



# DEPARTMENT OF CITY PLANNING

## APPEAL REPORT

### City Planning Commission

**Date:** May 14, 2020  
**Time:** After 8:30 A.M.  
**Place:** In conformity with the Governor's Executive Order N-29-20 (March 17, 2020) and due to concerns over COVID-19, the CPC meeting will be conducted entirely telephonically by Zoom [<https://zoom.us/>].

The meeting's telephone number and access code access number will be provided no later than 72 hours before the meeting on the meeting agenda published at <https://planning.lacity.org/about/commissions-boards-hearings> and / or by contacting [cpc@lacity.org](mailto:cpc@lacity.org)

**Public Hearing:** October 16, 2019  
**Appeal Status:** Further Appealable to City Council  
**Expiration Date:** May 19, 2020

**Case No.:** VTT-74761-1A  
**CEQA No.:** ENV-2016-4676-EIR  
**Related Cases:** CPC-2016-4675-TDR-VCU-MCUP  
**Council No.:** 14-Huizar  
**Plan Area:** Central City  
**Plan Overlay:** SN – Historic Broadway Sign District  
**Certified NC:** Downtown Los Angeles  
**GPLU:** Regional Commercial  
**Zone:** C2-4D-SN  
**Applicant:** Rossano De Cotiis, Onni Times, LP  
**Representative:** Dale Goldsmith, Armbruster, Goldsmith and Delvac, LLP  
**Appellant:** Supporter's Alliance for Environmental Responsibility  
**Appellant Representative:** Richard Drury, Lozeau Drury LLP

**PROJECT LOCATION:** 121, 145, 147 S. Spring Street; 100, 102, 106, 108, 110, 118, 120, 124, 126, 128, 130, 140, 142 S. Broadway; 202, 212, 214, 220, 224, 228, 230, 234 W. 1<sup>st</sup> Street; 205, 211, 221 W. 2<sup>nd</sup> Street

**PROPOSED PROJECT:** Vesting Tentative Tract Map No. 74761 (map stamp-dated June 28, 2018), located at 121 – 147 S. Spring Street, 100 – 142 S. Broadway, 202 – 234 W. 1st Street, and 205 – 221 W. 2nd Street for the merger of a portion of public right of way along Broadway and resubdivision of the project site into nine lots for condominium purposes for a mixed-use project containing up to 1,127 residential units and up to 34,572 square feet of new commercial floor area, and a haul route for the export of up to 364,000 cubic yards of soils.

**REQUESTED ACTIONS:** Appeal of the April 1, 2020 Advisory Agency determination which:

**CERTIFIED** the following:

- 1) The Times Mirror Square Project EIR has been completed in compliance with the California Environmental Quality Act (CEQA);
- 2) The Times Mirror Square Project EIR was presented to the Advisory Agency as a decision-making body of the lead agency; and
- 3) The Times Mirror Square Project EIR reflects the independent judgment and analysis of the lead agency.

**ADOPTED** the following:

- 1) The related and prepared Times Mirror Square Project EIR Environmental Findings;
- 2) The Statement of Overriding Considerations; and
- 3) The Mitigation Monitoring Program prepared for the Times Mirror Square Project EIR.

**APPROVED** Pursuant to Section 17.15 of the Los Angeles Municipal Code (LAMC),

**Vesting Tentative Tract Map No. 74761** (map stamp-dated June 28, 2018), located at 121 – 147 S. Spring Street, 100 – 142 S. Broadway, 202 – 234 W. 1st Street, and 205 – 221 W. 2nd Street for the merger of a portion of public right of way along Broadway and resubdivision of the project site into **nine lots for condominium purposes** for a mixed-use project containing up to 1,127 residential units and up to 34,572 square feet of new commercial floor area, and a haul route for the export of up to 364,000 cubic yards of soils.

**RECOMMENDED ACTIONS:**

**Deny** the appeal, and sustain the following actions of the Advisory Agency:

1. **Find** that the City Planning Commission has reviewed and considered the information contained in the Environmental Impact Report No. ENV-2016-4676-EIR (SCH No. 2017061083), which includes the Draft EIR, dated March 28, 2018, and the Final EIR, dated September 20, 2019, and Errata, dated March 24, 2020 (collectively, Times Mirror Square Project EIR), as well as the whole of the administrative record; and

**CERTIFY** the following:

- 1) The Times Mirror Square Project EIR has been completed in compliance with the California Environmental Quality Act (CEQA);
- 2) The Times Mirror Square Project EIR was presented to the City Planning Commission as a decision-making body of the lead agency; and
- 3) The Times Mirror Square Project EIR reflects the independent judgment and analysis of the lead agency.

**ADOPT** the following:

- 1) The related and prepared Times Mirror Square Project Environmental Findings;
  - 2) The Statement of Overriding Considerations; and
  - 3) The Mitigation Monitoring Program prepared for the Times Mirror Square Project EIR (Exhibit B).
2. **Sustain** the actions of the Advisory Agency in approving Vesting Tentative Tract No. VTT-74761 for the merger of a portion of public right of way along Broadway and resubdivision of the project site into nine lots for condominium purposes for a mixed-use project containing up to 1,127 residential units and up to 34,572 square feet of new commercial floor area, and a haul route for the export of up to 364,000 cubic yards of soils; and
  3. **Adopt** the Advisory Agency's Conditions of Approval and Findings.

VINCENT P. BERTONI, AICP  
Director of Planning



for

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Lisa Webber, AICP  
Deputy Director



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Luciralia Ibarra,  
Principal City Planner



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Alan Como, AICP  
City Planner  
Deputy Advisory Agency



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William Lamborn  
City Planner

**ADVICE TO PUBLIC:** \*The exact time this report will be considered during the meeting is uncertain since there may be several other items on the agenda. Written communications may be mailed to the Commission Secretariat, 200 North Spring Street, Room 272, Los Angeles, CA 90012 (Phone No. 213-978-1300). While all written communications are given to the Commission for consideration, the initial packets are sent to the week prior to the Commission's meeting date. If you challenge these agenda items in court, you may be limited to raising only those issues you or someone else raised at the public hearing agendized herein, or in written correspondence on these matters delivered to this agency at or prior to the public hearing. As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability, and upon request, will provide reasonable accommodation to ensure equal access to this programs, services and activities. Sign language interpreters, assistive listening devices, or other auxiliary aids and/or other services may be provided upon request. To ensure availability of services, please make your request not later than three working days (72 hours) prior to the meeting by calling the Commission Secretariat at (213) 978-1300.

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- C – VTT-74761 Decision Letter and Tract Map
- D – Mitigation Monitoring Plan
- E – March 2020 City Responses and Appendices

Environmental Impact Report (EIR) links:

Draft EIR:

[https://planning.lacity.org/eir/TimesMirrorSquare/DEIR/Times%20Mirror%20Square\\_DEIR\\_HTML%20SOURCE.html](https://planning.lacity.org/eir/TimesMirrorSquare/DEIR/Times%20Mirror%20Square_DEIR_HTML%20SOURCE.html)

Final EIR:

[https://planning.lacity.org/eir/TimesMirrorSquare/feir/Times%20Mirror%20Square\\_FEIR\\_HTML.html](https://planning.lacity.org/eir/TimesMirrorSquare/feir/Times%20Mirror%20Square_FEIR_HTML.html)

Errata:

<https://planning.lacity.org/development-services/eir/times-mirror-square-project-2>

## APPEAL ANALYSIS

### **BACKGROUND**

The subject tract map is for the merger of a portion of public right of way along Broadway and resubdivision of the project site into nine lots for condominium purposes for a mixed-use project containing up to 1,127 residential units and up to 34,572 square feet of new commercial floor area, and a haul route for the export of up to 364,000 cubic yards of soils.

The Tract Map approval is associated with the Times Mirror Square Project, which would construct a new mixed-use development and rehabilitate the historic Times, Plant, and Mirror Buildings on the approximately 3.6-acre city block bounded by 1st Street, Spring Street, 2nd Street, and Broadway in downtown Los Angeles. The existing Executive Building at the corner of 1st Street and Broadway and parking garage at the corner of 2nd Street and Broadway would be demolished to allow for the development of the Project's new mixed-use component. New development, consisting of the 37-story "North Tower" and 53-story "South Tower" would contain a maximum of 1,127 residential units and up to 34,572 square feet of commercial floor area, and would be constructed above a five-story parking podium. The space below the podium would contain an additional nine (9) levels of subterranean parking. The combined commercial and residential floor area would total up to 1,135,803 square feet. The existing Times, Plant, and Mirror Buildings have a combined floor area of 376,105 square feet, and would remain. The retained buildings would be adaptively reused with office, retail, restaurant and grocery store uses. In total, including new construction and existing buildings to remain, the Project proposes up to 1,511,908 square feet of floor area, resulting in a maximum floor area ratio (FAR) of 9.42:1.

The topography of the Project Site and surrounding vicinity is relatively flat with a gentle slope to the south. As noted above, the site comprises a full city block bounded by 1<sup>st</sup> Street to the north, 2<sup>nd</sup> Street to the south, Broadway to the west, and Spring Street to the east. The rectangular site has approximately 485 feet of frontage along Broadway and Spring Street, and approximately 330 feet of frontage along 1<sup>st</sup> Street and 2<sup>nd</sup> Street.

The Project Site is located within the northern portion of the Central City Community Plan Center City/Historic Core district. As discussed in the Community Plan, the Historic Core, which is centered on Spring Street and Broadway, forms the spine through Downtown that links the Financial District and Bunker Hill to the west, South Park and the Convention Center to the south, the South Markets to the southeast, and Little Tokyo and the Arts District to the east. The Project Site is situated at the northern portion of the Historic Core and the southern edge of the Civic Center, in an area characterized by a concentration of government-related uses, high- and mid-rise office buildings, residential buildings, hotels, retail uses, museums, and cultural uses.

The Central City Community Plan designates the Site for Regional Commercial land uses, corresponding to the C2-4D-SN Zone (Commercial Zone, Height District 4). The Project Site is subject to an existing "D" Development Limitation, pursuant to Ordinance No. 164,307. The D Limitation restricts FAR on the Site to a maximum of 6:1, with the exception of projects approved for transfers of floor area up to a 13:1 FAR. The Central City Community Plan Map Footnote No. 3, which is applicable to the Project Site's Regional Commercial land use designation and corresponds to Height District 4D, similarly limits the Site to an FAR of 6:1, and up to 13:1 with Transfer of Floor Area. To redevelop the site with the proposed mixed-use development, the concurrent CPC case for this Project, CPC-2016-4675-TDR-VCU-MCUP, is requesting a Transfer of Development Rights of 548,440 square feet from the Los Angeles Convention Center (Donor Site) to the Project Site (Receiver Site). Including existing buildings to remain, the Project would result in a maximum FAR of 9.42:1.

The Project Site is not located within a hillside area, Very High Fire Severity Zone, Alquist Priolo Fault Zone, or Methane Hazard Site. The Project Site is located in the Los Angeles State Enterprise Zone, the Greater Downtown Housing Incentive Area, and a Transit Priority Area pursuant to Public Resources Code Section 21099(d).

## **APPEAL**

Pursuant to Section 17.06 A.3 of the LAMC, appeals of a Vesting Tentative Tract Map are made to the Appeal Board, which in this case is the City Planning Commission. Once the City Planning Commission renders their decision on the appeal, the decision may be further appealed to the City Council, if an appeal is filed pursuant to Section 17.06 A.4 within 10 days of the issuance of the Letter of Decision.

The Deputy Advisory Agency issued a letter of determination on April 1, 2020, approving Vesting Tentative Tract Map No. VTT-74761. One appeal was filed in a timely manner on April 6, 2020. The appeal was filed by the Lozeau Drury law firm on behalf of the Supporter's Alliance for Environmental Responsibility (SAFER). Below is a summary of the main appeal points and staff's responses.

## **APPEAL POINTS AND STAFF RESPONSES**

Following publication of the Project's Final EIR, the Lozeau Drury law firm, on behalf of Supporters Alliance for Environmental Responsibility (SAFER), submitted a letter dated October 16, 2019 with attachments (the Lozeau Drury October 2019 Letter) providing comments on the EIR. The City responded to these comments (March 2020 City Responses), which are available in the subject case file. As detailed therein, the City finds that the issues raised in the October 2019 Lozeau Drury Letter lack credible evidence that the Project would result in new or substantially increased impacts than what was analyzed in the Draft EIR, that there is significant new information, or that any of the other criteria for recirculation under CEQA Guidelines Section 15088.5 has been met. Therefore, recirculation of the Draft EIR was not required.

SAFER's Vesting Tentative Tract Map appeal does not raise any new objections to the Project or the VTT that were not already previously raised by SAFER. Rather, the appeal attaches the aforementioned Lozeau Drury comment letter dated October 16, 2019. The complete Lozeau Drury October 2019 Letter, and associated appendices, is attached to this staff report as Exhibit B, SAFER Appeal Justification. The City's complete responses to the Lozeau Drury October 2019 Letter are attached to this staff report as Exhibit D, March 2020 City Responses and Appendices. Below is a summary of the main points raised in the Lozeau Drury October 2019 Letter, and a summary of staff's responses.

### **Appeal Statement SAFER-1:**

The Appellant claims that the Project objectives are overly narrow and unduly constrain the alternatives analysis as provided in Chapter V, Alternatives, of the Draft EIR. The Appellant further maintains that the Draft EIR violates CEQA by not selecting an alternative that would reduce the Project's significant impacts, in particular, Alternative 4, Partial Preservation, and Alternative 5, Full Preservation, which would avoid or reduce the Project's significant and unavoidable impacts to historical resources, construction air quality, and construction noise.

### **Staff Response SAFER-1:**

Pursuant to *CEQA Guidelines* Section 15126.6(a), an EIR must describe a "range of reasonable alternatives." Furthermore, pursuant to *CEQA Guidelines* Section 15126.6(f), an EIR must consider "only those alternatives necessary to permit a reasoned choice." Every conceivable

alternative need not be considered; rather, the range of alternatives should be designed to foster informed decision-making and public participation (*CEQA Guidelines* sections 15126.6(a), 15126.6(f)). In the case of the Project, the Draft EIR included a reasonable range of five alternatives, including the No Project Alternative. The alternatives were developed in consultation with the Department of City Planning's Office of Historic Resources. Each of the alternatives analyzed in Chapter V, *Alternatives*, of the Draft EIR would reduce the Project's significant impacts, and two of the alternatives (Alternatives 1 and 5) would avoid the Project's significant and unavoidable impacts with respect to construction air quality and noise and cultural resources. However, only Alternative 1, the No Project Alternative, would avoid all of the Project's significant and unavoidable traffic impacts.

Along with the environmental analysis for each alternative, the Draft EIR also considered whether and to what extent the alternatives would meet the Project objectives, as detailed in Chapter II, *Project Description*, of the Draft EIR. The Draft EIR concluded that Alternative 1 would not meet any of the Project objectives. It concluded that Alternative 5, the environmentally superior alternative, would not meet the underlying purpose and primary objective of the Project to develop the Project Site with a transit-oriented development that includes residential uses, community-serving commercial uses, and publicly accessible and private open space and amenities, or the Project's objectives that primarily concern high-density residential uses in proximity to transit and jobs-rich centers, or the creation of architecturally distinctive new buildings that contribute to the visual character of the Downtown. In addition, Alternative 5 would not support local and regional land use and housing policies relative to the concentration of development in established urban areas served by transit. Furthermore, and contrary to the comment, the Draft EIR does not reject any alternative, but is consistent with CEQA as it provides the City's decision makers with the information necessary to make an informed decision regarding the Project and the alternatives. The CEQA findings set forth in the Vesting Tentative Tract Map Letter of Determination provide justification and rationale for rejecting the alternatives as infeasible and approving the Project. The Project objectives comply with CEQA requirements and provide for the analysis of a reasonable range of alternatives.

### **Appeal Statement SAFER-2:**

The Appellant asserts that the Project's significant impacts to historic resources due to demolition of the Executive Building and parking structure also constitute significant aesthetic impacts. The Appellant further maintains that the Final EIR is incorrect in that the City cannot rely on SB 743 to dismiss an aesthetic impact on historical resources.

### **Staff Response SAFER-2:**

As stated in Section IV.A, *Aesthetics*, of the Draft EIR, and in Response to Comment No. 9-3 in the Final EIR, Senate Bill (SB) 743, codified within the California Environmental Quality Act (CEQA) Section 21099, states that "Aesthetic (...) impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." As the Project would meet these conditions, aesthetic impacts associated with the Project would not be considered significant as a matter of law. In addition, City of Los Angeles Zoning Information File No. 2452 (ZI No. 2452) states that projects meeting SB 743 criteria are exempted from a determination of significant impacts on aesthetic resources (scenic vistas, scenic resources, aesthetic character, and light and glare) as outlined in CEQA Appendix G.

Therefore, the Project would not have a significant aesthetic impact because of the significant impacts to historic resources identified in the EIR. The Appellant misconstrues PRC Section 21099(d)(2)(B), which states that, "For purposes of this subdivision, aesthetic impacts **do not include** impacts on historical or cultural resources." (Emphasis added.) The language in PRC

Section 21099(d)(2)(B) provides that impacts to historic or cultural resources are not considered to be (i.e., not included as) aesthetic impacts. As such, while the Project's impacts to historic resources are fully analyzed in the EIR, such impacts do not also constitute an impact to aesthetics.

**Appeal Statement SAFER-3:**

The commenter claims that the Project may have a significant impact on biological resources as a result of birds colliding with the Project's clear glass windows, and provides a memorandum to support this conclusion.

**Staff Response SAFER-3:**

The Appellant's suggestion that the Project will result in large numbers of avian window collision fatalities is based on personal anecdotal evidence and scientific articles without specifying how it relates to the Project's location. The Project Site is entirely developed and has been operating as an urban use for decades. The Project Site and vicinity are not known to be wildlife or migratory corridors or within a special-status species critical habitat. There is no evidence that an urbanized location with already existing skyscrapers could increase collision fatalities of birds or evidence of an avian migration corridor existing within the Project Site. To the contrary, the US Fish Wildlife has determined that less than one percent of avian collisions involve high rises. Furthermore, as detailed in Exhibit D, March 2020 City Responses, the summarized fatality numbers provided by the Appellant were taken from multiple sources across the United States. Only one of those sources was focused in California and none were focused on the Project and its vicinity. The majority of the sources provided had monitoring that was conducted in rural or suburban landscapes and, thus, are not representative of an urban environment such as downtown Los Angeles. Thus, the Appellant does not provide credible evidence to support the assertion that the special-status avian species identified by the commenter are dying from window collisions in downtown Los Angeles or even in southern California.

Nonetheless, in response to the comment, a one-mile search was conducted on December 24, 2019 for avian species for the Project Site address within the eBird database from 1900 to November 2019. The eBird database search provided results that are representative of the total number of bird observations of the course of multiple years. As provided in appendix to the March 2020 City Responses (Exhibit D), the only listed species (federally endangered, federally threatened, state endangered, state threatened) are the white-tailed kite, which was only observed once in 2016 at the Walt Disney Concert Hall, and the Peregrine Falcon, which was observed 69 times from 1987 to 2019, with the most recent sighting in 2010 in Grand Park and is a species that have been documented to thrive in the urbanized/skyscraper landscape. Additionally, based on studies conducted on the East Coast, migrant passerine species are the most likely species to experience window collisions. However, based on the eBird database search, very few if any migrant passerine species are known to use the Project area as a migration corridor, and none of these species are considered candidate, sensitive, or special status species. As further detailed in Exhibit D, the Appellant provides no substantial evidence that the Project could cause collision fatalities of birds. Impacts related to bird collisions with Project glass exteriors would be less than significant.

**Appeal Statement SAFER-4:**

The Appellant contends that the EIR's air quality model contained incorrect and unsubstantiated input parameters, and that as a result, the EIR's air model may have underestimated emissions. In particular, with respect to the EIR's air quality modeling, the Appellant asserts that the Project's restaurant land use was not included; office uses were underestimated; the fuel types for several pieces of construction equipment were changed from diesel to electrical without proper

justification; the Project's indoor water use rates were artificially changed; the use of Tier 4 Final construction equipment was not specified in the EIR; and the incorrect number of worker trips was used to estimate the Project's construction emissions. The Lozeau Drury October 2016 Letter provides an analysis by the consulting firm SWAPE in support of these contentions.

