amounts of particulate emissions and by reducing the Project's energy demand, which would reduce the emissions associated with production of that energy. It would blanket the roof of the parking garage, providing a significant decrease in the urban heat island effect of the site by decreasing the absorption of heat into the built fabric of the city. The roof would also capture stormwater for reuse on site or allow for it to be detained and filtered prior to release into the City of Los Angeles' stormwater system. While the benefits of this green roof are clear, there is no mechanism to include this land use in the CalEEMod modeling. Since the inclusion of a green roof reduces the environmental impacts, not including it in the CalEEMod modeling produces a conservative analysis of the Project's emissions.

Table 3.B: Alternative 9 Empirical Rate 2015 Operational Emissions

Category	Pollutant Emissions (lbs/day)					
	ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area	21	0.0024	0.24	0.000020	0.00088	0.00088
Energy	0.19	1.7	1.4	0.010	0.13	0.13
Mobile	13	36	140	0.30	21	5.8
Total Project Emissions	**34**	**38**	**140**	**0.31**	**21**	**5.9**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc. (May 2014).
Note: These emissions do not include the benefits of the planned 93,040 square-foot green roof on the parking structure.
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic gases
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides

Table 3.C: Alternative 9 Economy Adjustment Rate 2015 Operational Emissions

Category	Pollutant Emissions (lbs/day)					
	ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area	21	0.0024	0.24	0.000020	0.00088	0.00088
Energy	0.19	1.7	1.4	0.010	0.13	0.13
Mobile	14	38	150	0.32	22	6.2
Total Project Emissions	**35**	**40**	**150**	**0.33**	**22**	**6.3**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc. (May 2014).
Note: These emissions do not include the benefits of the planned 93,040 square-foot green roof on the parking structure.
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic gases
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides

1 See Draft Subsequent EIR, Chap. 4.4 (proposed Modified Project); Final Subsequent EIR, Sec. 3.1.1 (Alternative 9).

Table 3.D: Alternative 9 Published Rates 2015 Operational Emissions

Category	Pollutant Emissions (lbs/day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	21	0.0024	0.24	0.000020	0.00088	0.00088
Energy	0.19	1.7	1.4	0.010	0.13	0.13
Mobile	18	49	190	0.41	28	7.9
Total Project Emissions	**39**	**51**	**190**	**0.42**	**28**	**8.0**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc. (May 2014).
Note: These emissions do not include the benefits of the planned 93,040 square-foot green roof on the parking structure.
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROG = reactive organic gases
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides
PM_{10} = particulate matter less than 10 microns in size

Table 3.E: Alternative 9 Empirical Rate 2021 Operational Emissions

Category	Pollutant Emissions (lbs/day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	21	0.0022	0.24	0.000020	0.00085	0.00085
Energy	0.19	1.7	1.4	0.010	0.13	0.13
Mobile	9.1	22	94	0.30	20	5.7
Total Project Emissions	**30**	**24**	**96**	**0.31**	**20**	**5.8**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc. (May 2014).
Note: These emissions do not include the benefits of the planned 93,040 square-foot green roof on the parking structure.
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic gases
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides

Table 3.F: Alternative 9 Economy Adjustment Rate 2021 Operational Emissions

Category	Pollutant Emissions (lbs/day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	21	0.0022	0.24	0.000020	0.00085	0.00085
Energy	0.19	1.7	1.4	0.010	0.13	0.13
Mobile	9.7	24	99	0.32	22	6.1
Total Project Emissions	**31**	**26**	**100**	**0.33**	**22**	**6.2**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc. (May 2014).
Note: These emissions do not include the benefits of the planned 93,040 square-foot green roof on the parking structure.
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic gases
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides

Table 3.G: Alternative 9 Published Rates 2021 Operational Emissions

Category	Pollutant Emissions (lbs/day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	21	0.0022	0.24	0.000020	0.00085	0.00085
Energy	0.19	1.7	1.4	0.010	0.13	0.13
Mobile	**12**	30	130	0.41	28	7.8
Total Project Emissions	**33**	**32**	**130**	**0.42**	**28**	**7.9**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc. (May 2014).
Note: These emissions do not include the benefits of the planned 93,040 square foot green roof on the parking structure.
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROG = reactive organic gases
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides
PM_{10} = particulate matter less than 10 microns in size

A summary of CalEEMod input files is included in Appendix AN of the Subsequent EIR. As shown, similar to the analysis performed with CalEEMod 2011.1.1 in the Subsequent EIR, the long-term operational mobile source air quality impacts of Alternative 9 calculated by CalEEMod 2013.2.2 would be less than significant, and no mitigation would be required. In addition, as compared to the proposed Modified Project (see Sections 4.4.7-4.4.8 in the Draft Subsequent EIR), Alternative 9 would not involve new significant environmental effects or a substantial increase in the severity of previously identified significant effects related to air quality.

