

## Appendix C.2 Air Quality Peer Review by ESA PCR



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November 10, 2016

Wendy Lockwood  
SIRIUS ENVIRONMENTAL  
1478 N. Altadena Drive  
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**Subject:** Peer Review of EIR Air Quality Analyses for the Harvard-Westlake Parking Improvement Plan in the City of Los Angeles

Dear Ms. Lockwood:

ESA PCR has reviewed the Air Quality and Greenhouse Gas (GHG) analyses performed in association with the Final Environmental Impact Report (FEIR) for the Harvard-Westlake Parking Structure Improvement Plan (Project), prepared by Terry Hayes and Associates (TAHA). The purpose of the peer review was to identify any missing or erroneous analyses, or any inconsistencies with South Coast Air Quality Management District (SCAQMD), California Air Resources Board (CARB) or Environmental Protection Agency (EPA) guidance on performing air quality analyses. In addition, we also examined whether in our professional opinion the revised air quality studies prepared by TAHA in August 2016 comply with the California Environmental Quality Act (CEQA). The peer review analyzed revised air quality studies prepared by TAHA in August 2016 to response to comments on the Recirculated Draft EIR (RDEIR) as part of the FEIR for the Project. ESA PCR reviewed the following documents in:

- Air Quality Section of the RDEIR (Dated February 2016)
- Greenhouse Gas Section of the RDEIR (Dated February 2016)
- CalEEMod input and output files (Dated August 2016)
- AERMOD dispersion modeling input and output files (Dated August 2016)

This letter contains the results of the review related to the assessment of potential impacts to Air Quality resulting from project construction and operations.

## **SUMMARY OF REVIEW**

The analyses were performed in accordance with industry standards. The methodology used to perform air quality analysis prepared in association with the FEIR included the use of the CalEEMod and AERMOD models in a manner appropriate, reasonable and consistent with guidance provided by the SCAQMD, CARB and EPA. The Air Quality mitigation measures presented in the FEIR are also appropriate, feasible, and effective. In our professional opinion, the air quality analysis complies with all applicable rules and regulations, including CEQA.

## ISSUES IDENTIFIED AND RESOLUTION

Our peer review confirmed certain discrepancies that were raised in public comments on the RDEIR; and although these items merit mentioning, and have been corrected in the FEIR, they did not result in erroneous conclusions regarding significance of impacts as presented in the RDEIR.

1. **Underestimated Emissions in Table 3.2-7 Localized Construction Emissions.** The CalEEMod output files provided showed that the localized construction NO<sub>x</sub> emissions, prior to mitigation, reported in Table 3.2-7 of the RDEIR were underestimated. The construction phases for Grading and Street Work present emissions that were not consistent with the CalEEMod outputs. Table 3.2-7 in the RDEIR shows the localized NO<sub>x</sub> emissions for the Grading phase as 61 pounds per day; however, the CalEEMod outputs show localized NO<sub>x</sub> emissions for the Grading phase as 71 pounds per day. Table 3.2-7 in the RDEIR showed the localized NO<sub>x</sub> emissions for the Street Work phase as 19 pounds per day; however, the CalEEMod outputs show localized NO<sub>x</sub> emissions for the Grading phase as 28 pounds per day. With these corrections, and prior to the implementation of feasible mitigation measures, the maximum localized NO<sub>x</sub> emissions would be 113 pounds per day due to the overlap of the Grading, Soil Nailing, and Shotcrete phases compared to the threshold of significance of 114 pounds per day and the original value of 103 pounds per day reported in that RDEIR table Implementation of mitigation measure MM-AQ-10, as revised in the FEIR, would reduce the localized NO<sub>x</sub> emissions during the overlap of the Grading, Soil Nailing, and Shotcrete phases from 113 pounds per day to 55 pounds per day, well below the threshold of significance. Thus, the correction in the localized NO<sub>x</sub> emissions will not result in an exceedance of the applicable significance threshold.

The corrected analysis indicates that the data errors did not result in errors regarding the significance conclusions of the previous analyses. The analysis and conclusions presented in the FEIR as corrected are based on data that accurately and appropriately represents the proposed project impact.