**Staff Response SAFER-4:**

Contrary to the Appellant's assertions, the Project's emissions modeling provided in the Draft EIR does not underestimate emissions associated with the Project's construction and operational activities. The Project's CalEEMod output files, provided in Appendix C to the Draft EIR, contain input values that are consistent with information disclosed in the Draft EIR and in some cases slightly more conservative in order to ensure that the Project's potential air quality impacts are disclosed. As a result, the Project's construction and operational emissions are not underestimated, and the EIR adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality. Detailed responses to each of the points raised are provided in Exhibit D, March 2020 City Responses, and are summarized below.

As detailed in Exhibit D, the full extent of the Project's restaurant and office land uses were in fact accounted for in the CalEEMod input values, and the potential impacts associated with these uses were adequately analyzed in the EIR. Regarding adjustments to the modeling inputs for construction equipment and water rates, the CalEEMod User's Guide allows default inputs to be replaced with project-specific data. Therefore, Project-specific adjustments were made for construction equipment that is specifically required to be electric powered by the Project's Mitigation Monitoring Program. For example, MM-AQ-1 requires that tower cranes and signal boards utilize electricity from power poles or alternative fuels (i.e., non-diesel) rather than diesel power generators and/or gasoline power generators. Electric tower cranes and signal boards are available and are commonly used types of construction equipment. The default water rates in CalEEMod were similarly adjusted with Project-specific information for water usage from the Project's Water Supply Assessment approved by the Los Angeles Department of Water and Power (LADWP), which is discussed in the Section IV.R, *Water Supply*, of the Draft EIR. The Water Supply Assessment includes conservation commitments, required as Project Design Feature PDF-WS-1 in the Mitigation Monitoring Program, which will achieve the Project-specific water reductions. As a result, the Project's construction equipment, water demand and associated water-related emissions calculations for the Project are justified and accurate.

Regarding the use of off-road diesel-powered construction equipment that meet or exceed the stringent CARB and USEPA Tier 4 off-road emissions standards, Tier 4 Interim and Tier 3 equipment have greater emission levels than Tier 4 Final equipment. The Draft EIR's impact analysis appropriately considers the use of Tier 4 Final equipment in analyzing the Project's potential impacts and determining their significance. The Errata subsequently issued for the Project clarifies in Mitigation Measure MM-AQ-1 that Tier 4 Final equipment is indeed required for the Project.

Lastly, the Project's CalEEMod output file includes the correct number of worker trips during construction of the Project consistent with the amount of trips stated in Section IV.P, Transportation and Traffic, of the Draft EIR. As a result, construction emissions for the Project are adequately disclosed in the Draft EIR, and no changes to the air quality analysis are warranted.

**Appeal Statement SAFER-5:**

The Appellant states that although the Project will have significant impacts on air quality, the FEIR refuses to impose feasible mitigation measures that would reduce these impacts. In particular, the Appellant argues that the Project should be required to use zero-emission ("ZE") or near-zero emission ("NZE") on-road haul trucks and require that construction vendors, contractors, and/or

haul truck operators commit to using 2010 model year or newer engines that meet the California Air Resources Board's 2010 engine emissions standards.

**Staff Response SAFER-5:**

The EIR for the Project acknowledges that it would result in a significant air quality impact associated with the temporary and short-term construction NO<sub>x</sub> emissions during the two continuous concrete pouring foundation phases of Project construction, which would last a maximum of four days. The Draft and Final EIR considered feasible mitigation measures to reduce this impact, but ultimately determined that impacts would remain significant and unavoidable. The emissions associated with the two continuous concrete pouring foundation phases of Project construction, which would last a maximum of four days, are overwhelmingly the result of emissions from concrete trucks required to deliver and pour the concrete at the Project Site. The City considered the use of zero emissions (ZE) and near zero emissions (NZE) trucks as part of the Final EIR. Response to Comment 4-9 of the Final EIR and Exhibit D, March 2020 City Responses, contain a detailed explanation of why ZE and NZE concrete trucks would not be commercially available for use during Project construction. The Appellant provides no credible evidence to the contrary.

In addition, the EIR considered a mitigation measure requiring 2010 model year or newer engines. As discussed in the Response to Comment 4-9 of the Final EIR, a mitigation measure requiring 2010 model year or newer engines is not necessary because this is already substantially required through the CARB 2008 Truck and Bus Regulation. The regulation is phased over 8 years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this requirement would meet or exceed the 2010 engine emission standards for NO<sub>x</sub> and diesel particulate matter by 2023. As described in the Errata, Project construction would be initiated in 2020 with buildout and occupancy in 2024. As a result, the vast majority of the truck fleet used in the initial years of Project construction will be required to meet or exceed the 2010 engine standards, with 100 percent of the truck fleet complying with this requirement on or before 2023. Truck fleet operators are required to report compliance with the regulation in accordance with CARB's reporting procedures.

Nonetheless, as set forth in the Errata, the City has conservatively added the requirement to Mitigation Measure MM AQ-1 that all concrete trucks used during the Project's concrete pouring foundation shall have 2010 model or newer engines. Prior to issuance of a building permit, the applicant shall provide evidence (such as copies of contracts with concrete subcontractors with specifications or engine certifications) satisfactory to the Department of City Planning demonstrating compliance with this measure. As demonstrated in the Errata and Exhibit D, March 2020 City Responses, significant and unavoidable construction air quality impacts would remain even with the use of 2010 model or newer engines. Contrary to the Appellant's statements, the City has imposed all mitigation measures that could feasibly reduce significant air quality impacts during construction.

**Appeal Statement SAFER-6:**

The Appellant states that the EIR failed to conduct both a construction and operational health risk assessment, and argues that without such an analysis, the EIR fails to include substantial evidence that the Project's emissions will be less than significant. To demonstrate the potential risk posed by Project construction and operation to nearby sensitive receptors, the Appellant prepared a screening-level HRA attached to the Lozeau Drury October 2019 Letter.

**Staff Response SAFER-6:**

The Appellant maintains that the EIR should have included both a construction and operational health risk assessment of Project's toxic air contaminant (TACs) emissions. Section IV.B, *Air Quality*, of the Draft EIR analyzed and disclosed the potential for the Project to cause adverse health impacts from exposure to TACs from the Project's construction and operational emissions consistent with CEQA Guidelines Section 15126.2(a). As discussed therein, with respect to Project construction, the Project would be consistent with applicable South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan strategies intended to reduce emissions from construction equipment and activities, which include the use of cleaner construction equipment. The Project would comply with regulatory mandates including the California Air Resources Board (CARB) Air Toxic Control Measure that limits idling to no more than five minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation for the use of cleaner construction equipment. Consistent with and supportive of the goals of these regulatory mandates to minimize emissions and exposure to emissions, the Project would include emissions controls that will be full enforceable by the City, as per MM-AQ-1.

The Draft EIR further states that the SCAQMD has not adopted guidance that requires quantitative health risk assessments be performed for short-term exposures to TAC emissions. Specifically, the SCAQMD states that "SCAQMD currently does not have guidance on construction Health Risk Assessments." As disclosed in the Draft EIR, health effects from TACs for sensitive residential receptors are described in terms of individual cancer risk based on a long-term resident exposure duration (i.e., resident lifetime or 70-year). Given the temporary and short-term construction schedule (approximately 48 months), the Project would not result in a long-term (i.e., lifetime or 70-year) exposure as a result of Project construction. Therefore, a construction HRA is neither required nor warranted.

The SCAQMD has published and adopted the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities). The Project would not include any of these uses; therefore, an operational HRA is neither required nor warranted.

Although a quantitative HRA for the Project is not required for the reasons discussed above, in order to provide information that further supports the Draft EIR's less than significant finding with respect to TAC emissions, a quantitative health risk assessment has been prepared and is attached as Appendix A, Health Risk Assessment Calculations, to the March 2020 City Responses (Exhibit D). As discussed in further detail therein, the results of the quantitative HRA demonstrate that the health risks from TAC emissions from Project construction and operations would not exceed the SCAQMD significance threshold. This HRA further confirms the Draft EIR's less than significant impact finding with respect to TAC emissions.

**Appeal Statement SAFER-7:**

The Appellant asserts that there are deficiencies in the EIR's traffic analysis, and attached an analysis in support of these assertions as an appendix to the Lozeau Drury October 2019 Letter. The main points raised by the Appellant are that the Draft EIR's traffic analysis overestimates trip discounts for transit usage; the Draft EIR's traffic analysis uses obsolete trip generation data; the EIR should provide queuing analysis at impacted intersections; the Project's trip distribution understates traffic outside of a radius of 0.85 miles from the Project Site; and the DEIR should estimate traffic due to rideshare companies.

**Staff Response SAFER-7:**

The transportation impact analysis in the Draft EIR traffic study was conducted in accordance with the methodology and criteria specified in the Los Angeles Department of Transportation's (LADOT's) *Transportation Impact Study Guidelines* in effect at the time of the analysis. The analysis was confirmed and accepted by LADOT in their traffic study assessment letter dated May 21, 2018, and included in Appendix L of the Draft EIR.

As further described in a memorandum from traffic consulting firm Fehr and Peers, attached to Exhibit D, March 2020 City Responses, the transit credit taken in the transportation impact analysis is consistent with guidance in the LADOT Transportation Impact Study Guidelines. The LADOT guidance provides for a 25 percent credit for projects adjacent to a rail transit station. The 2nd Street/Broadway Regional Connector Station is currently under construction and will be open prior to the Project completion in 2023. Therefore, it is appropriate to consider this as an adjusted baseline condition in both the Existing plus Project and Future Project impact analyses. Furthermore, the Existing plus Project scenario is a hypothetical scenario as the Project will not be operational until 2023/2024.

Regarding the 40 percent discount applied to the supermarket, traditional pass-by trips are vehicle trips attracted from an adjacent suburban arterial. In the case of a supermarket located in a dense urban center, however, many patrons will likely walk from nearby locations and the pass-by discount was used as a surrogate for these trips. It is unlikely that a supermarket in this location would attract vehicle trips at the level that a supermarket in a suburban setting would attract; however, the available trip generation rates (in both the ITE 9th and ITE 10th Editions) are for supermarkets in suburban locations. Therefore, the 40 percent discount is appropriate. LADOT reviewed and approved the trip generation estimates and trip reduction credits in the traffic study MOU for the Project.

The Appellant states that Draft EIR's traffic analysis uses obsolete trip generation data resources. The ITE 9th Edition trip generation manual was the most up-to-date source available at the time the transportation impact analysis was conducted for the Project. The data from this source was the basis for the trip generation estimates approved by LADOT in the traffic study MOU for the Project, which was signed in March 2017 prior to release of the ITE 10th Edition manual. If the analysis were to be updated to utilize the more recently available data from the ITE 10th Edition trip general manual, the overall peak hour and estimated daily trip generation for the Project would be lower under the 10th Edition ITE than that estimated in the Draft EIR under the 9th Edition ITE. Therefore, the transportation impact analysis presented in the Draft EIR is conservative.

The Appellant states that the Draft EIR does not provide queuing analysis at the impacted intersections. The transportation impact analysis provided in the Draft EIR was conducted in accordance with the methodology and criteria specified in LADOT's Transportation Impact Study Guidelines in force at the time of the analysis. As acknowledged by the Appellant, the Draft EIR did find that the Project would have significant impacts at six intersections. This finding was based on LADOT's impact criteria for level of service. Level of service is a measure of the operating condition of an intersection and inherently reflects queuing in that there are greater levels of queuing and delay at worse levels of service.

The Appellant states that the Project's trip distribution understates traffic outside of a radius from about 0.75 to 0.85 miles from the intersection of W. 2nd Street and Broadway. The Appellant acknowledges that this percentage is likely true of the person-trips generated by the Project. Since most of these trips could be made by walking, bicycling or transit, assigning these trips as vehicle trips is in fact a conservative assumption. Furthermore, the Project's trip generation and traffic study were reviewed and approved by LADOT.

To date, research data into mode shares for rideshare use is limited, and LADOT has not established a methodology for considering their use. Anecdotal evidence suggests that rideshare is used more for occasional discretionary trips (such as to restaurants) rather than for daily trips (such as most trips generated by residential or office uses) due to their higher cost. While the proposed Project does contain supermarket and restaurant uses, the majority of the Project is residential and office.

**Appeal Statement SAFER-8:**

The commenter maintains that the Project would have a significant impact on indoor air quality due to formaldehyde.

**Staff Response SAFER-8:**

The Appellant provides no credible evidence that the Project will be constructed with building materials with significant amounts of formaldehyde, citing only an unsubstantiated, general article attached to the Lozeau Drury October 2019 Letter. There are no requirements or guidance from SCAQMD or relevant agencies to evaluate such risk. The project does not represent a unique or special development that needs addressing in CEQA, therefore no special analysis or mitigation is required. The Project will comply with the existing codes and regulations in California, which adequately address potential emissions and risks from building materials to ensure safe practices and healthy indoor air. As detailed in Exhibit D, March 2020 City Responses, these codes include specific provisions within Title 24 Building Energy Efficiency Standards, California Green Building Standards Code (CALGreen Code), and CARB's ATCM (Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products). Impacts with respect to formaldehyde would be less than significant.

**Conclusion**

Upon in-depth review and analysis of the issues raised by the Appellant for the Proposed Project, no substantial evidence exists of errors or abuse of discretion committed by the Advisory Agency in regards to the appeal points raised. The EIR is comprehensive and has been completed in full compliance with CEQA. As demonstrated by the responses to the appeal points, and as set forth in further detail in Exhibit D, March 2020 City Responses, there are no new impacts or substantial increases in previously identified impacts that would result from the comments raised herein. No substantial evidence has been provided that would recirculation of the Draft EIR. The Advisory Agency correctly made the findings of approval consistent with the Subdivision Map Act, LAMC Section 17.54, and the provisions of CEQA. Therefore, in consideration of all the facts, Staff recommends the City Planning Commission deny the appeal for the decision of the Advisory Agency to approve Case No. VTT-74761.



APPLICATIONS:

**APPEAL APPLICATION**

**Instructions and Checklist**

**Related Code Section:** Refer to the City Planning case determination to identify the Zone Code section for the entitlement and the appeal procedure.

**Purpose:** This application is for the appeal of Department of City Planning determinations authorized by the Los Angeles Municipal Code (LAMC).

**A. APPELLATE BODY/CASE INFORMATION**

**1. APPELLATE BODY**

- Area Planning Commission     City Planning Commission     City Council     Director of Planning
- Zoning Administrator

Regarding Case Number: VTT 74761 (CEQA No. ENV-2016-3693-4676-EIR)

Project Address: 121-147 S Spring St, 100-142 S Broadway, 202-234 W. 1st St, 205-221 W 2nd St.

Final Date to Appeal: 04/10/2020

**2. APPELLANT**

**Appellant Identity:**  
(check all that apply)

- Representative     Property Owner
- Applicant     Operator of the Use/Site

Person, other than the Applicant, Owner or Operator claiming to be aggrieved

Person affected by the determination made by the **Department of Building and Safety**

- Representative     Owner     Aggrieved Party
- Applicant     Operator

**3. APPELLANT INFORMATION**

Appellant's Name: Supporter's Alliance for Environmental Responsibility

Company/Organization: \_\_\_\_\_

Mailing Address: 4399 Santa Anita Ave, Ste 2005

City: El Monte    State: CA    Zip: 91731

Telephone: (510) 836-4200    E-mail: richard@lozeaudrury.com

a. Is the appeal being filed on your behalf or on behalf of another party, organization or company?

Self     Other: \_\_\_\_\_

b. Is the appeal being filed to support the original applicant's position?     Yes     No

**4. REPRESENTATIVE/AGENT INFORMATION**

Representative/Agent name (if applicable): Richard Drury

Company: Lozeau Drury LLP

Mailing Address: 1939 Harrison Street, Suite 150

City: Oakland State: CA Zip: 94612

Telephone: (510) 836-4200 E-mail: richard@lozeaudrury.com

**5. JUSTIFICATION/REASON FOR APPEAL**

a. Is the entire decision, or only parts of it being appealed?  Entire  Part

b. Are specific conditions of approval being appealed?  Yes  No

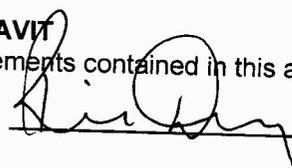
If Yes, list the condition number(s) here: All

Attach a separate sheet providing your reasons for the appeal. Your reason must state:

- The reason for the appeal
- How you are aggrieved by the decision
- Specifically the points at issue
- Why you believe the decision-maker erred or abused their discretion

**6. APPLICANT'S AFFIDAVIT**

I certify that the statements contained in this application are complete and true:

Appellant Signature: 

Date: Apr. 6, 2020

**GENERAL APPEAL FILING REQUIREMENTS**

**B. ALL CASES REQUIRE THE FOLLOWING ITEMS - SEE THE ADDITIONAL INSTRUCTIONS FOR SPECIFIC CASE TYPES**

**1. Appeal Documents**

a. **Three (3) sets** - The following documents are required for each appeal filed (1 original and 2 duplicates) Each case being appealed is required to provide three (3) sets of the listed documents.

- Appeal Application (form CP-7769)
- Justification/Reason for Appeal
- Copies of Original Determination Letter

**b. Electronic Copy**

Provide an electronic copy of your appeal documents on a flash drive (planning staff will upload materials during filing and return the flash drive to you) or a CD (which will remain in the file). The following items must be saved as individual PDFs and labeled accordingly (e.g. "Appeal Form.pdf", "Justification/Reason Statement.pdf", or "Original Determination Letter.pdf" etc.). No file should exceed 9.8 MB in size.

**c. Appeal Fee**

- Original Applicant - A fee equal to 85% of the original application fee, provide a copy of the original application receipt(s) to calculate the fee per LAMC Section 19.01B 1.
- Aggrieved Party - The fee charged shall be in accordance with the LAMC Section 19.01B 1.

**d. Notice Requirement**

- Mailing List - All appeals require noticing per the applicable LAMC section(s). Original Applicants must provide noticing per the LAMC
- Mailing Fee - The appeal notice mailing fee is paid by the project applicant, payment is made to the City Planning's mailing contractor (BTC), a copy of the receipt must be submitted as proof of payment.

**SPECIFIC CASE TYPES - APPEAL FILING INFORMATION**

**C. DENSITY BONUS / TRANSIT ORIENTED COMMUNITES (TOC)**

**1. Density Bonus/TOC**

Appeal procedures for Density Bonus/TOC per LAMC Section 12.22.A 25 (g) f.

**NOTE:**

- Density Bonus/TOC cases, only the *on menu or additional incentives* items can be appealed.
- Appeals of Density Bonus/TOC cases can only be filed by adjacent owners or tenants (must have documentation), and always only appealable to the Citywide Planning Commission.
- Provide documentation to confirm adjacent owner or tenant status, i.e., a lease agreement, rent receipt, utility bill, property tax bill, ZIMAS, drivers license, bill statement etc.

**D. WAIVER OF DEDICATION AND OR IMPROVEMENT**

Appeal procedure for Waiver of Dedication or Improvement per LAMC Section 12.37 I.

**NOTE:**

- Waivers for By-Right Projects, can only be appealed by the owner.
- When a Waiver is on appeal and is part of a master land use application request or subdivider's statement for a project, the applicant may appeal pursuant to the procedures that governs the entitlement.

**E. TENTATIVE TRACT/VESTING**

**1. Tentative Tract/Vesting** - Appeal procedure for Tentative Tract / Vesting application per LAMC Section 17.54 A.

NOTE: Appeals to the City Council from a determination on a Tentative Tract (TT or VTT) by the Area or City Planning Commission must be filed within 10 days of the date of the written determination of said Commission.

- Provide a copy of the written determination letter from Commission.