Therefore, the results of this supplemental analysis do not result in a new significant impact or a substantial increase in the severity of a previously identified significant impact.

3.3 AIR QUALITY MODELING – CONSTRUCTION (CALEEMOD 2013.2.2)

As discussed in Response to Comment O-27B-19 in the Final Subsequent EIR, a known error in the 2011.1.1 version of CalEEMod model used to analyze construction emissions in the Draft Subsequent EIR overstated offsite construction truck hauling emissions, which required correction in order to accurately provide expected construction emissions to decisionmakers and the public. The error in the 2011.1.1 version of CalEEMod model was therefore corrected in the analysis provided in the Subsequent EIR using the methodology to correct the error published at the time. (See Response to Comment O-27B-19 for additional discussion.)

Following the release of the Final Subsequent EIR, certain commenters claimed without evidentiary support that the error in the 2011.1.1 version of CalEEMod applies only to haul truck fugitive dust emissions and does not affect other pollutants (ROC, NO_X, CO, SO_X, exhaust PM_{10} and $PM_{2.5}$). As discussed in a December 6, 2013 memorandum prepared by LSA Associates, Inc. and provided to the City Planning Department's Hearing Officer, in the Draft Subsequent EIR LSA corrected the error in the 2011.1.1 version of CalEEMod based on information obtained directly from the South Coast Air Quality Management District. Specifically, Michael A. Krause, Program Supervisor at the South Coast Air Quality Management District, informed LSA in 2012 that the error in the 2011.1.1 version of CalEEMod related to offsite haul truck emissions applies to all pollutants. Accordingly, the correction to the 2011.1.1 version of CalEEMod for offsite haul truck emissions was applied to all pollutants, including fugitive dust emissions ROC, NO_X, CO, SO_X, exhaust PM_{10} and $PM_{2.5}$.

Nevertheless, in order to address the claim that the error in the 2011.1.1 version of CalEEMod applies only to haul truck fugitive dust emissions, a supplemental analysis was undertaken using the CalEEMod 2013.2.2 model. As discussed in Section 3.2 above, the 2013.2.2 model contains corrections within the model for certain known errors in the 2011.1.1 model, including the error related to construction truck hauling emissions. Therefore, the correction applied to the 2011.1.1 model in the Draft Subsequent EIR (see Sections 4.4.7-4.4.8 in the Draft Subsequent EIR) was not required in this supplemental analysis.

In the course of conducting this supplemental analysis and examining the construction modeling details, it was discovered that the construction haul distance was incorrectly entered in the CalEEMod modeling in the Draft Subsequent EIR (Section 4.4.7, page 4.4-30) as haul trips of 50 miles in length, rather than 23 miles that are planned. The 23-mile distance is based on the proposed haul truck routes from the Project site in Century City to the disposal site in Sylmar. In the Draft Subsequent EIR (Section 4.4.7, page 4.4-29), the CalEEMod modeling was run based on 125 round trips of 50 miles each, rather than the 125 one-way trips of 23 miles each that are planned. As a result, the Subsequent EIR provides an overly conservative, overestimate of construction haul emissions. To correct this overestimate, the supplemental analysis using the CalEEMod 2013.2.2 model used the more accurate 125 one-way trips of 23 miles each that are planned.

The supplemental analysis described above is provided below in Table 3.H, correcting Table 4.4.AI in the Draft Subsequent EIR. Specifically, Table 3.H lists the construction emissions for the proposed Modified Project and Alternative 9 (since Alternative 9 is only approximately 1,421 square feet smaller than the Modified Project, their construction emissions are anticipated to be substantially identical) with the implementation of mitigation described in the Subsequent EIR[2] using the CalEEMod 2013.2.2 model and the appropriate haul distance of 23 miles each way (see Appendix AN of the Subsequent EIR for the summary of the CalEEMod modeling input files). As shown in Table 3.H, with incorporation of these changes, construction of either the proposed Modified Project or Alternative 9 would result in a less than significant impact for total construction emissions with incorporation of the previously identified mitigation for all analyzed pollutants, including ROC and NO_X.