2. **Underestimated Haul and Concrete Truck Trips.** The number of haul truck trips assumed in the RDEIR version of the CalEEMod input files assumed a total of 17,640 truck trips over a period of 245 days, which is equivalent to 72 trips per day. However, these trips were inputted as one-way trips whereas the RDEIR established the activity as 72 inbound trips and 72 outbound trips. ESA PCR has confirmed that the correct number of haul trucks has been implemented in the most updated CalEEMod model runs prepared by TAHA in August 2016 by doubling the correct trip length value (discussed under Item 3 below).

The number of haul trucks reported in Appendix C of the RDEIR has been corrected in Appendix C.3 of the FEIR to account for round trips. The corrected analysis indicates that the data errors did not result in errors regarding the significance conclusions of the previous analyses. The analysis and conclusions presented in the FEIR as corrected are based on data that accurately and appropriately represents the proposed Project's potential impacts.

3. **Underestimated Haul Truck Trip Lengths.** The project description of the RDEIR mentioned a trip length of 35 miles for excavation haul trucks. However, the RDEIR version of the CalEEMod inputs used a default haul truck trip length of 20 miles. This has been corrected in the CalEEMod outputs in the FEIR providing corrected appropriate trip lengths for consistency purposes. The corrected CalEEMod files show that the

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correct trip length should be 26 miles per round trip (or 13 miles each way to and from the site). This correction has been implemented in the most recent updated CalEEMod model runs prepared by TAHA in August 2016 (FEIR Appendix C.3). The updated run uses a value of 26 miles for 72 truck trips per day, which is equivalent to 13 miles for 144 truck trips per day. This correction results in an increase in the emission of NO<sub>x</sub> as compared to values reported in the RDEIR. It should be noted the amount of NO<sub>x</sub> reported in the RDEIR exceeded the applicable threshold for regional construction emissions and the RDEIR concluded the impact to be significant, requiring mitigation to reduce the impact to a less than significant level. The increased level of emissions has been corrected in Table 3.2-6 of the FEIR. The previously proposed mitigation measure MM-AQ-10 has also been revised to commensurately reduce the levels of NO<sub>x</sub> to a less than significant level.

The corrected analysis indicates that the data errors did not result in errors regarding the significance conclusions of the previous analyses. The analysis and conclusions presented in the FEIR as corrected are based on data that accurately and appropriately represents the proposed Project's potential impacts.

4. **Vendor Truck Trips during Grading.** Page 3.2-27 of the RDEIR mentioned that up to 8 delivery trucks per day (8 inbound trips and 8 outbound trips) would occur. It was not clear where these trips are accounted for in the updated CalEEMod model runs prepared by TAHA in August 2016. The CalEEMod model runs show 3 vendor truck trips per day during the Soil Nailing phase and 5 vendor truck trips per day during the Shotcrete phase. The modeling has been clarified indicating that these trips are intended to represent the 8 delivery trucks per day. Additionally, because CalEEMod vendor truck trip data are based on one-way trips, the values have been doubled to account for 16 one-way vendor truck trips (equivalent to 8 round trips).

TAHA has corrected this issue for the FEIR by doubling the vendor truck trip length. The corrected analysis indicates that the data errors did not result in errors regarding the significance conclusions of the previous analyses. The analysis and conclusions presented in the FEIR as corrected are based on data that accurately and appropriately represents the proposed Project's potential impacts.

5. **Underestimated AERMOD Emission Rates for Construction.** The emission rates entered into the AERMOD dispersion model run for evaluating localized construction PM<sub>10</sub> and PM<sub>2.5</sub> emissions were underestimated. Based on the CalEEMod outputs, the maximum localized emissions were approximately 9.6 pounds per day for PM<sub>10</sub> and 7.5 pounds per day for PM<sub>2.5</sub> (on-site fugitive dust with watering plus heavy-duty equipment exhaust emissions). However, Table 3.2-7 in the RDEIR showed the emissions as 9 pounds per day for PM<sub>10</sub> and 7 pounds per day for PM<sub>2.5</sub>. The AERMOD model used a concentration of  $8.40 \times 10^{-6}$  grams per second per square meter (g/s/m<sup>2</sup>) of PM<sub>10</sub>, which corresponds to approximately 9 pounds per day (over an 8-hour construction workday). The emissions rate should have been set at  $8.96 \times 10^{-6}$  g/s/m<sup>2</sup> of PM<sub>10</sub>, which corresponds to approximately 9.6 pounds per day (over an 8-hour construction workday). The AERMOD model used an emission rate of  $3.73 \times 10^{-6}$  g/s/m<sup>2</sup> of PM<sub>2.5</sub>, which corresponds to approximately 4 pounds per day (over an 8-hour construction workday). The AERMOD modeling run in the RDEIR was programmed with the 4 pounds per day screening level for PM<sub>2.5</sub> rather than the project's actual localized PM<sub>2.5</sub> emissions. The emissions rate should have been set at  $7.00 \times 10^{-6}$  g/s/m<sup>2</sup> of PM<sub>2.5</sub>, which corresponds to approximately 7.5 pounds per day (over an 8-hour construction workday), which is nearly double the rate used in the RDEIR.