**F. BUILDING AND SAFETY DETERMINATION**

**1. Appeal of the *Department of Building and Safety* determination, per LAMC 12.26 K 1, an appellant is considered the **Original Applicant** and must provide noticing and pay mailing fees.**

**a. Appeal Fee**

- Original Applicant - The fee charged shall be in accordance with LAMC Section 19.01B 2, as stated in the Building and Safety determination letter, plus all surcharges. (the fee specified in Table 4-A, Section 98.0403.2 of the City of Los Angeles Building Code)

**b. Notice Requirement**

- Mailing Fee - The applicant must pay mailing fees to City Planning's mailing contractor (BTC) and submit a copy of receipt as proof of payment.

**2. Appeal of the *Director of City Planning* determination per LAMC Section 12.26 K 6, an applicant or any other aggrieved person may file an appeal, and is appealable to the Area Planning Commission or Citywide Planning Commission as noted in the determination.**

**a. Appeal Fee**

- Original Applicant - The fee charged shall be in accordance with the LAMC Section 19.01 B 1 a.

**b. Notice Requirement**

- Mailing List - The appeal notification requirements per LAMC Section 12.26 K 7 apply.
- Mailing Fees - The appeal notice mailing fee is made to City Planning's mailing contractor (BTC), a copy of receipt must be submitted as proof of payment.

**G. NUISANCE ABATEMENT**

**1. Nuisance Abatement - Appeal procedure for Nuisance Abatement per LAMC Section 12.27.1 C 4**

NOTE:

- Nuisance Abatement is only appealable to the City Council.

**a. Appeal Fee**

Aggrieved Party the fee charged shall be in accordance with the LAMC Section 19.01 B 1.

**2. Plan Approval/Compliance Review**

Appeal procedure for Nuisance Abatement Plan Approval/Compliance Review per LAMC Section 12.27.1 C 4.

**a. Appeal Fee**

Compliance Review - The fee charged shall be in accordance with the LAMC Section 19.01 B.

Modification - The fee shall be in accordance with the LAMC Section 19.01 B.

**NOTES**

*A Certified Neighborhood Council (CNC) or a person identified as a member of a CNC or as representing the CNC may not file an appeal on behalf of the Neighborhood Council; persons affiliated with a CNC may only file as an individual on behalf of self.*

***Please note** that the appellate body must act on your appeal within a time period specified in the Section(s) of the Los Angeles Municipal Code (LAMC) pertaining to the type of appeal being filed. The Department of City Planning will make its best efforts to have appeals scheduled prior to the appellate body's last day to act in order to provide due process to the appellant. If the appellate body is unable to come to a consensus or is unable to hear and consider the appeal prior to the last day to act, the appeal is automatically deemed denied, and the original decision will stand. The last day to act as defined in the LAMC may only be extended if formally agreed upon by the applicant.*

This Section for City Planning Staff Use Only		
Base Fee:	Reviewed & Accepted by (DSC Planner):	Date:
Receipt No:	Deemed Complete by (Project Planner):	Date:
<input type="checkbox"/> Determination authority notified		<input type="checkbox"/> Original receipt and BTC receipt (if original applicant)

## Justification/Reason for Appeal

### Times Mirror Square Project

Vesting Tentative Tract No. 74761 (CEQA Case No. ENV-2016-4676-EIR)

121-147 S. Spring Street; 100-142 S. Broadway; 202-234 W. 1<sup>st</sup> Street; 205-221 W. 2<sup>nd</sup> Street

**REASON FOR THE APPEAL:** The Environmental Impact Report (“EIR”) prepared for the Times Mirror Square Project aka VTT-74761 (and ENV-2016-4676-EIR) (“Project”) fails to comply with the California Environmental Quality Act (“CEQA”).

**SPECIFICALLY THE POINTS IN ISSUE:** The EIR fails to adequately analyze environmental impacts of the Project, including biological, traffic, indoor air quality, emissions, greenhouse gases, and historic resources and fails to propose all feasible mitigation measures and alternatives to reduce Project impacts. The EIR also found potentially significant impacts for one of the mandatory findings of significance required by CEQA. Additionally, the specific points in issue are set forth in the attached comment letter dated October 16, 2019, in the expert comment letters attached thereto, and in this appeal. As such, these potentially significant impacts must be analyzed by in a revised EIR.

**HOW YOU ARE AGGREIVED BY THE DECISION:** Members of appellant Supporters Alliance for Environmental Responsibility (“SAFER”) live and/or work in the vicinity of the proposed Project. They breathe the air, suffer traffic congestion, and will suffer other environmental impacts of the Project unless it is properly mitigated.

**WHY YOU BELIEVE THE DECISION-MAKER ERRED OR ABUSED THEIR DISCRETION:** The Advisory Agency adopted the EIR, the Statement of Overriding Considerations, and the Mitigation Monitoring Program, and approved Vesting Tentative Tract Map No. VTT-74761 for the Project despite the fact that the EIR fails to comply with CEQA.



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*Via Email and Hand Delivery*

October 16, 2019

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**Re: Comment on Final Environmental Impact Report, Times Mirror Square Project (aka VTT-74761, ENV-2016-4676-EIR, CPC-2016-4675-TDR-VCU-MCUP, and SCH No. 2017061083)**

Dear Mr. Lamborn, Mr. Bertoni, and Ms. Wolcott:

This letter is submitted on behalf of Supporters Alliance For Environmental Responsibility ("SAFER"), a California nonprofit public benefit corporation, regarding the Draft Environmental Impact Report ("DEIR") and Final Environmental Impact Report ("FEIR") prepared for Times Mirror Square, Project No. ENV-2016-4676-EIR (SCH No. 2017061083) (the "Project"). After reviewing the DEIR and FEIR (collectively, "EIR"), we conclude that the EIR fails as an informational document and fails to impose all feasible mitigation measures to reduce the Project's impacts. SAFER requests that the Hearing Officer and Advisory Agency refrain from recommending certification of the EIR at this time and instead request the City of Los Angeles ("City") to address these shortcomings in a revised draft environmental impact report ("RDEIR") and recirculate the RDEIR prior to considering approvals for the Project.

## I. PROJECT DESCRIPTION

The Project proposes to rehabilitate the Times, Plant, and Mirror Buildings and build a mixed-use development on 3.6 acres of land bounded by W. 1st Street, S. Spring Street, W. 2nd Street, and S. Broadway Street in the Central City Plan Area of the City of Los Angeles. The Project would demolish the existing Executive Building at the corner of W. 1st Street and S. Broadway and parking garage at the corner of W. 2nd Street and S. Broadway to allow for the development of the Project's mixed-use component. The Project will contain up to 1,127 residential units, and approximately 34,572 square feet of commercial space among the 37-story "North Tower" and 53-story "South Tower" constructed above a five-story parking podium. The space below the podium would contain an additional nine levels of subterranean parking. In total, the Project proposes up to 1,511,908 square feet of floor area.

## II. LEGAL BACKGROUND

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an environmental impact report ("EIR") (except in certain limited circumstances). *See, e.g.*, Pub. Res. Code § 21100. The EIR is the very heart of CEQA. *Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652. "The 'foremost principle' in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." *Communities for a Better Environment v. Calif. Resources Agency* (2002) 103 Cal. App. 4th 98, 109.

CEQA has two primary purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. 14 Cal. Code Regs. ("CEQA Guidelines") § 15002(a)(1). "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR 'protects not only the environment but also informed self-government.'" *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 564. The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return." *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal. App. 4th 1344, 1354 ("Berkeley Jets"); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.

Second, CEQA requires public agencies to avoid or reduce environmental damage when "feasible" by requiring "environmentally superior" alternatives and all feasible mitigation measures. CEQA Guidelines § 15002(a)(2) and (3); *see also, Berkeley Jets*, 91 Cal. App. 4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564. The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to "identify ways that environmental damage can be avoided or significantly reduced." CEQA Guidelines § 15002(a)(2). If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has

“eliminated or substantially lessened all significant effects on the environment where feasible” and that any unavoidable significant effects on the environment are “acceptable due to overriding concerns.” Pub. Res. Code § 21081; CEQA Guidelines § 15092(b)(2)(A) & (B). The lead agency may deem a particular impact to be insignificant only if it produces rigorous analysis and concrete substantial evidence justifying the finding. *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 732 (Cal. App. 5th Dist. 1990).

The EIR is the very heart of CEQA “and the integrity of the process is dependent on the adequacy of the EIR.” *Berkeley Jets*, 91 Cal. App. 4th 1109, 1355. CEQA requires that a lead agency analyze all potentially significant environmental impacts of its proposed actions in an EIR. Pub. Res. Code § 21100(b)(1); Guidelines § 15126(a); *Berkeley Jets*, 91 Cal.App.4th 1344, 1354. The EIR must not only identify the impacts, but must also provide “information about how adverse the impacts will be.” *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 831. The lead agency may deem a particular impact to be insignificant only if it produces rigorous analysis and concrete substantial evidence justifying the finding. *Kings County Farm Bureau*, 221 Cal.App.3d 692, 732. “The ‘foremost principle’ in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.” *Communities for a Better Env’t*, 103 Cal.App.4th 98, 109.

While the courts review an EIR using an “abuse of discretion” standard, “the reviewing court is not to ‘uncritically rely on every study or analysis presented by a project proponent in support of its position. A ‘clearly inadequate or unsupported study is entitled to no judicial deference.’” *Berkeley Jets*, 91 Cal. App. 4th 1344, 1355 (emphasis added), quoting, *Laurel Heights Improvement Assn. v. Regents of University of California*, 47 Cal. 3d 376, 391 409, fn. 12 (1988). A prejudicial abuse of discretion occurs “if the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process.” *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal. App. 4th 713, 722; *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal. App. 4th 1109, 1117; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal. App. 4th 931, 946. As discussed below, and in the attached expert comment letters of expert Dr. Smallwood, expert consulting firm SWAPE, and Mr. Smith, the EIR for this Project fails to adequately analyze and mitigate the Project’s impacts.

The lead agency must evaluate comments on the draft EIR and prepare written responses in the final EIR (“FEIR”). Pub. Res. Code § 21091(d). The FEIR must include a “detailed” written response to all “significant environmental issues” raised by commenters. As the court stated in *City of Long Beach v. LA USD* (2009) 176 Cal.App.4th 889, 904:

The requirement of a detailed written response to comments helps to ensure that the lead agency will fully consider the environmental consequences of a decision before it is made, that the decision is well informed and open to public scrutiny, and that public participation in the environmental review process is meaningful.

The FEIR's responses to comments must be detailed and must provide a reasoned, good faith analysis. CEQA Guidelines § 15088(c). Failure to provide a substantive response to comment render the EIR legally inadequate. *Rural Land Owners Assoc. v. City Council* (1983) 143 Cal.App.3d 1013, 1020.

The responses to comments on a draft EIR must state reasons for rejecting suggested mitigation measures and comments on significant environmental issues. "Conclusory statements unsupported by factual information" are not an adequate response. CEQA Guidelines §§ 15088(b), (c); *Cleary v. County of Stanislaus* (1981) 118 Cal.App.3rd 348. The need for a substantive, detailed response is particularly appropriate when comments have been raised by experts or other agencies. *Berkeley Keep Jets*, 91 Cal.App.4th at 1367; *People v. County of Kern* (1976) 62 Cal.App.3d 761. A reasoned analysis of the issue and references to supporting evidence are required for substantive comments raised. *Calif. Oak Found. v. Santa Clarita* (2005) 133 Cal.App.4th 1219.

### III. DISCUSSION

#### A. The City Unduly Restrains the Project's Alternatives and Their Implementation.

An overly narrow definition of project objectives renders the alternatives analysis inadequate. To narrowly define the primary "objective" of the proposed project itself constitutes a violation of CEQA since such a restrictive formulation would improperly foreclose consideration of alternatives. See, *City of Santee v. County of San Diego* (1989) 214 Cal.App.3d 1438, holding that when project objectives are defined too narrowly an EIR's treatment of analysis may also be inadequate. As a leading treatise on CEQA compliance cautions, "[t]he case law makes clear that...overly narrow objectives may unduly circumscribe the agency's consideration of project alternatives." Remy, Thomas, Moose & Manley, *Guide to CEQA* (Solano Books, 2007), p. 589.

CEQA prohibits a project sponsor from limiting its ability to implement the project in a way that precludes it from implementing reasonable alternatives to the project. See *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 736 (alternatives may not be artificially limited by applicant's prior contractual commitments that would prevent sponsor from implementing reasonable alternative). The fact that a proposed alternative does not meet all of the Project Objectives is not an appropriate basis to eliminate impact-reducing project alternatives from analysis in an EIR. (14 Cal. Code Regs § 15126.6(c), (f)).

The EIR identifies several significant environmental impacts the Project will have, as well as the project alternatives that alleviate these impacts. Yet the City failed to impose a project alternative that would reduce environmental impacts because they do not meet all of the Project's stringent objectives. For example, Alternative 5 would avoid the Project's significant

and unavoidable impacts to historical resources, associated with air quality standards, and related to construction noise. DEIR, p. V-205. However, this alternative was not selected in part because it did not meet all of the uses identified in the Project's objectives, and would not meet the objective to restore portions of the existing buildings "to the same extent as under the Project." DEIR, p. V-206. Additionally, Alternative 4 was not selected, although it would lessen or reduce the significant and unavoidable impacts to historical resources, air quality standards, and construction noise, because while it "would meet the Project's underlying purpose and primary objective . . . it would not *fully meet* the Objective's intent to provide publicly accessible open space and amenities *to the same extent* as the Project . . . ." DEIR, p. V-166–V-167.

By refusing to select a Project alternative that mitigates or reduces the Project's significant environmental impacts simply because the alternative does not entirely meet the narrowly defined Project objectives, the City has violated CEQA.

**B. The EIR Fails to Adequately Analyze Historic and Cultural Aesthetic Impacts.**

The site of the proposed Project includes five historical resources, including the Times, Plant, Mirror, and Executive buildings, as well as the parking structure. Despite these resources, the City asserts Senate Bill (SB) 743 applies to the Project and therefore the Project's aesthetic impacts are not considered significant impacts on the environment. DEIR, p. II-13–14. It makes this finding despite a subsection of SB 743 that excludes impacts to historical resources from this aesthetic exemption.

Codified within CEQA section 21099 et seq., SB 743 states "[a]esthetic . . . impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." Pub. Res. Code § 21099(d)(1). However, the City is incorrect in concluding it is exempt from analyzing all aesthetic impacts caused by the Project because SB 743 goes on to state that for the purposes of this section, "aesthetic impacts do not include impacts on historical or cultural resources." Pub. Res. Code § 21099(d)(2)(B). The City therefore cannot use SB 743 as an excuse to not mitigate aesthetic impacts to historical resources that are significant.

CEQA gives historic resources special recognition. *See Friends of Sierra Madre v. City of Sierra Madre* (2001) 25 Cal.4th 165, 186; *Citizens for a Sustainable Treasure Island v. City & County of San Francisco* (2014) 227 Cal. App. 4th 1036, 1065. Objects of historical significance fall within CEQA's definition of "environment." Pub. Res. Code § 21060.5. Therefore, if a project has significant impacts on a historical resource, it has significant environmental impacts.

A substantial adverse change of a historical resource is considered a significant impact on the environment. CEQA Guidelines § 15064.5(b). Substantial adverse changes include "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings" resulting in the significance of the resource being "materially impaired." CEQA Guidelines §

15064.5(b)(1). Material impairments of historical resources occur when the project demolishes or adversely materially alters the physical characteristics of the historical resource that either conveys its historical significance and that justify its inclusion in or eligibility for inclusion in the California Register of Historical Resources or the local register of historical resources. *Id.* §§ 15064.5(b)(2)(A)–(C). These material impairments clearly include aesthetic changes to historical resources because physical characteristics of historical resources encompass the façade and structural design of these resources.

Here, the Project proposes to demolish the Executive Building and the accompanying parking structure. Since both structures are eligible for inclusion in the California Register of Historic Resources and their physical characteristics that make them eligible for such listing will be demolished, the Project will result in a material impairment of these historical resources. Additionally the Times, Plant, and Mirror Buildings are included in the local register of historic resources and are in the immediate surroundings of the Executive Building and parking structure. If the Project moves forward as planned, the impacts on the aesthetic quality of these buildings will be significant because the demolition of the Executive Building and parking structure will make room for two very large apartment buildings that will dwarf the Times, Plant, and Mirror Buildings and minimize the visibility of these historic resources.

Therefore, the Project will have significant adverse impacts on the aesthetics of historical resources and the City cannot use SB 743 as an excuse to not analyze these impacts. The City is required to analyze and mitigate these significant impacts.

**C. The City Failed to Make Full and Accurate Responses to Comments Concerning Aesthetic Impacts to Historical Resources.**

While public participation is an essential part of the CEQA process, so is an agency's evaluation and response to public comments. Failure to comply with the requirement can lead to disapproval of a project. CEQA Guidelines Discussion, § 15088. An agency's responses to comments must specifically explain the reasons for rejecting suggestions received in comments and for proceeding with a project despite its environmental impacts. Such explanations must be fully supported with specific references to empirical information, scientific authority, and/or explanatory information. *Cleary v. County of Stanislaus* (1981) 118 Cal.App.3d 348, 357. The responses, moreover, must manifest a good faith, reasoned analysis; conclusory statements unsupported by factual information will not suffice. *People v. County of Kern* (1974) 39 Cal.App.3d 830, 841.

Here, the City continued to hide behind SB 743 when it responded in a cursory and inadequate way to a comment regarding the inadequacy of the EIR's analysis of aesthetic impacts on historical resources. *See* FEIR, p. 2-80–2-81. The City again pointed to SB 743 to assert that “the Project would result in the removal of the existing Executive Building and the parking structure, which are historic resources and, as such, may be considered to contribute to the aesthetic character under the [Los Angeles CEQA] Thresholds Guide. However, per ZI No.

2452 [which adopted SB 743], aesthetic impacts shall not be considered a significant impact for a qualifying mixed-use project in a Transit Priority Area, such as the Project.” FEIR, p. 2-81. This response, as identified in the section above, is incorrect and erroneous because the City’s reliance on SB 743 is inappropriate given the reading of the entire section, which requires agency’s to still consider aesthetic impacts to historical resources.

The City’s response is legally inadequate because its analysis is based on a select reading of SB 743 and ignores the rest of the statute excluding historical resources from the aesthetic impact exemption. This inadequate and conclusory response to a comment fails to meet CEQA’s requirements. Responses such as this require the City to revise its EIR so that it fully evaluates and responds to public comments.

**D. The Project May Have Significant Impacts on Special-Status Birds as a Result of Window Collisions.**

Dr. Smallwood indicates that the Project, as proposed, will result in significant impacts on birds colliding with the Project’s clear glass windows. Ex. A, p. 8. Specifically, Dr. Smallwood predicts “2,310 bird deaths per year” due to the Project. *Id.* Project illustrations show extensive use of glass in the facades of the Project’s buildings. “[T]he project’s façades would support at least 30,000 m<sup>2</sup> of glass windows . . . .” Ex. A, p. 1. “Adding to collision hazards would be the abundant use of window recessing, over-window balconies, between-building interior spaces, and as depicted in the EIR, use of transparent glass and abundant interior lighting at night.” *Id.* Making matters worse, the Project, with these potentially harmful features, is proposed to be constructed where eBird records indicate “43 special-status species of birds occur near the site . . . 14 of which were seen on property immediately adjacent to the site.” Ex. A, p. 2.

Despite emerging scientific literature about window collisions as one of the largest sources of avian mortality worldwide, the City and the EIR do not assess this potential impact. Additionally, the EIR “provides no analysis of cumulative impacts on birds caused by window collisions in the City, nor any analysis of the proposed project’s contribution to cumulative impacts of window collisions. An RDEIR is required to fully analyze and mitigate these impacts.

In order to mitigate these potential impacts to birds, Dr. Smallwood recommends the following mitigation measures:

- Marking windows
- Managing outdoor landscape vegetation
- Managing indoor landscape vegetation
- Managing nocturnal lighting
- Designing to minimize transparency through two parallel facades
- Designing to minimize views of interior plants
- Landscaping to increase distances between windows and trees and shrubs

Ex. A, p. 12–13.