Table 3.H: Short-Term Regional Construction Emissions – Proposed Modified Project and Alternative 9 – with Mitigation

	Total Regional Pollutant Emissions, lbs/day							
Construction Phase	**ROC**	**NO_X**	**CO**	**SO_X**	**Fugitive PM_{10}**	**Exhaust PM_{10}**	**Fugitive $PM_{2.5}$**	**Exhaust $PM_{2.5}$**
Demolition	3.5	36	52	0.078	0.19	1.6	0.047	1.5
Grading	6.5	82	78	0.15	4.9	2.8	1.9	2.6
Building Construction	10	55	150	0.26	7.0	2.2	1.9	2.1
Architectural Coating	43	0.84	9.8	0.017	1.1	0.014	0.30	0.014
Peak Daily Emissions[1]	**53**	**82**	**160**	**0.28**	**10**		**4.5**	
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**		**55**	
Significant Emissions?	**No**	**No**	**No**	**No**	**No**		**No**	

Source: LSA Associates, Inc., October 2014.
[1] The Building Construction and Architectural Coating phases are expected to overlap.
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROC = reactive organic compounds
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides

As discussed in Chapter 4.4 of the Draft Subsequent EIR for the Modified Project, in Section 3.1.1 of the Final Subsequent for Alternative 9, and in Response to Comment O-27B-19 in the Final Subsequent EIR,

2 Mitigation Measures 4.4.1 and 4.4.2 in Section 4.4 of the Draft Subsequent EIR.

using the model for the 2011.1.1 version of CalEEMod following the incorporation of mitigation, the Modified Project and Alternative 9 would result in a less than significant impact for total construction emissions. As demonstrated above, using the model for CalEEMod 2013.2.2 with the changes described, the Modified Project and Alternative 9 would continue to result in a less than significant impact for total construction emissions, including impacts related to ROC and NO_X. Therefore, the results of this supplemental analysis do not result in a new significant impact or a substantial increase in the severity of a previously identified significant impact.

3.4 CLIMATE CHANGE - BUSINESS AS USUAL ANALYSES

To provide additional information for decision-makers and the public, the CalEEMod 2013.2.2 model also was used to determine the GHG emissions from the Approved Project, the proposed Modified Project and Alternative 9. As discussed above in Section 3.2, CalEEMod 2013.2.2 was released in October 2013 and contains updates and revisions to the model from the 2011.1.1 version used in the Draft Subsequent EIR. Consistent with the original analytical methodology used in the Draft Subsequent EIR (see Chapter 4.5 of the Draft Subsequent EIR), the "business-as-usual" (BAU) analysis for GHGs was conducted by comparing the CalEEMod analyses for the Approved Project, the proposed Modified Project and Alternative 9 scenarios to a Project if no action were taken to improve environmental practices and reduce GHG emissions. An adjustment factor was developed based on review of the AB 32 Scoping Plan data related to efficiency changes, and was applied to the area, energy, mobile, waste and water emissions source outputs of the CalEEMod modeling. This modeling also includes the commercial-work (C-W) trip length of 12.7 miles confirmed by Gibson Transportation Consulting, Inc. (see Appendix AM of the Subsequent EIR), as well as the proper 23 mile construction haul trip length. Note that for Tables 3.I through 3.L and all analyses in the Subsequent EIR, the CalEEMod modeling does not include the 93,040 square foot green roof, which consists of open and planted space on the roof of the parking structure, for both the proposed Modified Project and Alternative 9. This proposed green roof would minimize the development's impact on the surrounding city and ecosystem by trapping small amounts of particulate emissions and by reducing the Project's energy demand, which would reduce the emissions associated with production of that energy. It would blanket the roof of the parking garage, providing a significant decrease in the urban heat island effect of the site by decreasing the absorption of heat into the built fabric of the city. The roof would also capture stormwater for reuse on site or allow for it to be detained and filtered prior to release into the City of Los Angeles' stormwater system. While the benefits of this green roof are clear, there is no mechanism to include this land use in the CalEEMod modeling. Since the inclusion of a green roof reduces the environmental impacts, not including it in the CalEEMod modeling produces a conservative analysis of the Project's greenhouse gas emissions.

Table 3.I lists the operational GHG emissions for the Approved Project, the proposed Modified Project and Alternative 9 for 2021 using only the Published Rates vehicle trip rates and the 12.7-mile C-W trip length modeled with the CalEEMod 2013.2.2 model, broken down by source of emissions. Table 3.J provides the same information, but broken down by type of pollutant emissions, As shown, similar to the analysis performed with CalEEMod 2011.1.1 (see Draft Subsequent EIR, Section 4.5.7; Final Subsequent EIR, Section 3.1.1), the comparison of the Modified Project's and Alternative 9's operational GHG emissions with the BAU scenario as calculated by CalEEMod 2013.2.2 would yield a less than significant impact, and no mitigation would be required. In addition, as compared to the proposed Modified Project, Alternative 9 would not involve new significant environmental effects or a substantial increase in the severity of previously identified significant effects related to GHG emissions.