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These corrections have been implemented, resulting in slightly higher  $PM_{10}$  and  $PM_{2.5}$  concentrations at sensitive receptors than reported in the RDEIR. However, the corrected analysis indicates that the data errors did not result in errors regarding the significance conclusions of the previous analyses. The analysis and conclusions presented in the FEIR as corrected are based on data that accurately and appropriately represents the proposed Project's potential impacts.

6. **AERMOD Parameters Incorrect.** Several of the AERMOD input parameters used (September 2015 run) were not consistent with the SCAQMD Modeling Guidance for AERMOD. The modeling guidance is available on the SCAQMD website at the following address: <http://www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/modeling-guidance>. The anemometer height for the Burbank meteorological station should have been set to 175 meters. The flagpole receptor heights should have been set at 0.0 meters consistent with SCAQMD AERMOD Modeling Guidance.

TAHA has corrected the meteorological station elevation heights and the flagpole receptor heights. The corrected analysis indicates that the data errors did not result in errors regarding the significance conclusions of the previous analyses. The analysis and conclusions presented in the FEIR as corrected are based on data that accurately and appropriately represents the proposed Project's potential impacts.

7. **Underestimated Concrete Truck Emissions.** The RDEIR describes 50 inbound and 50 outbound concrete truck trips. The CalEEMod runs from September 2015 accounted for 50 concrete truck trips, but the trips were input as one-way trips. The number of truck trips for haul and concrete trucks should have been doubled to account for round-trips. As a conservative assumption, concrete trucks should also have been classified as Heavy-Heavy Duty Trucks (HHDT) instead of Heavy Duty (HDT) Mix.

TAHA has corrected this issue for the FEIR. The corrected analysis indicates that the data errors did not result in errors regarding the significance conclusions of the previous analyses. The analysis and conclusions presented in the FEIR as corrected are based on data that accurately and appropriately represents the proposed Project's potential impacts.

8. **Greenhouse Gas Emissions.** CEQA guidelines allow for a project-by-project determination of whether the analysis of GHG emissions should be qualitative or quantitative. The RDEIR calculates (GHG) emissions resulting from construction and operational activities, relying on CalEEMod, and uses a mass-based significance criterion. The RDEIR applies a 30 year amortization schedule to the construction emissions, consistent with SCAQMD guidelines. The change in operational GHG emissions was calculated for the long-term energy demand from lighting of the athletic field.

TAHA has updated the emission calculations for the FEIR, primarily as a result of revisions to Mitigation Measure MM-AQ-10 and new Mitigation Measure MM-AQ-11. Although construction emissions increased slightly, compared to the RDEIR, the conclusion that the project does not generate a significant GHG impact remains unchanged.



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## **CONCLUSIONS**

ESA PCR conducted a peer review of the RDEIR Air Quality Section for the Harvard Westlake Parking Improvement Plan in the City of Los Angeles, along with Appendices and revised modeling updates and analyses prepared by TAHA in association with the FEIR for the Project. In response to ESA PCR's comments, TAHA has revised the analyses presented in the RDEIR. The revisions incorporated into the FEIR are consistent with SCAQMD, CARB, and EPA guidelines on preparing CEQA air quality analyses.

Sincerely,  
**ESA PCR**

A handwritten signature in cursive script that reads "Heidi Rous".

Heidi Rous, CPP  
Air Quality and Noise Group Director  
Southern California Region