Dr. Smallwood also suggests adherence to available guidelines on building design intended to minimize collision hazards to birds, such as those by the American Bird Conservancy (“ABC”). Ex., p. 13. ABC recommends: (1) minimizing use of glass; (2) placing glass behind some type of screening (grilles, shutters, exterior shades); (3) using glass with inherent properties to reduce collisions, such as patterns, window films, decals or tape; and (4) turning off lights during migration seasons. *Id.*

Here, there is ample evidence to support a fair argument that the Project will result in many collision fatalities of birds, and that this may result in a significant impact. Yet the EIR makes no attempt to analyze this potentially significant impact. An RDEIR is required to fully analyze and mitigate this impact.

**E. The Project’s Emissions Were Improperly Analyzed Because the EIR Uses Incorrect and Unsubstantiated Input Parameters.**

Environmental consulting firm SWAPE reviewed the EIR. SWAPE found that the EIR’s air quality model contained incorrect and unsubstantiated input parameters. As a result, the EIR’s air model may have underestimated emissions and cannot be relied upon as substantial evidence to determine that the Project’s impacts will be less than significant. SWAPE’s analysis can be found in Exhibit B, pages 1-10.

**F. The FEIR Fails to Adequately Respond to Comments Concerning Mitigation Measures for Construction Air Quality Impacts.**

The Project will have significant impacts on air quality. However, the FEIR refuses to impose feasible mitigation measures that would reduce these impacts.

Expert agency South Coast Air Quality Management District (“SCAQMD”) submitted a letter requesting that the City require the use of zero-emission (“ZE”) or near-zero emission (“NZE”) on-road haul trucks and require that construction vendors, contractors, and/or haul truck operators commit to using 2010 model year or newer engines that meet the California Air Resources Board’s (“CARB”) 2010 engine emissions standards. FEIR, p. 2-10–2-11. The FEIR refuses to require these mitigation measures, rejecting them for impracticality and unfeasibility reasons, and because it already has to comply with CARB’s 2008 Truck and Bus Regulation. FEIR, p. 2-20–2-21.

First, the FEIR references a handful of reports to conclude that the use of ZE and NZE trucks is not feasible at this time. *Id.* However, the FEIR does not mention how many ZE or NZE trucks are in fact available, just that there are barriers to widespread availability of them and their required infrastructure at this time, and that a fleet wouldn’t likely be available during the project. *Id.* SCAQMD also suggested the City require this mitigation measure as part of the bid or contract specification. FEIR, p. 2-18. The City fails to respond to this suggestion, despite the

contractors' likely greater knowledge of the availability of these vehicles than the City. The FEIR is also quick to note that the Project would exceed NOx emissions during construction for up to four days when a continuous pour would be used for the two foundations. FEIR, p. 2-21. The FEIR cannot rely on this limited time frame in which NOx emissions will be significant. It must adopt feasible mitigation measures that will bring the impacts below a significance level no matter how short the impact will last. The City's excuses for failing to adopt this mitigation measure are conclusory and cannot be used to support a finding of infeasibility.

Second, the FEIR states that it already requires compliance with CARB's 2008 Truck and Bus Regulation, which reduces NOx, PM10, and PM2.5 emissions from existing diesel vehicles operating in California so it does not believe that a mitigation measure requiring the use of CARB's 2010 engine emission standards. FEIR, p. 2-21. Requiring this additional mitigation measure could likely assist in reducing significant air quality impacts, and just because another mitigation measure would similarly reduce significant air quality impacts, does not make the additional mitigation measure infeasible. Therefore, the City's excuse for failing to adopt this mitigation measure is also conclusory and it must adopt the mitigation measure if feasible.

The FEIR's failure to implement SCAQMD's suggested mitigation measures to reduce the significant impacts on air quality fails to meet CEQA's requirements and the City must implement them.

**G. Updated Air Quality Model Demonstrates That the Project Will Have Significant Air Quality Impacts From Greenhouse Gas Emissions.**

SWAPE found that there would be significant greenhouse gas emissions despite the EIR's finding that the Project's greenhouse gas emissions would be less than significant. As a result, the City must prepare a RDEIR which takes into account SWAPE's findings and analyze and mitigate this significant impact. SWAPE's analysis and mitigation measures can be found in Exhibit B, pages 23-33.

**H. The Project Will Have a Significant Construction-Related Health Risk Impact That Has Not Been Adequately Analyzed or Mitigated.**

SWAPE found that the EIR failed to conduct both a construction and operational health risk assessment. Without such an analysis, the EIR fails to include substantial evidence that the Project's emissions will be less than significant. Additionally, SWAPE has suggested several mitigation measures to reduce emission impacts to less than significant levels. SWAPE's analysis and mitigation measures can be found in Exhibit B, pages 12-23.

**I. The EIR Fails to Accurately Disclose and Analyze Traffic Impacts.**

Traffic expert found multiple deficiencies in the EIR's traffic analysis. As such, the EIR has failed to adequately disclose, discuss, and analyze the Project's impacts on traffic. Mr. Smith's analysis can be found in Exhibit C.

**J. The EIR Fails to Address the Potential Significant Indoor Air Quality Impacts on the Health of Future Residents of the Project.**

Formaldehyde is a known human carcinogen. Many composite wood products typically used in residential and office building construction contain formaldehyde-based glues which off-gas formaldehyde over a very long time period. The primary source of formaldehyde indoors is composite wood products manufactured with urea-formaldehyde resins, such as plywood, medium density fiberboard, and particle board. These materials are commonly used in residential and office building construction for flooring, cabinetry, baseboards, window shades, interior doors, and window and door trims. Given the prominence of materials with formaldehyde-based resins that will be used in constructing the Project and the residential buildings, there is a significant likelihood that the Project's emissions of formaldehyde to air will result in very significant cancer risks to future residents and workers in the buildings. Even if the materials used within the buildings comply with the Airborne Toxic Control Measures (ATCM) of the California Air Resources Board (CARB), significant emissions of formaldehyde may still occur.

The residential buildings will have significant impacts on air quality and health risks by emitting cancer-causing levels of formaldehyde into the air that will expose workers and residents to cancer risks well in excess of SCAQMD's threshold of significance. A 2018 study by Chan et al. (attached as Exhibit D) measured formaldehyde levels in new structures constructed after the 2009 CARB rules went into effect. Even though new buildings conforming to CARB's ATCM had a 30% lower median indoor formaldehyde concentration and cancer risk than buildings built prior to the enactment of the ATCM, the levels of formaldehyde will still pose cancer risks greater than 100 in a million, well above the 10 in one million significance threshold established by the SCAQMD.

Based on expert comments submitted on other similar projects and assuming all the Project's and the residential building materials are compliant with the California Air Resources Board's formaldehyde airborne toxics control measure, future residents and employees using the Project will be exposed to a cancer risk from formaldehyde greater than the SCAQMD's CEQA significance threshold for airborne cancer risk of 10 per million. Currently, the City does not have any idea what risk will be posed by formaldehyde emissions from the Project or the residences.

The City has a duty to investigate issues relating to a project's potential environmental impacts. *See County Sanitation Dist. No. 2 v. County of Kern*, (2005) 127 Cal.App.4th 1544, 1597–98. [“[U]nder CEQA, the lead agency bears a burden to investigate potential environmental impacts.”]. “If the local agency has failed to study an area of possible environmental impact, a fair argument may be based on the limited facts in the record.

Deficiencies in the record may actually enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences.” *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 311. Given the lack of study conducted by the City on the health risks posed by emissions of formaldehyde from new residential projects, a fair argument exists that such emissions from the Project may pose significant health risks. As a result, the City must prepare a RDEIR which calculates the health risks that the formaldehyde emissions may have on future residents and workers and identifies appropriate mitigation measures.

#### **IV. THE CITY SHOULD PREPARE AND RECIRCULATE A REVISED DEIR**

A revised draft environmental impact report (“RDEIR”) should be prepared and circulated for full public review to address the impacts identified above and to propose feasible mitigation measures. CEQA requires re-circulation of an EIR when significant new information is added to the EIR following public review but before certification. (Pub. Res. Code § 21092.1.) The CEQA Guidelines clarify that new information is significant if “the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project” including, for example, “a disclosure showing that . . . [a] new significant environmental impact would result from the project.” (14 CCR § 15088.5.) The above significant environmental impacts have not been analyzed in the EIR and must be addressed in an RDEIR that is re-circulated for public review.

#### **V. CONCLUSION**

For the foregoing reasons, SAFER believes that the Times Mirror Square DEIR and FEIR are wholly inadequate. SAFER urges the Hearing Officer and Advisory Agency to refrain from certifying the FEIR or recommending approval of the Times Mirror Square Project in order to allow staff additional time to address the concerns raised herein. Thank you for considering our comments and please include this letter in the record of proceedings for this project.

Sincerely,



Richard Toshuyuki Drury  
LOZEAU DRURY LLP

# Exhibit A

Shawn Smallwood, PhD  
3108 Finch Street  
Davis, CA 95616

William Lamborn  
City of Los Angeles  
Department of City Planning  
221 N. Figueroa St., Room 1350  
Los Angeles, CA 90012

13 October 2019

RE: Times Mirror Square Project

Dear Mr. Lamborn,

I write to comment on the City of Los Angeles (2019a,b) DEIR and FEIR prepared for the Times Mirror Square Project, which I understand would add 1,135,803 ft<sup>2</sup> of construction floor space between a 37-story building and a 53-story building, and including 34,572 ft<sup>2</sup> of commercial floor space and 1,127 residential units on 3.6 acres of land. Assuming 25% of the buildings' façades would be composed of steel or concrete, I estimate the project's façades would support at least 30,000 m<sup>2</sup> of glass windows, which would pose collision hazards to birds. Adding to the collision hazards would be the abundant use of window recessing, over-window balconies, between-building interior space, and as depicted in the EIR, use of transparent glass and abundant interior lighting at night. I write to comment on bird-window collisions that would result from this project – a type of impact that is not addressed in the DEIR or FEIR.

My qualifications for preparing expert comments are the following. I hold a Ph.D. degree in Ecology from University of California at Davis, where I subsequently worked for four years as a post-graduate researcher in the Department of Agronomy and Range Sciences. My research has been on animal density and distribution, habitat selection, habitat restoration, interactions between wildlife and human infrastructure and activities, conservation of rare and endangered species, and on the ecology of invading species. I perform research on wildlife mortality caused by wind turbines, electric distribution lines, agricultural practices, and road traffic. I authored numerous papers on special-status species issues, including "Using the best scientific data for endangered species conservation" (Smallwood et al. 1999), and "Suggested standards for science applied to conservation issues" (Smallwood et al. 2001). I served as Chair of the Conservation Affairs Committee for The Wildlife Society – Western Section. I am a member of The Wildlife Society and the Raptor Research Foundation, and I've been a part-time lecturer at California State University, Sacramento. I was Associate Editor of wildlife biology's premier scientific journal, The Journal of Wildlife Management, as well as of Biological Conservation, and I was on the Editorial Board of Environmental Management. I have performed wildlife surveys in California for thirty-three years, including at many proposed project sites. My CV is attached.

## **BIOLOGICAL IMPACTS ASSESSMENT**

Based on recent eBird records, 43 special-status species of birds occur near the site of the proposed project (Table 1), 14 of which were seen on property immediately adjacent to the site. Fifteen species have been known to collide with windows (Table 1). Many of these species are undoubtedly already experiencing annual mortality caused by window collisions in Los Angeles, but the proposed new project would substantially add window-collision hazards to birds flying over Los Angeles.

### **WINDOW COLLISIONS**

Recent advances in structural glass engineering have contributed to a proliferation of glass windows on building façades. This proliferation is readily observable in newer buildings and in recent project planning documents, and it is represented by a worldwide 20% increase in glass manufacturing for building construction since 2016. Increasing window to wall ratios and glass façades have become popular for multiple reasons, including a growing demand for ‘daylighting.’ Not only is glass a major feature of the Times Mirror Square Project, but depictions in the EIR are of buildings gleaming in transparent glass in daylight and lit from the interior at night.

The EIR has not been prepared with the benefit of survey visits by wildlife biologists, so it inadequately informs the public about avian use of the area. Surveys are needed to learn how many of each bird species fly through the area and at what times of day (and night). Nocturnal surveys can be performed using a thermal-imaging camera or radar. Such surveys would inform of collision risk, and could inform mitigation strategies involving interior light management and design modifications to facades facing the prevailing approach directions of migrating birds. Below I review the bird-window collision issue, hypothesized causal factors and recommended mitigation solutions. I also predict bird-window collision rates based on studies performed across the USA at structures ranging widely in height, window-to-wall ratio, types of glass, orientation, and structural context. My aim is to make a robust prediction from this range of study conditions, and to present the associated large confidence interval that I believe is appropriate in the face of uncertainty over how many birds fly through the project area and what proportion of the birds are more susceptible than others to window collision.

Glass-façades of buildings intercept and kill many birds, but these façades are differentially hazardous to birds based on spatial extent, contiguity, orientation, and other factors. At Washington State University, Johnson and Hudson (1976) found 266 bird fatalities of 41 species within 73 months of monitoring of a three-story glass walkway (no fatality adjustments attempted). Prior to marking the windows to warn birds of the collision hazard, the collision rate was 84.7 per year. At that rate, and not attempting to adjust the fatality estimate for the proportion of fatalities not found, 4,235 birds were likely killed over the 50 years since the start of their study, and that’s at a relatively small building façade (Figure 1). Accounting for the proportion of fatalities not found, the number of birds killed by this walkway over the last 50 years would have been about 12,705. And this is just for one 3-story, glass-sided walkway between two college campus buildings.

**Table 1.** Reports of special-status species occurrences within close proximity of the proposed project site.

<b>Common name</b>	<b>Species name</b>	<b>Status</b>	<b>eBird post(s)</b>	<b>Known window collision fatalities</b>
California gull	<i>Larus californicus</i>	TWL	Adjacent	
Caspian tern	<i>Hydroprogne caspia</i>	BCC	Adjacent	
Turkey vulture	<i>Cathartes aura</i>	FGC 3503.5	Adjacent	
Osprey	<i>Pandion haliaetus</i>	TWL, FGC 3503.5	Nearby	
Swainson's hawk	<i>Buteo swainsoni</i>	CT, FGC 3503.5	Nearby	
Red-tailed hawk	<i>Buteo jamaicensis</i>	FGC 3503.5	Adjacent	Yes
Red-shouldered hawk	<i>Buteo lineatus</i>	FGC 3503.5	Adjacent	Yes
Northern harrier	<i>Circus cyaneus</i>	SSC3, FGC 3503.5	Nearby	
White-tailed kite	<i>Elanus leucurus</i>	CFP, FGC 3503.5	Nearby	
Sharp-shinned hawk	<i>Accipiter striatus</i>	FGC 3503.5	Nearby	Yes
Cooper's hawk	<i>Accipiter cooperi</i>	FGC 3503.5	Nearby	Yes
American kestrel	<i>Falco sparverius</i>	FGC 3503.5	Adjacent	Yes
Merlin	<i>Falco columbarius</i>	FGC 3503.5	Adjacent	Yes
Prairie falcon	<i>Falco mexicanus</i>	FGC 3503.5	Regional	
Peregrine falcon	<i>Falco peregrinus</i>	CE, CFP, FGC 3503.5	Adjacent	Yes
Barn owl	<i>Tyto alba</i>	FGC 3503.5	Adjacent	
Great-horned owl	<i>Bubo virginianus</i>	FGC 3503.5	Nearby	
Burrowing owl	<i>Athene cunicularia</i>	BCC, SSC2, FGC 3503.5	Adjacent	
Western screech-owl	<i>Megascops kennicottii</i>	FGC 3503.5	Regional	
Vaux's swift	<i>Chaetura vauxi</i>	SSC2	Adjacent	
Black swift	<i>Cypseloides niger</i>	SSC3	Nearby	
Allen's hummingbird	<i>Selasphorus sasin</i>	BCC	Adjacent	Yes
Costa's hummingbird	<i>Calypte costae</i>	BCC	Adjacent	Yes
Nuttall's woodpecker	<i>Picoides nuttallii</i>	BCC	Nearby	
Lewis's woodpecker	<i>Melanerpes lewis</i>	BCC	Nearby	
Horned lark	<i>Eremophila alpestris actia</i>	TWL	Regional	
California gnatcatcher	<i>Polioptila c. californica</i>	FT, SSC	Regional	
Willow flycatcher	<i>Empidonax trailii</i>	FE, CE	Nearby	
Vermilion flycatcher	<i>Pyrocephalus rubinus</i>	SSC2	Nearby	
Olive-sided flycatcher	<i>Contopus cooperi</i>	SSC2	Nearby	

<b>Common name</b>	<b>Species name</b>	<b>Status</b>	<b>eBird post(s)</b>	<b>Known window collision fatalities</b>
Purple martin	<i>Progne subis</i>	SSC2	Nearby	Yes
Oak titmouse	<i>Baeolophus inornatus</i>	BCC	Adjacent	Yes
Loggerhead shrike	<i>Lanius ludovicianus</i>	BCC, SSC2	Nearby	
Least Bell's vireo	<i>Vireo belli pusillus</i>	FE, CE	Regional	
Yellow warbler	<i>Setophaga petechia</i>	SSC2	Adjacent	Yes
Yellow-breasted chat	<i>Icteria virens</i>	SSC3	Nearby	Yes
Summer tanager	<i>Piranga rubra</i>	SSC1	Nearby	Yes
Bell's sage sparrow	<i>Amphispiza b. belli</i>	TWL	Nearby	
Oregon vesper sparrow	<i>Pooecetes gramineus affinis</i>	SSC2	Regional	
Grasshopper sparrow	<i>Ammodramus savannarum</i>	SSC2	Regional	Yes
Southern California rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>	BCC, SSC	Nearby	
Tricolored blackbird	<i>Agelaius tricolor</i>	CT, BCC	Nearby	
Lawrence's goldfinch	<i>Spinus lawrencei</i>	BCC	Nearby	

<sup>1</sup> Listed as FE and FT = federal endangered and threatened species, BCC = U.S. Fish and Wildlife Service Bird Species of Conservation Concern, CE and CT = California endangered and threatened species, SSC = California species of special concern (not threatened with extinction, but rare, very restricted in range, declining throughout range, peripheral portion of species' range, associated with habitat that is declining in extent), CFP = California Fully Protected (CDFW Code 3511), FGC 3503.5 = California Department of Fish and Wildlife Code 3503.5 (Birds of prey), and SSC1, SSC2 and SSC3 = California Bird Species of Special Concern priorities 1, 2 and 3, respectively (Shuford and Gardali 2008), and TWL = Taxa to Watch List (Shuford and Gardali 2008).

**Figure 1.** *A walkway connecting two buildings at Washington State University where one of the earliest studies of bird collision mortality found 85 bird fatalities per year prior to marking windows (254 annual deaths adjusted for the proportion not found). Given that the window markers have long since disappeared, this walkway has likely killed at least 12,705 birds since 1968, and continues to kill birds. Notice that the transparent glass on both sides of the walkway gives the impression of unimpeded airspace that can be navigated safely by birds familiar with flying between tree branches. Also note the reflected images of trees, which can mislead birds into seeing safe perch sites. Further note the distances of ornamental trees, which allow birds taking off from those trees to reach full speed upon arrival at the windows.*



Window collisions are often characterized as either the second or third largest source or human-caused bird mortality. The numbers behind these characterizations are often attributed to Klem's (1990) and Dunn's (1993) estimates of about 100 million to 1 billion bird fatalities in the USA, or more recently Loss et al.'s (2014) estimate of 365-988 million bird fatalities in the USA or Calvert et al.'s (2013) and Machtans et al.'s (2013) estimates of 22.4 million and 25 million bird fatalities in Canada, respectively. However, these estimates and their interpretation warrant examination because they were based on opportunistic sampling, volunteer study participation, and fatality monitoring by more inexperienced than experienced searchers.