Table 3.I: Operational Greenhouse Gas Emissions Summary Comparison - by Source

Category	Pollutant Emissions, MT/year						
	Construction CO_2e	Area CO_2e	Energy CO_2e	Mobile CO_2e	Waste CO_2e	Water CO_2e	Total CO_2e
Approved Project							
Business-As-Usual	200	140	3,400	2,480	100	400	6,720
As Proposed	200	125	3,140	2,190	101	367	6,120
Emissions Reduction	0	15	260	290	-1	33	600
Percent Reduction	0.0%	10.7%	7.6%	11.7%	-1.0%	8.3%	8.9%
Proposed Modified Project							
Business-As-Usual	330	0.0610	11,300	5,080	440	2,070	19,200
As Proposed	230	0.0605	7,900	5,080	309	1,450	15,000
Emissions Reduction	100	0.0005	3,400	0	131	620	4,200
Percent Reduction	30.3%	0.8%	30.1%	0.0%	29.8%	30.0%	21.9%
Proposed Alternative 9							
Business-As-Usual	330	0.0610	11,300	4,990	440	2,040	19,100
As Proposed	230	0.0605	7,890	4,990	310	1,430	14,900
Emissions Reduction	100	0.0005	3,410	0	130	610	4,200
Percent Reduction	30.3%	0.8%	30.2%	0.0%	29.5%	29.9%	22.0%

Source: LSA Associates, Inc., October 2014.
Note: These emissions do not include the benefits of the planned 93,040 square-foot green roof on the parking structure.
Note: Numbers in table may not appear to add up correctly due to rounding of all numbers to three significant digits.
CO_2e = carbon dioxide equivalent
MT = metric tons

Table 3.J: Long-Term Operational Greenhouse Gas Emissions Summary

Category	Pollutant Emissions, MT/year					
	Bio-CO_2	NBio-CO_2	Total CO_2	CH_4	N_2O	CO_2e
Approved Project						
Business-As-Usual	56.0	6,550	6,610	4.03	0.0700	6,720
As Proposed	55.1	5,960	6,020	3.90	0.0644	6,120
Emissions Reduction	0.9	590	590	0.13	0.0056	600
Percent Reduction	1.6%	9.0%	8.9%	3.3%	8.0%	8.9%
Proposed Modified Project						
Business-As-Usual	260	18,400	18,700	19.0	0.280	19,200
As Proposed	179	14,500	14,600	12.8	0.194	15,000
Emissions Reduction	81	3,900	4,100	6.2	0.086	4,200
Percent Reduction	31.2%	21.2%	21.9%	32.6%	30.7%	21.9%
Proposed Alternative 9						
Business-As-Usual	260	18,300	18,600	18.0	0.280	19,100
As Proposed	179	14,400	14,500	12.7	0.193	14,900
Emissions Reduction	81	3,900	4,100	5.3	0.087	4,200
Percent Reduction	31.2%	21.3%	22.0%	29.4%	31.1%	22.0%

Source: LSA Associates, Inc., October 2014.
Note: These emissions do not include the benefits of the planned 93,040 square-foot green roof on the parking structure.
Note: Numbers in table may not appear to add up correctly due to rounding of all numbers to three significant digits.
Bio-CO_2 = biologically generated CO_2
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT/year = metric tons per year
N_2O = nitrous oxide
NBio-CO_2 = non-biologically generated CO_2

As such, the use of the CalEEMod 2013.2.2 model did not change the impact conclusions from the original analyses for the Modified Project and Alternative 9 in the Subsequent EIR (see Chapter 4.5 of the Draft Subsequent EIR and Section 3.1.1 of the Final Subsequent EIR).

Another method to analyze the emission reduction between BAU and the As Proposed condition is to apply the effects of the proposed project design features and regulations enacted since AB 32 that affect project efficiency to the inputs of the CalEEMod modeling rather than to the results, as was done for the analysis in Tables 3.I and 3.J above. CalEEMod version 2013.2.2 has better tools built into the model to support this type of analysis than version 2011.1.1. Table 3.K lists the operational GHG emissions for the Approved Project, the proposed Modified Project, and Alternative 9 for 2021 using the same Published Rates vehicle trip rates and the 12.7-mile C-W trip length used in the analyses for Tables 3.I and 3.J above, broken down by the source of emissions. Table 3.L provides the same information, but broken down by type of pollutant emissions. See the summary CalEEMod input files, which are included in Appendix AN of the Subsequent EIR.

All three BAU scenarios have the energy usage set to 2005 Title 24 California Building Code (CBC) levels. The As Proposed Approved Project scenario has energy usage set to exceed 2005 Title 24 CBC levels by 10 percent and water conservation measures achieving a 5 percent improvement over BAU. The As Proposed Modified Project and Alternative 9 scenarios both have the energy, water and waste conservation usage set to meet 2013 Title 24 CBC levels (CalEEMod 2013.2.2 only includes the 2010 CBC; based on the California Energy Commission (CEC) information that the 2013 CBC generally achieves a 25 percent improvement over the 2010 CBC, the As Proposed Modified Project and Alternative 9 scenarios both have the energy usage set to exceed the 2010 CBC by 25 percent in the mitigation section of CalEEMod) and include water and waste conservation measures achieving a corresponding 35 and 50 percent improvement, respectively, to represent what the project is required to accomplish to comply with the 2013 CBC and the stringent water and waste conservation project features planned.