Klem's (1990) estimate was based on speculation that 1 to 10 birds are killed per building per year, and this speculated range was extended to the number of buildings estimated by the US Census Bureau in 1986. Klem's speculation was supported by fatality monitoring at only two houses, one in Illinois and the other in New York. Also, the basis of his fatality rate extension has changed greatly since 1986. Whereas his estimate served the need to alert the public of the possible magnitude of the bird-window collision issue, it was highly uncertain at the time and undoubtedly outdated more than three decades hence. Indeed, by 2010 Klem (2010) characterized the upper end of his estimated range – 1 billion bird fatalities – as conservative. Furthermore, the estimate lumped species together as if all birds are the same and the loss of all birds to windows has the same level of impact.

Homes with birdfeeders are associated with higher rates of window collisions than are homes without birdfeeders (Kummer and Bayne 2015, Kummer et al. 2016a), so the developed area might pose even greater hazard to birds if it includes numerous birdfeeders. Another factor potentially biasing national or North American estimates low was revealed by Bracey et al.'s (2016) finding that trained fatality searchers found

2.6× the number of fatalities found by homeowners on the days when both trained searchers and homeowners searched around homes. The difference in carcass detection was 30.4-fold when involving carcasses volitionally placed by Bracey et al. (2016) in blind detection trials. This much larger difference in trial carcass detection rates likely resulted because their placements did not include the sounds that typically alert homeowners to actual window collisions, but this explanation also raises the question of how often homeowner participants with such studies miss detecting window-caused fatalities because they did not hear the collisions.

By the time Loss et al. (2014) performed their effort to estimate annual USA bird-window fatalities, many more fatality monitoring studies had been reported or were underway. Loss et al. (2014) were able to incorporate many more fatality rates based on scientific monitoring, and they were more careful about which fatality rates to include. However, they included estimates based on fatality monitoring by homeowners, which in one study were found to detect only 38% of the available window fatalities (Bracey et al. 2016). Loss et al. (2014) excluded all fatality records lacking a dead bird in hand, such as injured birds or feather or blood spots on windows. Loss et al.'s (2014) fatality metric was the number of fatalities per building (where in this context a building can include a house, low-rise, or high-rise structure), but they assumed that this metric was based on window collisions. Because most of the bird-window collision studies were limited to migration seasons, Loss et al. (2014) developed an admittedly assumption-laden correction factor for making annual estimates. Also, only 2 of the studies included adjustments for carcass persistence and searcher detection error, and it was unclear how and to what degree fatality rates were adjusted for these factors. Although Loss et al. (2014) attempted to account for some biases as well as for large sources of uncertainty mostly resulting from an opportunistic rather than systematic sampling data source, their estimated annual fatality rate across the USA was highly uncertain and vulnerable to multiple biases, most of which would have resulted in fatality estimates biased low.

In my review of bird-window collision monitoring, I found that the search radius around homes and buildings was very narrow, usually 2 meters. Based on my experience with bird collisions in other contexts, I would expect that a large portion of bird-window collision victims would end up farther than 2 m from the windows, especially when the windows are higher up on tall buildings. In my experience, searcher detection rates tend to be low for small birds deposited on ground with vegetation cover or woodchips or other types of organic matter. Also, vertebrate scavengers entrain on anthropogenic sources of mortality and quickly remove many of the carcasses, thereby preventing the fatality searcher from detecting these fatalities. Adjusting fatality rates for these factors – search radius bias, searcher detection error, and carcass persistence rates – would greatly increase nationwide estimates of bird-window collision fatalities.

Buildings can intercept many nocturnal migrants as well as birds flying in daylight. As mentioned above, Johnson and Hudson (1976) found 266 bird fatalities of 41 species within 73 months of monitoring of a four-story glass walkway at Washington State University (no adjustments attempted). Somerlot (2003) found 21 bird fatalities among 13 buildings on a university campus within only 61 days. Monitoring twice per week, Hager et al. (2008) found 215 bird fatalities of 48 species, or 55 birds/building/year,

and at another site they found 142 bird fatalities of 37 species for 24 birds/building/year. Gelb and Delacretaz (2009) recorded 5,400 bird fatalities under buildings in New York City, based on a decade of monitoring only during migration periods, and some of the high-rises were associated with hundreds of fatalities each. Klem et al. (2009) monitored 73 building façades in New York City during 114 days of two migratory periods, tallying 549 collision victims, nearly 5 birds per day. Borden et al. (2010) surveyed a 1.8 km route 3 times per week during 12-month period and found 271 bird fatalities of 50 species. Parkins et al. (2015) found 35 bird fatalities of 16 species within only 45 days of monitoring under 4 building façades. From 24 days of survey over a 48 day span, Porter and Huang (2015) found 47 fatalities under 8 buildings on a university campus. Sabo et al. (2016) found 27 bird fatalities over 61 days of searches under 31 windows. In San Francisco, Kahle et al. (2016) found 355 collision victims within 1,762 days under a 5-story building. Ocampo-Peñuela et al. (2016) searched the perimeters of 6 buildings on a university campus, finding 86 fatalities after 63 days of surveys. One of these buildings produced 61 of the 86 fatalities, and another building with collision-deterrent glass caused only 2 of the fatalities, thereby indicating a wide range in impacts likely influenced by various factors. There is ample evidence available to support my prediction that the proposed project would result in many collision fatalities of birds.

### **Project Impact Prediction**

Predicting the number of bird collisions at a new project is challenging because the study of window collisions remains in its early stages. Researchers have yet to agree on a collision rate metric. Some have reported findings as collisions per building per year and some as collisions per building per day. Some have reported findings as collisions per m<sup>2</sup> of window. The problem with the temporal factor in the collision rate metrics has been monitoring time spans varying from a few days to 10 years, and even in the case of the 10-year span, monitoring was largely restricted to spring and fall migration seasons. Short-term monitoring during one or two seasons of the year cannot represent a 'year,' but monitoring has rarely spanned a full year. Using 'buildings' in the metric treats buildings as all the same size, when we know they are not. Using square meters of glass in the metric treats glass as the only barrier upon which birds collide against a building's façade, when we know it is not. It also treats all glass as equal, even though we know that collision risk varies by type of glass as well as multiple factors related to contextual settings.

Without the benefit of more advanced understanding of window collision factors, my prediction of project impacts will be uncertain. Klem's (1990) often-cited national estimate of avian collision rate relied on an assumed average collision rate of 1 to 10 birds per building per year, but studies since then have all reported higher rates of collisions 12 to 352 birds per building per year. Because the more recent studies were likely performed at buildings known or suspected to cause many collisions, collision rates from them could be biased high. By the time of these comments I had reviewed and processed results of bird collision monitoring at 181 buildings and façades for which bird collisions per m<sup>2</sup> of glass per year could be calculated and averaged (Johnson and Hudson 1976, O'Connell 2001, Somerlot 2003, Hager et al. 2008, Borden et al. 2010,

Hager et al. 2013, Porter and Huang 2015, Parkins et al. 2015, Kahle et al. 2016, Ocampo-Peñuela et al. 2016, Sabo et al. 2016, Barton et al. 2017, Schneider et al. 2018). These study results averaged 0.077 bird deaths per m<sup>2</sup> of glass per year (95% CI: 0.04-0.11). Looking over the proposed building design, I estimated the buildings would include at least 30,000 m<sup>2</sup> of glass windows, which applied to the mean fatality rate would predict **2,310 bird deaths per year (95% CI: 1,200-3,300)** at the buildings. The 50-year toll from this average annual fatality rate would be 115,500 bird deaths (95% CI: 60,000-165,000), which would continue until the buildings are either renovated to reduce bird collisions or they come down. The vast majority of these deaths would be of birds newly protected under Fish and Game Code section 3513, which was amended by Governor Newsom's signing of AB 454 on 27 September 2019 to reinstate as state law the recently repealed federal Migratory Bird Treaty Act. If the project moves forward as proposed, and annually kills thousands of birds protected by AB 454, the project will cause significant unmitigated impacts.

As mentioned earlier, the accuracy of my window collision predictions depends on factors known or hypothesized to affect window collision rates. However, from the national average collision rate, I used all the variation in collision rates that was available and which resulted from a wide range in building height, type of glass, indoor and outdoor landscaping, interior light management, window to wall ratio, and structural context of the façade. This variation contributed to a robust bird-window collision rate represented by a wide 95% confidence interval. According to the confidence interval, which again was based on the wide range of conditions in the underlying data, the proposed project built as designed at 100 locations would be predicted to kill between 1,200 and 3,300 birds per year at 95 of those 100 locations, leaving the other 5 to kill birds at rates either lower or higher than this range. Even at the low end of the interval, the death toll would be excessive, amounting to 60,000 bird deaths over 50 years. This impact would be significant, especially considering that the predicted fatality rate can be prevented by implementing appropriate mitigation measures. Below I will discuss hypothesized bird-window collision factors, and I will recommend mitigation measures.

### **Bird-Window Collision Factors**

Below is a list of collision factors I found in the scientific literature. Following this list are specific notes and findings taken from the literature and my own experience.

- (1) Inherent hazard of a structure in the airspace used for nocturnal migration or other flights
- (2) Window transparency, falsely revealing passage through structure or to indoor plants
- (3) Window reflectance, falsely depicting vegetation, competitors, or open airspace
- (4) Black hole or passage effect
- (5) Window or façade extent, or proportion of façade consisting of window or other reflective surface
- (6) Size of window
- (7) Type of glass

- (8) Lighting, which is correlated with window extent and building operations
- (9) Height of structure (collision mechanisms shift with height above ground)
- (10) Orientation of façade with respect to winds and solar exposure
- (11) Structural layout causing confusion and entrapment
- (12) Context in terms of urban-rural gradient, or surrounding extent of impervious surface vs vegetation
- (13) Height, structure, and extent of vegetation grown near home or building
- (14) Presence of birdfeeders or other attractants
- (15) Relative abundance
- (16) Season of the year
- (17) Ecology, demography and behavior
- (18) Predatory attacks or cues provoking fear of attack
- (19) Aggressive social interactions

(1) Inherent hazard of structure in airspace.—Not all of a structure’s collision risk can be attributed to windows. Overing (1938) reported 576 birds collided with the Washington Monument in 90 minutes on one night, 12 September 1937. The average annual fatality count had been 328 birds from 1932 through 1936. Gelb and Delacretaz (2009) and Klem et al. (2009) also reported finding collision victims at buildings lacking windows, although many fewer than they found at buildings fitted with windows. The takeaway is that any building going up at the project site would likely kill birds, although the impacts of a glass-sided building would likely be much greater.

(2) Window transparency.—Widely believed as one of the two principal factors contributing to avian collisions with buildings is the transparency of glass used in windows on the buildings (Klem 1989). Gelb and Delacretaz (2009) felt that many of the collisions they detected occurred where transparent windows revealed interior vegetation.

(3) Window reflectance.—Widely believed as one of the two principal factors contributing to avian collisions with buildings is the reflectance of glass used in windows on the buildings (Klem 1989). Reflectance can deceptively depict open airspace, vegetation as habitat destination, or competitive rivals as self-images (Klem 1989). Gelb and Delacretaz (2009) felt that many of the collisions they detected occurred toward the lower parts of buildings where large glass exteriors reflected outdoor vegetation. Klem et al. (2009) and Borden et al. (2010) also found that reflected outdoor vegetation associated positively with collisions.

(4) Black hole or passage effect.—Although this factor was not often mentioned in the bird-window collision literature, it was suggested in Sheppard and Phillips (2015). The black hole or passage effect is the deceptive appearance of a cavity or darkened ledge that certain species of bird typically approach with speed when seeking roosting sites. The deception is achieved when shadows from awnings or the interior light conditions give the appearance of cavities or protected ledges. This factor appears potentially to be nuanced variations on transparency or reflectance or possibly an interaction effect of both of these factors.

(5) Window or façade extent.—Klem et al. (2009), Borden et al. (2010), Hager et al. (2013), and Ocampo-Peñuela et al. (2016) reported increased collision fatalities at buildings with larger reflective façades or higher proportions of façades composed of windows. However, Porter and Huang (2015) found a negative relationship between fatalities found and proportion of façade that was glazed.

(6) Size of window.—According to Kahle et al. (2016), collision rates were higher on large-pane windows compared to small-pane windows.

(7) Type of glass.—Klem et al. (2009) found that collision fatalities associated with the type of glass used on buildings. Otherwise, little attention has been directed towards the types of glass in buildings.

(8) Lighting.—Parkins et al. (2015) found that light emission from buildings correlated positively with percent glass on the façade, suggesting that lighting is linked to the extent of windows. Zink and Eckles (2010) reported fatality reductions, including an 80% reduction at a Chicago high-rise, upon the initiation of the Lights-out Program. However, Zink and Eckles (2010) provided no information on their search effort, such as the number of searches or search interval or search area around each building.

(9) Height of structure.—I found little if any hypothesis-testing related to building height, including whether another suite of factors might relate to collision victims of high-rises. Are migrants more commonly the victims of high-rises or of smaller buildings?

(10) Orientation of façade.—Some studies tested façade orientation, but not convincingly. Confounding factors such as the extent and types of windows would require large sample sizes of collision victims to parse out the variation so that some portion of it could be attributed to orientation of façade. Whether certain orientations cause disproportionately stronger or more realistic-appearing reflections ought to be testable through measurement, but counting dead birds under façades of different orientations would help.

(11) Structural layout.—Bird-safe building guidelines have illustrated examples of structural layouts associated with high rates of bird-window collisions, but little attention has been directed towards hazardous structural layouts in the scientific literature. An exception was Johnson and Hudson (1976), who found high collision rates at 3 stories of glassed-in walkways atop an open breezeway, located on a break in slope with trees on one side of the structure and open sky on the other, Washington State University.

(12) Context in urban-rural gradient.—Numbers of fatalities found in monitoring have associated negatively with increasing developed area surrounding the building (Hager et al. 2013), and positively with more rural settings (Kummer et al. 2016a).

(13) Height, structure and extent of vegetation near building.—Correlations have sometimes been found between collision rates and the presence or extent of vegetation

near windows (Hager et al. 2008, Borden et al. 2010, Kummer et al. 2016a, Ocampo-Peñuela et al. 2016). However, Porter and Huang (2015) found a negative relationship between fatalities found and vegetation cover near the building. In my experience, what probably matters most is the distance from the building that vegetation occurs. If the vegetation that is used by birds is very close to a glass façade, then birds coming from that glass will be less likely to attain sufficient speed upon arrival at the façade to result in a fatal injury. Too far away and there is probably no relationship. But 30 to 50 m away, birds alighting from vegetation can attain lethal speeds by the time they arrive at the windows.

(14) Presence of birdfeeders.—Dunn (1993) reported a weak correlation ( $r = 0.13$ ,  $P < 0.001$ ) between number of birds killed by home windows and the number of birds counted at feeders. However, Kummer and Bayne (2015) found that experimental installment of birdfeeders at homes increased bird collisions with windows 1.84-fold.

(15) Relative abundance.—Collision rates have often been assumed to increase with local density or relative abundance (Klem 1989), and positive correlations have been measured (Dunn 1993, Hager et al. 2008). However, Hager and Craig (2014) found a negative correlation between fatality rates and relative abundance near buildings.

(16) Season of the year.—Borden et al. (2010) found 90% of collision fatalities during spring and fall migration periods. The significance of this finding is magnified by 7-day carcass persistence rates of 0.45 and 0.35 in spring and fall, rates which were considerably lower than during winter and summer (Hager et al. 2012). In other words, the concentration of fatalities during migration seasons would increase after applying seasonally-explicit adjustments for carcass persistence. Fatalities caused by collisions into the glass façades of the project's building would likely be concentrated in fall and spring migration periods.

(17) Ecology, demography and behavior.—Klem (1989) noted that certain types of birds were not found as common window-caused fatalities, including soaring hawks and waterbirds. Cusa et al. (2015) found that species colliding with buildings surrounded by higher levels of urban greenery were foliage gleaners, and species colliding with buildings surrounded by higher levels of urbanization were ground foragers. Sabo et al. (2016) found no difference in age class, but did find that migrants are more susceptible to collision than resident birds.

(18) Predatory attacks.—Panic flights caused by raptors were mentioned in 16% of window strike reports in Dunn's (1993) study. I have witnessed Cooper's hawks chasing birds into windows, including house finches next door to my home and a northern mockingbird chased directly into my office window. Predatory birds likely to collide with the project's windows would include Peregrine falcon, red-shouldered hawk, Cooper's hawk, and sharp-shinned hawk.

(19) Aggressive social interactions.—I found no hypothesis-testing of the roles of aggressive social interactions in the literature other than the occasional anecdotal account of birds attacking their self-images reflected from windows. However, I have

witnessed birds chasing each other and sometimes these chases resulting in one of the birds hitting a window.

## **Window Collision Solutions**

Given the magnitude of bird-window collision impacts, there are obviously great opportunities for reducing and minimizing these impacts going forward. Existing structures can be modified or retrofitted to reduce impacts, and proposed new structures can be more carefully sited, designed, and managed to minimize impacts. However, the costs of some of these measures can be high and can vary greatly, but most importantly the efficacies of many of these measures remain uncertain. Both the costs and effectiveness of all of these measures can be better understood through experimentation and careful scientific investigation. **Post-construction fatality monitoring should be an essential feature of any new building project.** Below is a listing of mitigation options, along with some notes and findings from the literature.

Any new project should be informed by preconstruction surveys of daytime and nocturnal flight activity. Such surveys can reveal the one or more façades facing the prevailing approach direction of birds, and these revelations can help prioritize where certain types of mitigation can be targeted. It is critical to formulate effective measures prior to construction, because post-construction options will be limited, likely more expensive, and probably less effective.

### ***(1) Retrofitting to reduce impacts***

- (1A) Marking windows
- (1B) Managing outdoor landscape vegetation
- (1C) Managing indoor landscape vegetation
- (1D) Managing nocturnal lighting

(1A) Marking windows.—Whereas Klem (1990) found no deterrent effect from decals on windows, Johnson and Hudson (1976) reported a fatality reduction of about 69% after placing decals on windows. In an experiment of opportunity, Ocampo-Peñuela et al. (2016) found only 2 of 86 fatalities at one of 6 buildings – the only building with windows treated with a bird deterrent film. At the building with fritted glass, bird collisions were 82% lower than at other buildings with untreated windows. Kahle et al. (2016) added external window shades to some windowed façades to reduce fatalities 82% and 95%. Many external and internal glass markers have been tested experimentally, some showing no effect and some showing strong deterrent effects (Klem 1989, 1990, 2009, 2011; Klem and Saenger 2013; Rössler et al. 2015).

Following up on the results of Johnson and Hudson (1976), I decided to mark windows of my home, where I have documented 5 bird collision fatalities between the time I moved in and 6 years later. I marked my windows with decals delivered to me via US Postal Service from a commercial vendor. I have documented no fatalities at my windows during the 8 years hence. On 8 December 2018, I photographed a ruby-

crowned kinglet pulling up short of my window (Figure 2), right at one of my installed markers. In my assessment, markers can be effective in some situations.

**Figure 2.** *Ruby-crowned kinglet puts on the brakes in front of a decal I applied to mark windows of my home, 8 December 2018. This window killed birds prior to marking, but I have found no window collision victims since marking the windows. Windows with attractive built-in marking are commercially available.*



### **(2) Siting and Designing to minimize impacts**

- (2A) Deciding on location of structure
- (2B) Deciding on façade and orientation
- (2C) Selecting type and sizes of windows
- (2D) Designing to minimize transparency through two parallel façades
- (2E) Designing to minimize views of interior plants
- (2F) Landscaping to increase distances between windows and trees and shrubs

### **(3) Monitoring for adaptive management to reduce impacts**

- (3A) Systematic monitoring for fatalities to identify seasonal and spatial patterns
- (3B) Adjust light management, window marking and other measures as needed.

### **Guidelines on Building Design**

If the project goes forward, it should at a minimum adhere to available guidelines on building design intended to minimize collision hazards to birds. The American Bird Conservancy (ABC) produced an excellent set of guidelines recommending actions to: (1) Minimize use of glass; (2) Placing glass behind some type of screening (grilles, shutters, exterior shades); (3) Using glass with inherent properties to reduce collisions, such as patterns, window films, decals or tape; and (4) Turning off lights during migration seasons (Sheppard and Phillips 2015). The City of San Francisco (San Francisco Planning Department 2011) also has a set of building design guidelines, based on the excellent guidelines produced by the New York City Audubon Society (Orff et al. 2007). The ABC document and both the New York and San Francisco documents provide excellent alerting of potential bird-collision hazards as well as many visual examples. The San Francisco Planning Department's (2011) building design guidelines are more comprehensive than those of New York City, but they could have gone further. For example, the San Francisco guidelines probably should have also covered scientific monitoring of impacts as well as compensatory mitigation for impacts that could not be

avoided, minimized or reduced. Monitoring and the use of compensatory mitigation should be incorporated at any new building project because the measures recommended in the available guidelines remain of uncertain effectiveness, and even if these measures are effective, they will not reduce collision fatalities to zero. The only way to assess effectiveness and to quantify post-construction fatalities is to monitor the project for fatalities.

### **CUMULATIVE IMPACTS**

City of Los Angeles (2019a,b) provides no analysis of cumulative impacts on birds caused by window collisions in the City, nor any analysis of the proposed project's contribution to cumulative impacts of window collisions. This missing analysis is a critical shortfall, because bird abundance across North America has declined 29% over the last 48 years (Rosenberg et al. 2019). The proposed project alone is predicted to kill 2,310 bird deaths per year (95% CI: 1,200-3,300), which would add to many thousands more killed by windows in Los Angeles. City of Los Angeles needs to provide an estimate of the extent of windows already constructed, as well as an estimate of projected future extent of windows in the City. From such estimates, the City's cumulative toll on birds colliding with windows can be estimated.

### **MITIGATION**

Bird surveys need to be performed to adequately characterize flight patterns through the project area. These surveys need to inform a revised EIR, which should require adherence to the available guidelines on minimizing bird-window collisions (see earlier comments). Compensatory mitigation should be formulated for those collision fatalities that cannot be avoided through implementation of guidelines. Unavoidable collision fatalities should be measured through two or more years of post-construction fatality monitoring, and the revised EIR should tie levels of compensatory mitigation to threshold fatality rates.

### **Fund Wildlife Rehabilitation Facilities**

Compensatory mitigation ought also to include funding contributions to wildlife rehabilitation facilities to cover the costs of injured animals that will be delivered to these facilities for care. Most of the wildlife injuries will likely be caused by window collisions. But the project's impacts can also be offset by funding the treatment of injuries to animals caused by other buildings, electric lines, cars, and house cats.

Thank you for your attention,



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Shawn Smallwood, Ph.D.

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## Curriculum Vitae

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Born May 3, 1963 in  
Sacramento, California.  
Married, father of two.

### Ecologist

#### Expertise

- Finding solutions to controversial problems related to wildlife interactions with human industry, infrastructure, and activities;
- Wildlife monitoring and field study using GPS, thermal imaging, behavior surveys;
- Using systems analysis and experimental design principles to identify meaningful ecological patterns that inform management decisions.

#### Education

Ph.D. Ecology, University of California, Davis. September 1990.  
M.S. Ecology, University of California, Davis. June 1987.  
B.S. Anthropology, University of California, Davis. June 1985.  
Corcoran High School, Corcoran, California. June 1981.

#### Experience

- 477 professional publications, including:
  - 81 peer reviewed publications
  - 24 in non-reviewed proceedings
  - 370 reports, declarations, posters and book reviews
  - 8 in mass media outlets
  - 87 public presentations of research results at meetings
  - Reviewed many professional papers and reports
  - Testified in 4 court cases.

Editing for scientific journals: Guest Editor, *Wildlife Society Bulletin*, 2012-2013, of invited papers representing international views on the impacts of wind energy on wildlife and how to mitigate the impacts. Associate Editor, *Journal of Wildlife Management*, March 2004 to 30 June 2007. Editorial Board Member, *Environmental Management*, 10/1999 to 8/2004. Associate Editor, *Biological Conservation*, 9/1994 to 9/1995.

Member, Alameda County Scientific Review Committee (SRC), August 2006 to April 2011. The

five-member committee investigated causes of bird and bat collisions in the Altamont Pass Wind Resource Area, and recommended mitigation and monitoring measures. The SRC reviewed the science underlying the Alameda County Avian Protection Program, and advised the County on how to reduce wildlife fatalities.

Consulting Ecologist, 2004-2007, California Energy Commission (CEC). Provided consulting services as needed to the CEC on renewable energy impacts, monitoring and research, and produced several reports. Also collaborated with Lawrence-Livermore National Lab on research to understand and reduce wind turbine impacts on wildlife.

Consulting Ecologist, 1999-2013, U.S. Navy. Performed endangered species surveys, hazardous waste site monitoring, and habitat restoration for the endangered San Joaquin kangaroo rat, California tiger salamander, California red-legged frog, California clapper rail, western burrowing owl, salt marsh harvest mouse, and other species at Naval Air Station Lemoore; Naval Weapons Station, Seal Beach, Detachment Concord; Naval Security Group Activity, Skaggs Island; National Radio Transmitter Facility, Dixon; and, Naval Outlying Landing Field Imperial Beach.

Fulbright Research Fellow, Indonesia, 1988. Tested use of new sampling methods for numerical monitoring of Sumatran tiger and six other species of endemic felids, and evaluated methods used by other researchers.

### **Peer Reviewed Publications**

Smallwood, K. S. 2017. Long search intervals under-estimate bird and bat fatalities caused by wind turbines. *Wildlife Society Bulletin* 41:224-230.

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# Exhibit B



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October 15, 2019

Richard Drury  
Lozeau | Drury LLP  
1939 Harrison Street, Suite 150  
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**Subject:           Comments on the Times Mirror Square Project**

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Dear Mr. Drury,

We have reviewed the March 2019 Draft Environmental Impact Report (“DEIR”) for the Times Mirror Square Project (“Project”) located in the City of Los Angeles (“City”). The Project proposes to demolish an existing 183,758 square foot executive building and 6-story parking garage in order to construct two buildings with 1,127 residential units and 34,572 square feet of restaurant space, for a total of 1,135,803 square feet of new development. The Project also proposes to rehabilitate three existing buildings, totaling 376,105 square feet.

Our review concludes that the DEIR fails to adequately evaluate the Project’s Air Quality, Health Risk, and Greenhouse Gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An updated DEIR should be prepared to adequately assess and mitigate the potential air quality and health risk impacts that the project may have on the surrounding environment.

## **Air Quality**

### **Unsubstantiated Input Parameters Used to Estimate Project Emissions**

The DEIR’s air quality analysis relies on emissions calculated with CalEEMod.2016.3.2.<sup>1</sup> CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act (CEQA) requires that such changes be justified by substantial evidence.<sup>2</sup> Once all of the values are inputted into the model, the Project’s

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<sup>1</sup> CAPCOA (November 2017) CalEEMod User’s Guide, [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4).

<sup>2</sup> Ibid, p. 1, 9.

construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters were utilized in calculating the Project's air pollutant emissions and make known which default values were changed as well as provide justification for the values selected.<sup>3</sup>

Review of the Project's air modeling demonstrates that the DEIR underestimates emissions associated with Project activities. As previously stated, the DEIR's air quality analysis relies on air pollutant emissions calculated using CalEEMod. When reviewing the Project's CalEEMod output files, provided in Appendix C to the DEIR, we found that several of the values inputted into the model were not consistent with information disclosed in the DEIR. As a result, the Project's construction and operational emissions are underestimated. An updated DEIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

*Failure to Include All Proposed Land Uses*

Review of the Project's CalEEMod output files demonstrates that not all of the land uses proposed by the DEIR were included in the model. As a result, the Project's construction and operational emissions may be underestimated.

According to the DEIR, the proposed Towers would include approximately 34,572 square feet of restaurant uses (see excerpt below) (p. II-30, Table II-2).

**TABLE II-2  
PROPOSED DEVELOPMENT<sup>A</sup>**

<b>North and South Towers Uses</b>	<b>North Tower</b>	<b>South Tower</b>	<b>Total</b>
<b>Residential Uses</b>			
Studio	90 Units	0	90 Units
I Bedroom	166 Units	380 Units	546 Units
1 Bedroom + Den	60 Units	100 Units	160 Units
2 Bedroom	132 Units	192 Units	324 Units
3 Bedroom	0 Units	4 Units	4 Units
Penthouse	2 Units	1 Unit	3 Units
<b>Total Residential Units</b>	<b>450 Units</b>	<b>677 Units</b>	<b>1,127 Units</b>
<i>Total Residential Floor Area</i>			<i>1,071,692 sf</i>
<b>Non-Residential Uses</b>			
Loading			2,586 sf
Restaurant			34,572 sf
<i>Total Non-Residential Floor Area</i>			<i>64,111 sf</i>
<b>Proposed New Floor Area in North and South Towers</b>			<b>1,135,803 sf</b>

<sup>3</sup> Supra, fn 1, p. 11, 12 – 13. A key feature of the CalEEMod program is the "remarks" feature, where the user explains why a default setting was replaced by a "user defined" value. These remarks are included in the report.

Review of the Project’s CalEEMod output files for the Towers, however, demonstrates that the restaurant land use was not included (see excerpt below) (Appendix C, pp. 135, 181).

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	37.60	1000sqft	0.86	37,597.00	0
Enclosed Parking with Elevator	1,754.00	Space	0.68	697,600.00	0
Other Non-Asphalt Surfaces	74.64	1000sqft	0.09	74,643.00	0
City Park	0.92	Acre	0.09	28,777.00	0
Health Club	25.62	1000sqft	0.59	25,618.00	0
Apartments High Rise	1,127.00	Dwelling Unit	0.80	1,071,692.00	1894

As you can see in the excerpt above, the Towers air model fails to include the proposed restaurant land use. The land usage parameters, including land use types and sizes, are used throughout CalEEMod to determine default variables and emission factors that go into the model’s calculations.<sup>4</sup> For example, land use areas are used for certain calculations such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts). Therefore, by failing to include the proposed restaurant land use in the Towers air model, the construction and operational emissions are not properly accounted for in the model. Therefore, an updated air quality analysis should be prepared in an updated DEIR to adequately evaluate the Project’s construction and operational air quality impacts.

### *Underestimated Land Use Size*

Review of the Project’s CalEEMod output files demonstrates that the size of the proposed General Office Building land use was underestimated within the operational model. According to the DEIR, the Project will include 307,288 square feet of office space once operational (p. II-30, table II-2). However, review of the CalEEMod output files reveals that an area value of 285,088 square feet was modeled for the General Office Building land use (see excerpt below) (Appendix C, pp. 258, 269).

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	285.09	1000sqft	0.95	285,088.00	0
User Defined Commercial	3.02	User Defined Unit	0.04	3,025.00	0
Enclosed Parking with Elevator	1,754.00	Space	0.68	697,600.00	0
Other Non-Asphalt Surfaces	74.64	1000sqft	0.08	74,643.00	0
City Park	0.92	Acre	0.08	28,777.00	0
Health Club	25.62	1000sqft	0.08	25,618.00	0
High Turnover (Sit Down Restaurant)	53.39	1000sqft	0.28	53,389.00	0
Quality Restaurant	22.20	1000sqft	0.20	22,200.00	0
Apartments High Rise	1,127.00	Dwelling Unit	0.80	1,071,692.00	1894
Supermarket	50.00	1000sqft	0.50	50,000.00	0

<sup>4</sup> “CalEEMod User’s Guide.” CAPCOA, November 2017, available at: [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4), p. 18.

As you can see in the excerpt above, the operational CalEEMod model estimates emissions assuming a General Office Building land use size of 285,088 square feet. This underestimates the operational office space by 22,200 square feet. As previously stated, the land use type and size features are used throughout CalEEMod to determine default variable and emission factors that go into the model's calculations.<sup>5</sup> The square footage of a land use is used for certain calculations such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts). Therefore, because the size of the General Office Building land use within the operational air model is underestimated, the operational emissions generated by the proposed Project are underestimated and should not be relied upon to determine Project significance.

*Unsubstantiated Reduction in Land Use Population*

Review of the Project's CalEEMod output files demonstrates that the population associated with the residential land use was manually reduced without proper justification. As a result, the Project's operational emissions may be underestimated.

According to the "User Entered Comments and Non-Default Data" table, the land use population was changed from 3,223 to 1,894 (see excerpt below) (Appendix B, pp. 138, pp. 184, pp. 260, pp. 271).

tblLandUse	Population	3,223.00	1,894.00
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As you can see in the excerpt above, the population size is reduced by 1,329 residents, or approximately 41%. However, the DEIR fails to mention this reduction or justify any change to the land use population for high-rise apartments. According to the CalEEMod User's Guide, the land use population metric is used throughout CalEEMod to calculate emissions associated with Project activities.<sup>6</sup> As a result, the operational emissions associated with the Project may be underestimated and should not be relied upon to estimate emissions.

*Incorrectly Applied Tier 4 Mitigation Measure*

According to the DEIR, the Project will implement the use of Tier 4 engines for off-road construction equipment in order to reduce construction emissions (p. IV.B-77). The DEIR states,

"As detailed in mitigation measures MM AQ-1 and MM AQ-2, construction of the Project would be required to utilize off-road diesel powered construction equipment that meet or exceed the stringent CARB and USEPA Tier 4 off-road emissions standards for those equipment rated at 50 hp or greater during Project construction" (p. IV.B-77).

MM-AQ-1 goes on to state,

<sup>5</sup> "CalEEMod User's Guide." CAPCOA, November 2017, available at: [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4), p. 18.

<sup>6</sup> "CalEEMod User's Guide." CAPCOA, November 2017, available at: [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4), p. 18.

“Off-road diesel-powered equipment that will be used an aggregate of 40 or more hours during any portion of the construction activities associated with grading/excavation/export phase shall meet the Tier 4 standards” (IV. B-78).

As the above excerpt demonstrates, MM-AQ-1 does not specify whether the Project would implement Tier 4 Interim or Tier 4 Final engines. Review of the CalEEMod output files demonstrates that the model assumed that Tier 4 *Final* engines would be used for 150 pieces of construction equipment.

The excerpts below demonstrate that emissions were modeled assuming that 150 pieces of construction equipment were equipped with Tier 4 Final engines in the Tower, renovation, and vibratory pile driver air models (see excerpts below) (Appendix C, pp. 137, 183, 227, 233, 240, 249).

*Tower Construction*

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	42.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00



Tier 4 Final represents the cleanest burning equipment and therefore has the lowest emissions compared to other tiers, including Tier 4 Interim equipment (see excerpt below):<sup>7</sup>

Maximum horsepower	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015+
25shp<50						7.1 / 4.1 / 0.60				5.6 / 4.1 / 0.45				5.6 / 4.1 / 0.22					3.5 / 4.1 / 0.02		
50shp<75										5.6 / 3.7 / 0.30				3.5 / 3.7 / 0.22 <sup>f</sup>					3.5 / 3.7 / 0.02 <sup>g</sup>		
75shp<100														3.5 / 3.7 / 0.30					0.14 / 2.5 / 3.7 / 0.015 <sup>e</sup>		0.14 / 0.30 / 3.7 / 0.015
100shp<175										4.9 / 3.7 / 0.22				3.0 / 3.7 / 0.22							
175shp<300										4.9 / 2.6 / 0.15				3.0 / 2.6 / 0.15 <sup>d</sup>					0.14 / 1.5 / 2.6 / 0.015 <sup>e</sup>		0.14 / 0.30 / 2.2 / 0.015
300shp<600			1.0 / 6.9 / 8.5 / 0.40							4.8 / 2.6 / 0.15				3.0 / 2.6 / 0.15 <sup>d</sup>					0.14 / 1.5 / 2.6 / 0.015 <sup>e</sup>		0.14 / 0.30 / 2.2 / 0.015
600shp<750														3.0 / 2.6 / 0.15 <sup>d</sup>					0.14 / 1.5 / 2.6 / 0.015 <sup>e</sup>		0.14 / 0.30 / 2.2 / 0.015
Mobile Machines > 750hp														3.0 / 2.6 / 0.15 <sup>d</sup>					0.14 / 2.6 / 2.6 / 0.03		0.14 / 0.50 / 2.6 / 0.02
750hp<GEN ≤1200hp										1.0 / 6.9 / 8.5 / 0.40				4.8 / 2.6 / 0.15					0.30 / 2.6 / 2.6 / 0.07		0.14 / 0.50 / 2.6 / 0.02
GEN>1200 hp														4.8 / 2.6 / 0.15					0.30 / 0.50 / 2.6 / 0.07		0.14 / 0.50 / 2.6 / 0.02

Source: derived from California Air Resources Board, [http://www.arb.ca.gov/msprog/ordiesel/documents/Off-Road\\_Diesel\\_Std.xls](http://www.arb.ca.gov/msprog/ordiesel/documents/Off-Road_Diesel_Std.xls).

- a) When ARB and USEPA standards differ, the standards shown here represent the more stringent of the two.
- b) Standards given for all sizes of Tier 1 engines are hydrocarbons/oxides of nitrogen (NOx)/carbon monoxide (CO)/particulate matter (PM) in grams per brakehorsepower per hour (g/bhp-hr).
- c) Standards given for all sizes of Tier 2 and Tier 3 engines, and Tier 4 engines below 75 horsepower are non-methane hydrocarbons (NMHC)+NOx/CO/PM in g/bhp-hr.
- d) Standards given for Tier 4 engines above 75 horsepower are NMHC/NOx/CO/PM in g/bhp-hr.
- e) Engine families in this power category may alternately meet Tier 3 PM standards (0.30 g/bhp-hr) from 2008-2011 in exchange for introducing final PM standards in 2012.
- f) The implementation schedule shown is the three-year alternate NOx approach. Other schedules are available.
- g) Certain manufacturers have agreed to comply with these standards by 2005.



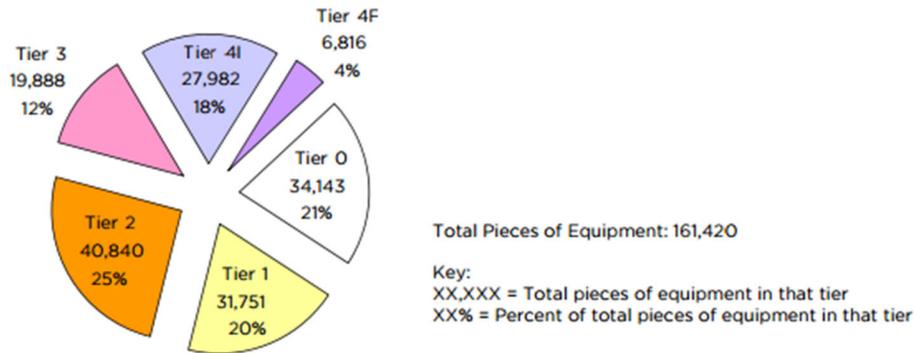
As demonstrated in the figure above, Tier 4 Interim and Tier 3 equipment have greater emission levels than Tier 4 Final equipment. Therefore, by modeling construction emissions assuming nearly a full Tier 4 Final equipment fleet, the Project Applicant failed to account for higher emissions that may occur as a result of the use of Tier 3 or Tier 4 Interim equipment. Since MM-AIR-1 fails to specify whether the Project will use Tier 4 Interim or Tier 4 Final equipment, it is incorrect to model emissions assuming that Tier 4 Final equipment will be used. Until the Project Applicant specifies that the Project will actually use Tier 4 Final engines during all phases of construction, and not utilize Tier 4 Interim equipment, the Project’s potential impacts should not be evaluated assuming the use of this cleaner burning equipment.