As shown in Tables 3.K and 3.L, similar to the analysis performed above, the BAU comparison of the Modified Project and Alternative 9 calculated by CalEEMod 2013.2.2 would result in the same conclusion of a less than significant impact related to GHG emissions as provided in the Draft Subsequent EIR (see Draft Subsequent EIR, Section 4.5.7; Final Subsequent EIR, Section 3.1.1), and no mitigation would be required. In addition, as compared to the proposed Modified Project, Alternative 9 would not involve new significant environmental effects or a substantial increase in the severity of previously identified significant effects related to GHG emissions. Therefore, the conclusions regarding GHG emissions do not change whether emission reductions are modeled by applying PDFs and AB 32 factors to CalEEMod inputs or results.

As a result, the results of this supplemental analysis do not result in a new significant impact or a substantial increase in the severity of a previously identified significant impact. Whether the CalEEMod inputs or outputs are adjusted for the BAU analysis, the conclusion would be the same. The proposed Modified Project and Alternative 9 are not significant for GHG emissions.

Table 3.K: Operational Greenhouse Gas Emissions Summary Comparison by Source

Category	Pollutant Emissions, MT/year						
	Construction CO_2e	Area CO_2e	Energy CO_2e	Mobile CO_2e	Waste CO_2e	Water CO_2e	Total CO_2e
Approved Project							
Business-As-Usual	230	125	3,140	2,190	101	367	6,150
As Proposed	230	125	2,910	2,190	101	342	5,900
Emissions Reduction	0	0	230	0	0	25	250
Percent Reduction	0.0%	0.0%	7.3%	0.0%	0.0%	6.8%	4.1%
Proposed Modified Project							
Business-As-Usual	270	0.0605	8,220	5,080	309	1,450	15,300
As Proposed	190	0.0605	6,370	5,080	155	923	12,800
Emissions Reduction	80	0	1,850	0	154	527	2,500
Percent Reduction	29.6%	0.0%	22.5%	0.0%	49.8%	36.3%	16.3%
Proposed Alternative 9							
Business-As-Usual	270	0.0605	8,210	4,990	310	1,430	15,200
As Proposed	190	0.0605	6,360	4,990	155	911	12,600
Emissions Reduction	80	0	1,850	0	155	519	2,600
Percent Reduction	29.6%	0.0%	22.5%	0.0%	50.0%	36.3%	17.1%

Source: LSA Associates, Inc., September 2014.
Note: These emissions do not include the benefits of the planned 93,040 square-foot green roof on the parking structure.
Note: Numbers in table may not appear to add up correctly due to rounding of all numbers to three significant digits.
CO_2e = carbon dioxide equivalent MT = metric tons

Table 3.L: Long-Term Operational Greenhouse Gas Emissions Summary

Category	Pollutant Emissions, MT/year					
	Bio- CO_2	NBio- CO_2	Total CO_2	CH_4	N_2O	CO_2e
Approved Project						
Business-As-Usual	55.1	5,980	6,040	3.90	0.0650	6,150
As Proposed	54.6	5,730	5,780	3.84	0.0610	5,900
Emissions Reduction	0.5	250	260	0.06	0.004	250
Percent Reduction	0.9%	4.2%	4.3%	1.6%	6.3%	4.1%
Proposed Modified Project						
Business-As-Usual	179	14,800	15,000	12.8	0.200	15,300
As Proposed	95.7	12,500	12,600	7.20	0.139	12,800
Emissions Reduction	83.3	2,300	2,400	5.6	0.061	2,500
Percent Reduction	46.5%	15.5%	16.0%	44.0%	29.8%	16.3%
Proposed Alternative 9						
Business-As-Usual	179	14,700	14,900	12.7	0.200	15,200
As Proposed	95.4	12,400	12,500	7.20	0.140	12,600
Emissions Reduction	83.6	2,300	2,400	5.5	0.060	2,600
Percent Reduction	46.7%	15.6%	16.1%	43.6%	29.9%	17.1%

Source: LSA Associates, Inc., September 2014.
Note: These emissions do not include the benefits of the planned 93,040 square-foot green roof on the parking structure.
Note: Numbers in table may not appear to add up correctly due to rounding of all numbers to two significant digits.
Bio-CO_2 = biologically generated CO_2
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT = metric tons
N_2O = nitrous oxide
NBio-CO_2 = non-biologically generated CO_2

3.5 AMBIENT NOISE MONITORING

As stated in Section 4.8 of the Draft Subsequent EIR, LSA Associates, Inc. (LSA) conducted an ambient noise survey in the vicinity of the Project site at eight locations on February 22, 2012, during daytime hours between 10:30 a.m. and 3:30 p.m. LSA also conducted nighttime noise measurements on February 29 and March 1, 2012, during nighttime hours between 10:00 p.m. on February 29, 2012, and 1:00 a.m. on March 1, 2012. Each noise measurement was conducted for 15 minutes except for the nighttime noise measurements that were conducted in the residential areas (Locations 1, 3, and 6) and at Beverly Hills High School (Location 8), where few traffic or other noise sources were measured. At these four locations, the measured noise levels were recorded for 10 minutes and averaged to determine the ambient noise level. Table 4.8.L in the Draft Subsequent EIR lists the measured noise levels.