Furthermore, review of the DEIR demonstrates that the DEIR failed to evaluate the feasibility in obtaining Tier 4 equipment. Due to the limited amount of Tier 4, especially Tier 4 Final, equipment available, the DEIR should have assessed the feasibility in obtaining equipment with Tier 4 Final (or interim) engines (see excerpt below).<sup>8</sup>

<sup>7</sup> “San Francisco Clean Construction Ordinance Implementation Guide for San Francisco Public Projects.” August 2015, available at: [https://www.sfdph.org/dph/files/EHSdocs/AirQuality/San\\_Francisco\\_Clean\\_Construction\\_Ordinance\\_2015.pdf](https://www.sfdph.org/dph/files/EHSdocs/AirQuality/San_Francisco_Clean_Construction_Ordinance_2015.pdf), p. 6

<sup>8</sup> *Ibid.*

Figure 4: 2014 Statewide All Fleet Sizes (Pieces of Equipment)



As demonstrated in the figure above, the Tier 4 Final equipment only accounts for 4% of all off-road equipment currently available in California. Thus, emissions are modeled assuming that the Project will be able to obtain 150 pieces of Tier 4 Final equipment even though this equipment only accounts for 4% of available off-road equipment currently available in California. As a result, the model represents the best-case scenario even though obtaining these types of equipment may not be feasible.

*Unsubstantiated Application of Fuel Type Mitigation Measure*

Review of the CalEEMod output files for the Towers demonstrates that the fuel types for several pieces of construction equipment were changed from diesel to electrical without proper justification. As a result, construction emissions are underestimated.

According to the Project’s CalEEMod output files, the fuel type for 16 pieces of construction equipment were manually changed from diesel to electrical (see excerpt below) (Appendix C, pp. 136, 182)

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

As you can see in the excerpt above, the model assumes that 12 pieces of construction equipment would use electrical engines rather than the default diesel engines. As previously stated, the CalEEMod User’s Guide requires that any non-default values inputted must be justified.<sup>9</sup> While the DEIR states that “[c]onstruction equipment such as tower cranes and signal boards shall utilize electricity from power poles or alternative fuels (i.e., non-diesel), rather than diesel power generators and/or gasoline power generators,” it fails to demonstrate how many and which pieces of construction equipment will actually utilize electrical engines (p. IV. B-78). Furthermore, the DEIR fails to actually commit to the

<sup>9</sup> “CalEEMod User’s Guide.” CAPCOA, November 2017, available at: [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4), p. 7, 13.

implementation and enforcement of this measure. As a result, the application of this mitigation measure cannot be verified, and the air model should not be relied upon to determine Project significance.

*Incorrect Number of Worker Trips for Construction*

The CalEEMod model relies on an incorrect number of worker trips to estimate the Project’s construction emissions. As a result, the Project’s construction-related air pollutant emissions and associated impacts may be underestimated and are inadequately addressed.

According to the Transportation and Traffic section of the DEIR, there would be 728 two-way, or 1,456 one-way, worker trips for building construction (see excerpt below) (p. IV.P-45, Table IV.P-7).

**TABLE IV.P-7  
CONSTRUCTION PERIOD TRIP GENERATION**

Peak Day Activity Under Each Phase	<b>(two-way trips)</b>					
	Phase 1: Demolition	Phase 2: Renovation	Phase 3: Site Preparation	Phase 4: Grading	Phase 5: Foundation/ Concrete Pour	Phase 6: Building Construction
Construction Workers	29	62	29	30	19	<b>728</b>
Passenger Car Equivalent (PCE) factor	1.0	1.0	1.0	1.0	1.0	1.0
Haul Truckloads	10	0	0	140	0	0
PCE factor	2.5	2.5	2.5	2.5	2.5	2.5
Delivery/Equipment Truckloads	0	0	0	0	703	179
PCE factor	2.0	2.0	2.0	2.0	2.0	2.0

As you can see in the excerpt above, the Project is anticipated to generate 728 two-way, or 1,456 one-way, trips during Project construction. Review of the CalEEMod output files, however, demonstrates that the Towers model includes an incorrect number of worker trips (see excerpt below) (Appendix C, pp. 150, 196).

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	20	58.00	0.00	3,500.00	14.70	6.90	22.10	LD_Mix	HDT_Mix	HHDT
Site Preparation	18	58.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	24	60.00	0.00	51,088.00	14.70	6.90	22.10	LD_Mix	HDT_Mix	HHDT
Foundation (North Tower)	15	38.00	1,406.00	0.00	14.70	25.00	20.00	LD_Mix	HHDT	HHDT
Foundation (South Tower)	15	38.00	1,173.00	0.00	14.70	25.00	20.00	LD_Mix	HHDT	HHDT
Subterranean Parking Structure	35	1,186.00	302.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Podium Construction	35	1,186.00	357.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	33	<b>1,186.00</b>	271.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	237.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

As you can see in the excerpt above, the total number of worker trips expected to occur during the Building Construction phase is underestimated by 270 trips. Without inputting the 1,456 trips discussed in the DEIR, the Towers air model fails to include all emissions expected for Project construction. As a result, construction emissions are underestimated. In order to provide the most conservative analysis, as is required by CEQA, the DEIR’s Towers air model should have utilized the trip values indicated to model the Project’s construction-related air pollutant emissions.

### *Unsubstantiated Changes to Indoor and Outdoor Water Use Rates*

Review of the Project’s CalEEMod output files demonstrates that the Project’s indoor water use rates were artificially changed without proper justification. As result, operational emissions may be underestimated.

According to the Project’s CalEEMod output files, numerous indoor water use rates were changed from their default values (see excerpt below) (Appendix C, pp. 262, 273).

Table Name	Column Name	Default Value	New Value
tbiWater	IndoorWaterUseRate	73,428,586.88	41,370,819.10
tbiWater	IndoorWaterUseRate	50,670,114.22	22,622,497.88
tbiWater	IndoorWaterUseRate	1,515,247.35	4,209,271.08
tbiWater	IndoorWaterUseRate	16,205,664.91	4,236,560.43
tbiWater	IndoorWaterUseRate	6,738,448.42	1,761,629.58
tbiWater	IndoorWaterUseRate	6,163,410.74	3,967,634.18
tbiWater	IndoorWaterUseRate	0.00	511,321.06

As you can see in the excerpt above, the values for indoor water use rates were altered manually. According to the CalEEMod User’s Guide, indoor and outdoor water use rates are used to determine land use contributions of GHG emissions associated with supplying and treating water and wastewater.<sup>10</sup> Regarding changes to water use rates, the DEIR states that “[t]he Project would reduce outdoor potable water use by a minimum of 20 percent compared to baseline water consumption” (p. II-48). However, this does not provide any justification for the changes to the Project’s indoor water use rate. As a result, these changes cannot be verified, and the Project’s operational emissions may be underestimated.

### *Failure to Implement All Feasible Mitigation to Reduce Emissions*

The DEIR determines that the Project’s construction NOx emissions would result in a significant air quality impact (see excerpt below) (p. IV.B-61, Table IV.B-7).

<sup>10</sup> [http://www.agmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.agmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4), p. 44

**TABLE IV.B-11  
ESTIMATED MAXIMUM MITIGATED REGIONAL CONSTRUCTION EMISSIONS (POUNDS PER DAY)<sup>a</sup>**

Source	VOC	NO <sub>x</sub>	CO <sup>d</sup>	SO <sub>2</sub>	PM10 <sup>b</sup>	PM2.5 <sup>b</sup>
<b>Individual Phases</b>						
Demolition	2	15	91	<1	5	1
Site Preparation	2	8	75	<1	1	<1
Grading	5	99	89	<1	7	2
Foundation (North Tower)	16	502	125	1.4	33	11
Foundation (South Tower)	13	420	107	1.2	28	9
Subterranean Parking Structure Construction	10	52	148	<1	16	5
Podium Construction	9	54	137	<1	16	5
Building Construction	9	43	117	<1	16	5
Building Construction/Architectural Coating	23	40	122	<1	18	5
Building Construction/Paving/Architectural Coating	23	42	159	<1	19	5
Existing Building Renovations <sup>c</sup>	1	9	21	<1	2	1
<b>Maximum Daily Emissions</b>	<b>25</b>	<b>512</b>	<b>180</b>	<b>1.5</b>	<b>35</b>	<b>11</b>
<b>SCAQMD Numeric Indicators</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Thresholds?</b>	<b>No</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

As you can see in the excerpt above, the DEIR determines that construction NO<sub>x</sub> emissions will exceed the SCAQMD threshold. The DEIR then concludes that the Project’s construction NO<sub>x</sub> emissions will result in a significant air quality impact. As a result, the DEIR proposes a few mitigation measures to reduce the Project’s criteria air pollutant emissions. However, even after implementation, the DEIR concludes that the Project’s construction NO<sub>x</sub> emissions would be “significant and unavoidable” (p. IV.B-62). While we agree that the Project would result in a significant construction-related NO<sub>x</sub> impact, the DEIR’s conclusion that these impacts are “significant and unavoidable” is incorrect. According to the California Environmental Quality Act (CEQA),

“CEQA requires Lead Agencies to mitigate or avoid significant environmental impacts associated with discretionary projects. Environmental documents for projects that have any significant environmental impacts must identify all feasible mitigation measures or alternatives to reduce the impacts below a level of significance. If after the identification of all feasible mitigation measures, a project is still deemed to have significant environmental impacts, the Lead Agency can approve a project, but must adopt a Statement of Overriding Consideration to explain why

further mitigation measures are not feasible and why approval of a project with significant unavoidable impacts is warranted.”<sup>11</sup>

Thus, an impact can only be labeled as significant and unavoidable after all available, feasible mitigation is considered. Review of the Project’s proposed mitigation measures, however, demonstrates that not all feasible mitigation measures are being implemented (p. IV.B-77 – IV.B-79). While the DEIR does include two mitigation measures for construction, MM-AQ-1 and MM-AQ-2, it fails to incorporate all feasible mitigation, as is required by CEQA. Therefore, the DEIR’s conclusion that impacts are significant and unavoidable is unsubstantiated. As a result, additional mitigation measures should be identified and incorporated in order to reduce the Project’s air quality impacts to the maximum extent possible. Until all feasible mitigation is reviewed and incorporated into the Project’s design, impacts from construction NOx emissions cannot be considered significant and unavoidable.<sup>12</sup>

As a result of the air modeling issues discussed above, we find the Project’s air quality impacts to be inadequately evaluated and require that an updated DEIR with an updated CalEEMod model be prepared that properly evaluates and mitigates the Project’s air quality impacts to a less than significant level.

### Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

The DEIR determines that the proposed Project would result in a less than significant health risk impact without conducting a quantitative construction or operational health risk assessment (HRA) to nearby sensitive receptors (p. IV.B-37). The DEIR attempts to justify the omission of a construction HRA by stating,

“Given the temporary and short-term construction schedule (approximately 48 months), the Project would not result in a long-term (i.e., lifetime or 70-year) exposure as a result of Project construction” (p. IV.B-69).

Furthermore, the DEIR attempts to justify the omission of an operational HRA by stating,

“Based on the uses expected on the Project Site, potential long-term operational impacts associated with the release of TACs would be minimal, regulated, and controlled, and would not be expected to exceed the SCAQMD numerical indicator of significance. Therefore, impacts would be less than significant” (p. IV.B-71).

However, these justifications for failing to evaluate the health risk posed to nearby sensitive receptors are incorrect for several reasons.

First, simply stating that the Project has a “short-term construction schedule” does not justify the omission of a construction HRA. According to the SCAQMD, the air pollution control agency for the

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<sup>11</sup> “Guidance for Assessing and Mitigating Air Quality Impacts.” SJVAPCD, March 2015, *available at*: [http://www.valleyair.org/transportation/GAMAQI\\_3-19-15.pdf](http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf), p. 115 of 125.

<sup>12</sup> See section titled “Mitigation Measures Available to Reduce Construction Emissions” of this comment letter. These measures would effectively reduce construction-related NOx emissions.

proposed Project, it is recommended that health risk impacts from short-term projects also be assessed. The Guidance document states,

Since these short-term calculations are only meant for projects with limits on the operating duration, these short-term cancer risk assessments can be thought of as being the equivalent to a 30-year cancer risk estimate and the appropriate thresholds would still apply (i.e. for a 5-year project, the maximum emissions during the 5-year period would be assessed on the more sensitive population, from the third trimester to age 5, after which the project's emissions would drop to 0 for the remaining 25 years to get the 30-year equivalent cancer risk estimate).<sup>13</sup>

Thus, an HRA is required to determine whether the Project would expose sensitive receptors to substantial air pollutants. The DEIR should have conducted some sort of quantitative analysis and should have compared the results of this analysis to applicable thresholds. The SCAQMD provides a specific numerical threshold of 10 in one million for determining a project's health risk impact.<sup>14</sup> Therefore, the DEIR should have conducted an assessment that compares the Project's construction and operational health risks to this threshold in order to determine the Project's health risk impacts. By failing to prepare an HRA, the DEIR fails to provide a comprehensive analysis of the sensitive receptor impacts that may occur as a result of exposure to substantial air pollutants.

Furthermore, just because "potential long-term operational impacts associated with the release of TACs would be minimal, regulated, and controlled," and because the DEIR asserts that impacts would not "exceed the SCAQMD numerical indicator of significance," does not mean that the Project's operational health-related impacts will inherently be less than significant. Although we were not given an operating schedule, we can reasonably assume that once Project construction is complete, it will operate for a long period of time. During operation, the Project will generate vehicle trips and truck deliveries, which will generate additional exhaust emissions, thus continuing to expose nearby sensitive receptors to emissions. As such, the DEIR should have conducted a construction and operational HRA, as long-term exposure to DPM and other TACs may result in a significant health risk impact and therefore, should be properly assessed.

Third, the omission of a quantified HRA is inconsistent with the most recent guidance published by the Office of Environmental Health Hazard Assessment (OEHHA), the organization responsible for providing recommendations and guidance on how to conduct HRAs in California. In February of 2015, the OEHHA released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments*, which was formally adopted in March of 2015.<sup>15</sup> This guidance document describes the

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<sup>13</sup> "Risk Assessment Procedures for Rules 1401, 1401.1 and 212." SCAQMD, June 2015, *available at*: <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/riskassprocjune15.pdf?sfvrsn=2>, p. XII-1 – XII-2.

<sup>14</sup> "South Coast AQMD Air Quality Significance Thresholds." SCAQMD, April 2019, *available at*: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>

<sup>15</sup> "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at*: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>

types of projects that warrant the preparation of an HRA. As previously stated, grading and construction activities for the proposed Project will produce emissions of DPM through the exhaust stacks of construction equipment over an approximate 48-month construction period (p. IV.B-37). The OEHHA document recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors.<sup>16</sup> Once construction is complete, Project operation will generate vehicle and truck trips, which will generate additional exhaust emissions, thus continuing to expose nearby sensitive receptors to DPM emissions. The OEHHA document recommends that exposure from projects lasting more than 6 months should be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident (MEIR).<sup>17</sup> Even though we were not provided with the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, per OEHHA guidelines, health risk impacts from Project construction and operation should have been evaluated in an HRA. These recommendations reflect the most recent HRA policy, and as such, an assessment of health risks to nearby sensitive receptors from construction and operation should be included in an updated DEIR.

### Screening-Level Assessment Indicates Significant Impact

In an effort to demonstrate the potential risk posed by Project construction and operation to nearby sensitive receptors, we prepared a simple screening-level HRA. The results of our assessment, as described below, provide substantial evidence that the Project's construction and operational DPM emissions may result in a potentially significant health risk impact not previously identified by the DEIR.

In order to conduct our screening level risk assessment, we relied upon AERSCREEN, which is a screening level air quality dispersion model.<sup>18</sup> The model replaced SCREEN3, and AERSCREEN is included in the OEHHA<sup>19</sup> and the California Air Pollution Control Officers Associated (CAPCOA)<sup>20</sup> guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSA"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

We prepared a preliminary HRA of the Project's construction and operational health-related impact to residential sensitive receptors using the annual PM<sub>10</sub> exhaust estimates from the SWAPE annual

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<sup>16</sup> "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>, p. 8-18.

<sup>17</sup> "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>, p. 8-6, 8-15.

<sup>18</sup> "AERSCREEN Released as the EPA Recommended Screening Model," USEPA, April 11, 2011, available at: [http://www.epa.gov/ttn/scram/guidance/clarification/20110411\\_AERSCREEN\\_Release\\_Memo.pdf](http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf)

<sup>19</sup> "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>

<sup>20</sup> "Health Risk Assessments for Proposed Land Use Projects," CAPCOA, July 2009, available at: [http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA\\_HRA\\_LU\\_Guidelines\\_8-6-09.pdf](http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf)

CalEEMod output files. According to the DEIR, the nearest residential sensitive receptor is located 250 feet, or approximately 75 meters, southeast of the Project site (p. IV.B-27). Consistent with recommendations set forth by OEHHA, we assumed that residential exposure begins during the third trimester stage of life. The Project’s construction CalEEMod output files indicate that construction activities will generate approximately 228 pounds of diesel particulate matter (DPM) over the 1,559-day construction period. The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project construction, we calculated an average DPM emission rate by the following equation:

$$\text{Emission Rate} \left( \frac{\text{grams}}{\text{second}} \right) = \frac{227.8 \text{ lbs}}{1,559 \text{ days}} \times \frac{453.6 \text{ grams}}{\text{lbs}} \times \frac{1 \text{ day}}{24 \text{ hours}} \times \frac{1 \text{ hour}}{3,600 \text{ seconds}} = \mathbf{0.0007673 \text{ g/s}}$$

Using this equation, we estimated a construction emission rate of 0.000767 grams per second (g/s). Subtracting the 1,559-day construction duration from the total residential duration of 30 years, we assumed that after Project construction, the MEIR would be exposed to the Project’s operational DP< for an additional 25.73 years, approximately. The Project’s operational CalEEMod emissions indicate that operational activities will generate approximately 407 pounds of DPM per year throughout operation. Applying the same equation used to estimate the construction DPM rate, we estimated the following emission rate for Project operation:

$$\text{Emission Rate} \left( \frac{\text{grams}}{\text{second}} \right) = \frac{407 \text{ lbs}}{365 \text{ days}} \times \frac{453.6 \text{ grams}}{\text{lbs}} \times \frac{1 \text{ day}}{24 \text{ hours}} \times \frac{1 \text{ hour}}{3,600 \text{ seconds}} = \mathbf{0.00585 \text{ g/s}}$$

Using this equation, we estimated an operational emission rate of 0.00585 g/s. Construction and operational activity was simulated as a 3.6-acre rectangular area source in AERSCREEN with dimensions of 143 meters by 102 meters. A release height of three meters was selected to represent the height of exhaust stacks on operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution.

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10%.<sup>21</sup> As previously stated, there are residential sensitive receptors located approximately 75 meters from the Project site. The single-hour concentration estimated by AERSCREEN for Project construction is approximately 1.396 µg/m<sup>3</sup> DPM at approximately 75 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration 0.1396 µg/m<sup>3</sup> for Project

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<sup>21</sup> “Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised.” EPA, 1992, available at: [http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019\\_OCR.pdf](http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf); see also “Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>, p. 4-36

construction at the nearest sensitive receptor. For Project operation, the single-hour concentration is estimated by AERSCREEN is approximately 10.65  $\mu\text{g}/\text{m}^3$  at approximately 75 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 1.065  $\mu\text{g}/\text{m}^3$  for Project operation at the nearest sensitive receptor.

We calculated the excess cancer risk to the residential receptors both maximally exposed and located closest to the Project site using applicable HRA methodologies prescribed by OEHHA and the SCAQMD. Consistent with the construction schedule proposed by the DEIR, the annualized average concentration for construction was used for the entire third trimester of pregnancy (0.25 years) and the first 0.75 years of the infantile stage of life (0 – 2 years). The annualized average concentration for operation was used for the remainder of the 30-year exposure period, which makes up the remainder of the infantile stage of life (0 – 2 years), child stages of life (2 – 16 years) and adult stages of life (16 – 30 years). Consistent with OEHHA, SCAQMD, BAAQMD, and SJVAPCD guidance, we used Age Sensitivity Factors (ASFs) to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution.<sup>22, 23, 24, 25</sup> According to the most updated guidance, quantified cancer risk should be multiplied by a factor of ten during the third trimester of pregnancy and during the first two years of life (infant) and should be multiplied by a factor of three during the child stage of life (2 to 16 years). We also included the quantified cancer risk without adjusting for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution in accordance with older OEHHA guidance from 2003. This guidance utilizes a less health protective scenario than what is currently recommended by SCAQMD, the air quality district responsible for the City, and several other air districts in the state. Furthermore, in accordance with guidance set forth by OEHHA, we used the 95<sup>th</sup> percentile breathing rates for infants.<sup>26</sup> Finally, according to SCAQMD guidance, we used a Fraction of Time At Home (FAH) Value of 1 for the

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<sup>22</sup> “Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>.