The ambient noise level at a particular location is the overall environmental noise level caused by all noise sources in the area, both near and far, including all forms of traffic, industry, lawnmowers, wind in foliage, insects, and animals, etc. Ambient noise levels typically fluctuate throughout the day, depending on the noise sources in the vicinity of the noise measurement location. Noise levels fluctuate between the maximum and the minimum but generally lie in the range between these two extremes. In a developed urban area dominated by vehicular traffic noise, ambient noise levels fluctuate within a narrow range.

To determine the ambient noise level in a specific area, Chapter XI, Section 111.01(a) of the Los Angeles Municipal Code specifies that ambient noise shall be averaged over a period of at least 15 minutes at a location and time of day comparable to that during which the measurement is taken of the particular noise source being measured. At the four locations where noise measurements were conducted for 10 minutes (Locations 1, 3, 6, and 8), there was little variation in the noise level over the entire measurement period (i.e., there were no unusual events, and noise levels were steady for the entire 10 minutes). Except for occasional vehicular traffic, there were no other noise-generating events in the vicinity of these noise measurement locations during the nighttime hours. Because the ambient noise level is an average, halting the noise measurements after 10 minutes in such a stable environment has little effect on the calculation of the ambient noise level and does not affect the validity of the ambient noise levels measured at these locations.

Nevertheless, LSA conducted follow-up ambient noise monitoring between 10:10 p.m. on December 10, 2013, and 12:11 a.m. on December 11, 2013, at the four measurement locations where nighttime ambient noise measurement was previously conducted for 10 minutes each (Locations 1, 3, 6, and 8). In December 2013, the noise measurements were taken for 15 minutes at each location. Table 3.M provides the measured ambient noise levels from 2012 and 2013. Similar to the ambient noise levels obtained during nighttime hours between 10:00 p.m. on February 29, 2012, and 1:00 a.m. on March 1, 2012, the dominant noise sources were vehicular traffic on local streets.

Table 3.M: Noise Measurements

Location	Measured Ambient Noise Levels (dBA)		Difference
	2012 Nighttime L_{eq} (10 p.m.–7 a.m.)	2013 Nighttime L_{eq} (10 p.m.–7 a.m.)	
1	52.7	52.1	-0.6
3	53.5	55.4	1.9
6	49.5	51.9	2.4
8	51.2	46.9	-4.3

dBA = A-weighted decibel
L_{eq} = Equivalent continuous noise level

Comparison between the ambient noise levels measured in 2012 and 2013 at the above four locations in the project vicinity shows that two locations recorded a slightly lower ambient noise level and two locations recorded a small increase in the nighttime ambient noise level (1.9 dBA and 2.4 dBA). The largest change, at Location 8 (Beverly Hills High School), recorded a 4.3 dBA lower nighttime ambient noise level compared to the 2012 ambient noise level. It is believed that this change was due to less traffic in the vicinity of the high school during the 2013 nighttime noise measurement period. Overall, these small differences are not unexpected in an urban environment where ambient noise levels are heavily influenced by traffic and surrounding development.

Section 4.8 of the Draft Subsequent EIR and Section 3.0 of the Final Subsequent EIR demonstrated that noise levels associated with the proposed Modified Project and Alternative 9 would not cause noise levels to increase over ambient noise conditions by 5 dBA at the closest receptor locations that are within close proximity to the Project site. Other off-site noise-sensitive receptor locations, including Locations 1, 3, 6, and 8, are at longer distances from the Project site and shielded by intervening structures/buildings between the Project site and these offsite locations. They would be exposed to noise associated with on-site sources at levels much lower than those that are closest to the Project site evaluated in the noise impact analysis. Due to the small variation in ambient noise measurements at Locations 1, 3, 6, and 8 (between 2012 and 2013) and the distance between the Project site and these locations, it can be concluded that the proposed Modified Project and Alternative 9 would not cause noise levels to increase ambient noise conditions by 5 dBA at the closest or any other off-site noise-sensitive receptor location, including Locations 1, 3, 6, and 8, even if the 2013 noise measurements are used in the analysis. Therefore, the 2013 ambient noise levels would not affect the findings or conclusions of the Draft and Final Subsequent EIR. Because no on-site noise or vibration sources would affect the other noise-sensitive locations in the immediate vicinity of the Project site, impacts related to on-site noise and vibration would be less than significant for the proposed Modified Project and for Alternative 9.

Therefore, this supplemental analysis does not result in a new significant impact or a substantial increase in the severity of a previously identified significant impact.

3.6 CONSTRUCTION EQUIPMENT NOISE ATTENUATION

As discussed in detail in Chapter 4.8 of the Draft Subsequent EIR and Section 3.1.1 of the Final Subsequent EIR, noise produced during construction of the proposed Modified Project or Alternative 9 would not result in any significant impacts with the implementation of Mitigation Measures 4.8.1 and 4.8.2, and with compliance with Section 41.40 of the Los Angeles Municipal Code. All aspects of the construction noise analysis were properly characterized in the Draft Subsequent EIR, including the heights of construction equipment noise sources and receptors when calculating the effectiveness of the proposed construction noise barrier which would be required by Mitigation Measure 4.8.1. Commenters on the Subsequent EIR have criticized the construction noise analysis by claiming that it understates the height and noise generated by heavy construction equipment exhaust stacks, and that it underestimates the height of noise receptors at the Century Plaza Hotel, thereby overstating the effectiveness of the noise barrier. As explained in Response to Comment O-27B-8, these criticisms are without merit.

According to the Los Angeles Municipal Code, a noise level increase of 5 dBA over the existing average ambient noise level at an adjacent property line is considered a noise violation. In addition to the discussion of construction noise provided in Chapter 4.8, Noise, of the Draft Subsequent EIR and Section 3.1.1 and the Responses to Comments in the Final Subsequent EIR, the following analyses support the conclusions reached in the Subsequent EIR, that construction noise for the proposed Modified

Project or Alternative 9 would not result in an increase of 5 dBA or more over the existing ambient noise level.

First, the analysis in the Subsequent EIR properly accounted for the height and sources of construction equipment noise. As described in Response to Comment O-27B-8 in the Final Subsequent EIR, construction equipment usually emits noise from several sources including, but not limited to, engines, exhaust pipes, and wheel/tire interaction with the ground surface. The typical exhaust height for construction equipment is 9 feet, the typical engine height is 4 feet, and the typical height of the wheel/tire interaction is less than 1 foot. The average height of all three sources is 4.7 feet. The engine of the heavy duty equipment is the dominant source of noise, with the exhaust and wheel/ground interaction contributing additional noise from the equipment. Therefore, providing a noise barrier that is higher than the engine makes the greatest difference with regard to noise attenuation. Mitigation Measure 4.8.1 would require a construction noise barrier at a minimum height of 8 feet.

Second, the Subsequent EIR also properly accounted for the elevation of noise receptors at the Century Plaza Hotel, the property line of which is located 140 feet from the edge of the Project site. While the Century Plaza Hotel is approximately 5 feet higher in elevation than the edge of the Project site, the small elevation difference would not substantially change the line-of-sight between the Project site and the Century Plaza Hotel, and the 8-foot noise barrier required by Mitigation Measure 4.8.1, which is approximately 10 feet from the active construction area, would be an effective means of reducing noise at the Century Plaza Hotel property line to a less than significant level. Using a receiver height of 5 feet, a receiver elevation of 5 feet, a source height of 4.7 feet, a distance of 140 feet from the receiver to the sound barrier, and a distance of 10 feet between the construction equipment and the sound barrier, the noise attenuation for the construction equipment would be 8.2 decibels. This barrier would reduce the project's construction-related noise at the Century Plaza Hotel property line from up to 77 dBA L_{eq} to 69 dBA L_{eq} or less. The ambient noise level in the vicinity of the Century Plaza Hotel is 68 dBA L_{eq}. Therefore, with the 8-foot noise barrier, the project's construction-related noise increase at the Century Plaza Hotel property line would be 1 dBA or less, which is less than the City's 5 dBA threshold (refer to pages 4.8-91 and 4.8-92 in the Draft Subsequent EIR).

As stated above, commenters on the Subsequent EIR claimed that Draft Subsequent EIR understates the noise generated by heavy construction equipment exhaust stacks. The following shows that, even evaluating the three construction equipment noise sources individually, the recommended noise barrier height would reduce construction noise from all noise sources below a level of significance. As discussed above, the engine is the dominant noise source; however, as a worst case condition, this supplemental analysis assumes that all three sources (engines, exhaust pipes, and wheel/tire interaction with the ground surface) would generate the same noise level. As discussed on Page 4.8-32 and shown in Table 4.8.N of the Subsequent EIR, the total noise for construction is 86 dBA L_{eq} at a reference distance of 50 feet from the center of the construction activity. When all three noise sources generate the same noise level, in order to generate the total noise level of 86 dBA, the noise level from each source would be 81 dBA (81 dBA + 81 dBA = 84 dBA; 84 dBA + 81 dBA = 86 dBA). Therefore, for this analysis, each of the three noise sources is assumed to generate 81 dBA at a distance of 50 feet. Using a receiver height of 5 feet, a receiver elevation of 5 feet, source heights of 9, 4, and 1 feet, a distance of 140 feet from the receiver to the sound barrier, and a distance of 10 feet between the construction equipment and the sound barrier, the noise attenuation of the 8 foot barrier for the exhaust, engine, and tire/track noise would be 4.2, 9.2, and 12.1 decibels, respectively. At a distance of 140 feet from the barrier, the noise levels from the exhaust, engine, and tire/track noise would be 67.3, 62.3, and 59.4 decibels, respectively. The combined noise level, from all three noise sources associated with the construction equipment, at the receiver after attenuation would be 69 dBA. This is the same noise level calculated above using the single source height of 4.7 feet associated with the engine source height. The construction noise calculations are summarized in Table 3.N.

Table 3.N: Construction Noise Level at Century Plaza Hotel using Three Source Heights

Noise Source	Source Height (feet)	Noise Level at 50 feet (dBA Leq)	Noise Level at Century Plaza without Barrier (dBA Leq)	Noise Attenuation of 8-foot Barrier (dBA)	Attenuated Noise Level (dBA Leq)
Exhaust	9	81	71.5	4.2	67.3
Engine	4	81	71.5	9.2	62.3
Tire	1	81	71.5	12.1	59.4
Total		86	76.5		69

dBA = A-weighted decibel
L_{eq} = Equivalent continuous noise level

Commenters on the Subsequent EIR also claimed that Draft Subsequent EIR understates the height of heavy construction equipment exhaust stacks and the height of noise receptors at the Century Plaza Hotel. These commenters suggest, without evidentiary support, using heights of up to 8 feet for the engine noise and 12 feet for the exhaust noise and increasing the receiver elevation from 5 to 10 feet. As shown in Table 4.8.N of the Draft Subsequent EIR, the noisiest construction phases are the ground clearing and finishing phases. The largest construction equipment used during those phases are motor graders, excavators, and loaders/backhoes. Table 3.O lists the source heights for the exhaust stacks and engines for each equipment type. As shown, these heights are consistent with those used in Table 3.N and are much lower than the heights recommended by the commenters.

Table 3.O: Construction Equipment Engine and Exhaust Stack Heights

Equipment Type	Engine Height (feet)	Exhaust Stack Height (feet)
Motor Grader	6.5	9.6
Excavator	4.5	7.2
Loader/Backhoe	3.0	8.3
Average	4.7	8.4

Source: Caterpillar Performance Handbook, Edition 42, 2012.

Nevertheless, in order to address this claim and to be conservative, the construction-related noise increase at the Century Plaza Hotel was calculated using the worst case engine height (8 feet), stack heights (12 feet), and receptor height (10 feet) and assuming all three noise sources (engines, exhaust pipes, and wheel/tire interaction with the ground surface) generate the same noise level (81 dBA at a distance of 50 feet). Using these heights, along with a height of 1 foot for tire/track noise, the noise attenuation produced by the 8 foot barrier would be reduced to 0.3, 4.9, and 11.5 decibels, for the exhaust, engine, and tire/track noise respectively. At a distance of 140 feet from the barrier, the noise levels from the exhaust, engine, and tire/track noise would be 71.2, 66.6, and 60.0 decibels, respectively. The combined noise level from all three noise sources associated with the construction equipment at the receiver after attenuation would be 72.7 dBA L_{eq}. The ambient noise level in the vicinity of the Century Plaza Hotel is 68 dBA L_{eq}. Using the worst case conditions provided by the commenters, the Project's construction-related noise increase at the Century Plaza Hotel property line would be 4.7 dBA, which is less than the City's 5 dBA threshold and a less than significant impact. The construction noise calculations are summarized in Table 3.P.

Table 3.P: Construction Noise Level at Century Plaza Hotel using Commenter Source Heights

Noise Source	Source Height (feet)	Noise Level at 50 feet (dBA L_{eq})	Noise Level at Century Plaza without Wall (dBA L_{eq})	Noise Attenuation of 8-foot Wall (dBA)	Attenuated Noise Level (dBA L_{eq})
Exhaust	12	81	71.5	0.3	71.2
Engine	8	81	71.5	4.9	66.6
Tire	1	81	71.5	11.5	60.0
Total		86	76.5		72.7

dBA = A-weighted decibels
L_{eq} = equivalent continuous noise level

Therefore, with implementation of the temporary construction barrier required by Mitigation Measure 4.8.1, construction noise impacts would be reduced to a less than significant level. As a result, the results of this supplemental analysis do not result in a new significant impact or a substantial increase in the severity of a previously identified significant impact.

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