<sup>23</sup> “Draft Environmental Impact Report (DEIR) for the Proposed The Exchange (SCH No. 2018071058).” SCAQMD, March 2019, available at: <http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2019/march/RVC190115-03.pdf?sfvrsn=8>, p. 4.

<sup>24</sup> “California Environmental Quality Act Air Quality Guidelines.” BAAQMD, May 2017, available at: [http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en), p. 56; see also “Recommended Methods for Screening and Modeling Local Risks and Hazards.” BAAQMD, May 2011, available at: <http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20Modeling%20Approach.ashx>, p. 65, 86.

<sup>25</sup> “Update to District’s Risk Management Policy to Address OEHHA’s Revised Risk Assessment Guidance Document.” SJVAPCD, May 2015, available at: <https://www.valleyair.org/busind/pto/staff-report-5-28-15.pdf>, p. 8, 20, 24.

<sup>26</sup> “Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics ‘Hot Spots’ Information and Assessment Act,” June 5, 2015, available at: <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588-risk-assessment-guidelines.pdf?sfvrsn=6>, p. 19.

“Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>

3rd trimester and infant receptors.<sup>27</sup> We used a cancer potency factor of 1.1 (mg/kg-day)<sup>-1</sup> and an averaging time of 25,550 days. The results of our calculations are shown below.

**The Closest Exposed Individual at an Existing Residential Receptor**

Activity	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	Cancer Risk without ASFs*	ASF	Cancer Risk with ASFs*
Construction	0.25	0.1396	361	1.9E-07	10	1.9E-06
<b>3rd Trimester Duration</b>	<b>0.25</b>			<b>1.9E-07</b>	<b>3rd Trimester Exposure</b>	<b>1.9E-06</b>
Construction	2.00	0.1396	1090	4.6E-06	10	4.6E-05
<b>Infant Exposure Duration</b>	<b>2.00</b>			<b>4.6E-06</b>	<b>Infant Exposure</b>	<b>4.6E-05</b>
Construction	2.02	0.1396				
Operation	11.98	1.065	572	1.1E-04	3	3.3E-04
<b>Child Exposure Duration</b>	<b>14.00</b>			<b>1.1E-04</b>	<b>Child Exposure</b>	<b>3.3E-04</b>
Operation	14.00	1.065	261	4.3E-05	1	4.3E-05
<b>Adult Exposure Duration</b>	<b>14.00</b>			<b>4.3E-05</b>	<b>Adult Exposure</b>	<b>4.3E-05</b>
<b>Lifetime Exposure Duration</b>	<b>30.00</b>			<b>1.6E-04</b>	<b>Lifetime Exposure</b>	<b>4.2E-04</b>

\* We, along with CARB and SCAQMD, recommend using the more updated and health protective 2015 OEHHA guidance, which includes ASFs.

The excess cancer risk posed to adults, children, infants, and during the third trimester of pregnancy at the closest receptor, located approximately 75 meters away, over the course of Project construction and operation, utilizing age sensitivity factors, are approximately 43, 330, 46, and 1.9 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years) at the closest receptor, with age sensitivity factors, is approximately 420 in one million. The excess cancer risk posed to adults, children, infants, and during the third trimester of pregnancy at the closest receptor, located approximately 75 meters away, over the course of Project construction and operation, without utilizing age sensitivity factors, are approximately 43, 110, 4.6, 0.19 in one million. The excess cancer risk over the course of a residential lifetime (30 years) at the closest receptor, without utilizing age sensitivity factors, is approximately 160 in one million.

An agency must include an analysis of health risks that connects the Project’s air emissions with the health risk posed by those emissions. Our analysis represents a screening-level HRA, which is known to

<sup>27</sup> “Risk Assessment Procedures for Rules 1401, 1401.1, and 212.” SCAQMD, August 2017, available at: [http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures\\_2017\\_080717.pdf](http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures_2017_080717.pdf), p. 7.

be conservative and tends to err on the side of health protection.<sup>28</sup> The purpose of the screening-level construction HRA shown above is to demonstrate the link between the proposed Project's emissions and the potential health risk. Our screening-level HRA demonstrates that construction of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. Therefore, since our screening-level construction HRA indicates a potentially significant impact, an updated CEQA analysis should include a reasonable effort to connect the Project's air quality emissions and the potential health risks posed to nearby receptors. Thus, an updated DEIR should include a quantified air pollution model as well as an updated, quantified refined health risk assessment which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

### *Mitigation Measures Available to Reduce Construction Emissions*

The Northeast Diesel Collaborative (NEDC) is a regionally coordinated initiative to reduce diesel emissions, improve public health, and promote clean diesel technology. The NEDC recommends that contracts for all construction projects require the following diesel control measures:<sup>29</sup>

- All diesel generators on site for more than 10 total days must be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85 percent.
- As previously mentioned, MM-AQ-1 requires that “[o]ff-road diesel-powered equipment that will be used an aggregate of 40 or more hours during any portion of the construction activities associated with grading/excavation/export phase shall meet the Tier 4 standards” (p. IV.B-78). We recommend that all diesel nonroad construction equipment have engines that meet EPA Tier 4 *Final* nonroad emission standards.
- All diesel vehicles, construction equipment, and generators on site shall be fueled with ultra-low sulfur diesel fuel (ULSD) or a biodiesel blend<sup>30</sup> approved by the original engine manufacturer with sulfur content of 15 parts per million (ppm) or less.

### *Repower or Replace Older Construction Equipment Engines*

The NEDC recognizes that availability of equipment that meets the EPA's newer standards is limited.<sup>31</sup> Due to this limitation, the NEDC proposes actions that can be taken to reduce emissions from existing equipment in the *Best Practices for Clean Diesel Construction* report.<sup>32</sup> These actions include but are not limited to:

- Repowering equipment (i.e. replacing older engines with newer, cleaner engines and leaving the body of the equipment intact).

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<sup>28</sup> *Supra*, fn 20, p. 1-5.

<sup>29</sup> Diesel Emission Controls in Construction Projects, *available at*:<http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf>

<sup>30</sup> Biodiesel blends are only to be used in conjunction with the technologies which have been verified for use with biodiesel blends and are subject to the following requirements:

<http://www.arb.ca.gov/diesel/verdev/reg/biodieselcompliance.pdf>

<sup>31</sup><http://northeastdiesel.org/pdf/BestPractices4CleanDieselConstructionAug2012.pdf>

<sup>32</sup><http://northeastdiesel.org/pdf/BestPractices4CleanDieselConstructionAug2012.pdf>

Engine repower may be a cost-effective emissions reduction strategy when a vehicle or machine has a long useful life and the cost of the engine does not approach the cost of the entire vehicle or machine. Examples of good potential replacement candidates include marine vessels, locomotives, and large construction machines.<sup>33</sup> Older diesel vehicles or machines can be repowered with newer diesel engines or in some cases with engines that operate on alternative fuels (see section “Use Alternative Fuels for Construction Equipment” for details). The original engine is taken out of service and a new engine with reduced emission characteristics is installed. Significant emission reductions can be achieved, depending on the newer engine and the vehicle or machine’s ability to accept a more modern engine and emission control system. It should be noted, however, that newer engines or higher tier engines are not necessarily cleaner engines, so it is important that the Project Applicant check the actual emission standard level of the current (existing) and new engines to ensure the repower product is reducing emissions for DPM.<sup>34</sup>

- Replacement of older equipment with equipment meeting the latest emission standards.

Engine replacement can include substituting a cleaner highway engine for a nonroad engine. Diesel equipment may also be replaced with other technologies or fuels. Examples include hybrid switcher locomotives, electric cranes, LNG, CNG, LPG or propane yard tractors, forklifts or loaders. Replacements using natural gas may require changes to fueling infrastructure.<sup>35</sup> Replacements often require some re-engineering work due to differences in size and configuration. Typically, there are benefits in fuel efficiency, reliability, warranty, and maintenance costs.<sup>36</sup>

#### *Install Retrofit Devices on Existing Construction Equipment*

PM emissions from alternatively-fueled construction equipment can be further reduced by installing retrofit devices on existing and/or new equipment. The most common retrofit technologies are retrofit devices for engine exhaust after-treatment. These devices are installed in the exhaust system to reduce emissions and should not impact engine or vehicle operation.<sup>37</sup> It should be noted that actual emissions reductions and costs will depend on specific manufacturers, technologies and applications. Should the Applicant be unable to obtain Tier 4 Interim or Tier 4 Final off-road equipment engines for all pieces of equipment with 50 hp or greater, the Applicant should consider use of engines that meet Tier 3 off-road emission standards and engines that are retrofitted with an ARB Level 2 or Level 3 Verified Diesel Emissions Control Strategy (VDECS).

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<sup>33</sup> Repair, Rebuild, and Repower, EPA, available at:<https://www.epa.gov/verified-diesel-tech/learn-about-verified-technologies-clean-diesel#repair>

<sup>34</sup> Diesel Emissions Reduction Program (DERA): Technologies, Fleets and Projects Information, available at:<http://www2.epa.gov/sites/production/files/2015-09/documents/420p11001.pdf>

<sup>35</sup> Alternative Fuel Conversion, EPA, available at:  
<https://www3.epa.gov/otaq/consumer/fuels/altfuels/altfuels.htm#fact>

<sup>36</sup> Cleaner Fuels, EPA, available at:<https://www.epa.gov/verified-diesel-tech/learn-about-verified-technologies-clean-diesel#cleaner>

<sup>37</sup> Retrofit Technologies, EPA, available at:<https://www.epa.gov/verified-diesel-tech/learn-about-verified-technologies-clean-diesel#retrofit>

### *Use Electric and Hybrid Construction Equipment*

CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*<sup>38</sup> report also proposes the use of electric and/or hybrid construction equipment as a way to mitigate DPM emissions. When construction equipment is powered by grid electricity rather than fossil fuel, direct emissions from fuel combustion are replaced with indirect emissions associated with the electricity used to power the equipment. Furthermore, when construction equipment is powered by hybrid-electric drives, emissions from fuel combustion are also greatly reduced. Electric construction equipment is available commercially from companies such as Peterson Pacific Corporation,<sup>39</sup> which specialize in the mechanical processing equipment like grinders and shredders. Construction equipment powered by hybrid-electric drives is also commercially available from companies such as Caterpillar<sup>40</sup>. For example, Caterpillar reports that during an 8-hour shift, its D7E hybrid dozer burns 19.5 percent fewer gallons of fuel than a conventional dozer while achieving a 10.3 percent increase in productivity. The D7E model burns 6.2 gallons per hour compared to a conventional dozer which burns 7.7 gallons per hour.<sup>41</sup> Fuel usage and savings are dependent on the make and model of the construction equipment used. The Project Applicant should calculate project-specific savings and provide manufacturer specifications indicating fuel burned per hour.

### *Implement a Construction Vehicle Inventory Tracking System*

CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*<sup>42</sup> report recommends that the Project Applicant provide a detailed plan that discusses a construction vehicle inventory tracking system to ensure compliances with construction mitigation measures. The system should include strategies such as requiring engine run time meters on equipment, documenting the serial number, horsepower, manufacture age, fuel, etc. of all onsite equipment and daily logging of the operating hours of the equipment. Specifically, for each onroad construction vehicle, nonroad construction equipment, or generator, the contractor should submit to the developer's representative a report prior to bringing said equipment on site that includes:<sup>43</sup>

- Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, and engine serial number.
- The type of emission control technology installed, serial number, make, model, manufacturer, and EPA/CARB verification number/level.
- The Certification Statement<sup>44</sup> signed and printed on the contractor's letterhead.

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<sup>38</sup> <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>

<sup>39</sup> Peterson Electric Grinders Brochure, available at: [http://www.petersoncorp.com/wp-content/uploads/peterson\\_electric\\_grinders1.pdf](http://www.petersoncorp.com/wp-content/uploads/peterson_electric_grinders1.pdf)

<sup>40</sup> Electric Power Products, available at: [http://www.cat.com/en\\_US/products/new/power-systems/electric-power-generation.html](http://www.cat.com/en_US/products/new/power-systems/electric-power-generation.html)

<sup>41</sup> <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>

<sup>42</sup> <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>

<sup>43</sup> Diesel Emission Controls in Construction Projects, available at: <http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf>

<sup>44</sup> Diesel Emission Controls in Construction Projects, available at: <http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf> The NEDC Model Certification Statement can be found in Appendix A.

Furthermore, the contractor should submit to the developer's representative a monthly report that, for each on-road construction vehicle, nonroad construction equipment, or generator onsite, includes: <sup>45</sup>

- Hour-meter readings on arrival on-site, the first and last day of every month, and on off-site date.
- Any problems with the equipment or emission controls.
- Certified copies of fuel deliveries for the time period that identify:
  - Source of supply
  - Quantity of fuel
  - Quality of fuel, including sulfur content (percent by weight).

In addition to these measures, we also recommend that the Applicant implement the following mitigation measures, called "Enhanced Exhaust Control Practices,"<sup>46</sup> that are recommended by the Sacramento Metropolitan Air Quality Management District (SMAQMD):

1. The project representative shall submit to the lead agency a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project.
  - The inventory shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment.
  - The project representative shall provide the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.
  - This information shall be submitted at least 4 business days prior to the use of subject heavy-duty off-road equipment.
  - The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.
2. The project representative shall provide a plan for approval by the lead agency demonstrating that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet-average 20% NOX reduction and 45% particulate reduction compared to the most recent California Air Resources Board (ARB) fleet average.
  - This plan shall be submitted in conjunction with the equipment inventory.
  - Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.
  - The District's Construction Mitigation Calculator can be used to identify an equipment fleet that achieves this reduction.

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<sup>45</sup> Diesel Emission Controls in Construction Projects, *available at*:<http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf>

<sup>46</sup>[http://www.airquality.org/ceqa/Ch3EnhancedExhaustControl\\_10-2013.pdf](http://www.airquality.org/ceqa/Ch3EnhancedExhaustControl_10-2013.pdf)

3. The project representative shall ensure that emissions from all off-road diesel-powered equipment used on the project site do not exceed 40% opacity for more than three minutes in any one hour.
  - Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately. Non-compliant equipment will be documented and a summary provided to the lead agency monthly.
  - A visual survey of all in-operation equipment shall be made at least weekly.
  - A monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey.
4. The District and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this mitigation shall supersede other District, state or federal rules or regulations.

These measures offer a cost-effective, feasible way to incorporate lower-emitting equipment into the Project's construction fleet, which subsequently reduces NOx and DPM emissions released during Project construction. An updated DEIR must be prepared to include additional mitigation measures, as well as include an updated air quality assessment to ensure that the necessary mitigation measures are implemented to reduce construction emissions. Furthermore, the Project Applicant needs to demonstrate commitment to the implementation of these measures prior to Project approval to ensure that the Project's construction-related emissions are reduced to the maximum extent possible.

#### *Use of Materials that Do Not Require Paint*

Using materials that do not require painting is a common mitigation measure where VOC emissions are a concern. Interior and exterior surfaces, such as concrete, can be left unpainted.

#### *Use of Spray Equipment with Greater Transfer Efficiencies*

Various coatings and adhesives are required to be applied by specified methods such as electrostatic spray, high-volume, low-pressure (HVLP) spray, roll coater, flow coater, dip coater, etc. in order to maximize the transfer efficiency. Transfer efficiency is typically defined as the ratio of the weight of coating solids adhering to an object to the total weight of coating solids used in the application process, expressed as a percentage. When it comes to spray applications, the rules typically require the use of either electrostatic spray equipment or HVLP spray equipment. The SCAQMD is now able to certify HVLP spray applicators and other application technologies at efficiency rates of 65 percent or greater.<sup>47</sup>

These measures offer a cost-effective, feasible way to incorporate lower-emitting equipment into the Project's construction fleet, which subsequently reduces DPM emissions released during Project construction. Furthermore, these measures also offer a feasible way to reduce the construction-related ROG emissions released from paints and architectural coatings. A revised DEIR must be prepared to

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<sup>47</sup> <http://www.aqmd.gov/home/permits/spray-equipment-transfer-efficiency>

include additional mitigation measures, as well as include an updated air quality assessment to ensure that the necessary mitigation measures are implemented to reduce construction emissions. Furthermore, the Project Applicant needs to demonstrate commitment to the implementation of these measures prior to Project approval to ensure that the Project's construction-related emissions are reduced to the maximum extent possible.

## Greenhouse Gas

### Failure to Adequately Evaluate Greenhouse Gas Impacts

The DEIR determines that the Project's GHG impact would be less than significant as a result of consistency with CARB's 2017 Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, the LA Green Plan, and the Sustainable City pLAN (p. IV.E-38). The DEIR also quantifies emissions, but fails to compare them to the SCAQMD's bright-line threshold, claiming that the SCAQMD has not adopted a GHG significance threshold for land use development projects (p. IV.E-18). Specifically, the DEIR states,

"In the absence of any adopted numeric threshold, the significance of the Project's GHG emissions is evaluated consistent with *CEQA Guidelines* Section 15064.4(b) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. The 2016-2040 RTP/SCS is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the state's long-term climate goals. CARB's Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, the City's *LA Green Plan*, and *Sustainable City pLAN* all apply to the Project and are all intended to reduce GHG emissions to meet the statewide targets set forth in AB 32. Thus, the Lead Agency has determined that the Project would not have a significant effect on the environment if the Project is found to be consistent with the applicable regulatory plans and policies to reduce GHG emissions, including the emissions reduction measures discussed within CARB's 2017 Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, and the City's *LA Green Plan*, and *Sustainable City pLAN*" (emphasis added) (p. IV.E-38).

This justification and subsequent less-than-significant impact finding is incorrect and unsubstantiated for several reasons:

- (1) The California Air Resources Board ("CARB") 2017 Scoping Plan and the Southern California Association of Governments ("SCAG") Regional Transportation Plan/Sustainable Community Strategies ("RTP/SCS") cannot be relied upon to determine Project significance;
- (2) The City's *LA Green Plan* and *Sustainable City pLAN* do not meet the criteria for an officially adopted GHG reduction plan;
- (3) The DEIR conducts an incorrect and unsubstantiated analysis of the Project's GHG emissions;
- (4) Notwithstanding the flawed air model discussed above, the Project's estimated GHG emissions exceed applicable bright-line and efficiency thresholds, thus resulting in a significant impact that was not previously identified or addressed by the DEIR;
- (5) The DEIR's failure to apply the SCAQMD's bright-line and efficiency thresholds to Project emissions is inconsistent with evolving scientific knowledge and regulatory schemes.

### 1) Failure to Demonstrate Additionality

The DEIR's reliance on the CARB 2017 Scoping Plan and SCAG's RTP/SCS is inadequate, as projects must incorporate emissions reductions measures beyond those that comprise basic requirements. Just because "a project is designed to meet high building efficiency and conservation standards ... does not establish that its [GHG] emissions from transportation activities lack significant impacts." *Newhall Ranch*, 62 Cal.4<sup>th</sup> at 229 (citing Natural Resources Agency).<sup>48</sup> This concept is known as "additionality" whereby GHG emission reductions otherwise required by law or regulation are appropriately considered part of the baseline and, pursuant to CEQA Guideline § 15064.4(b)(1), a new project's emissions should be compared against that existing baseline.<sup>49</sup> Hence, a "project should not subsidize or take credit for emissions reductions which would have occurred regardless of the project."<sup>50</sup> In short, as observed by the Court, newer developments must be more GHG-efficient. See *Newhall Ranch*, 62 Cal.4<sup>th</sup> at 226.

Furthermore, CARB asserts that SCAG's RTP/SCS is not enough, and recently found that California "***is not on track***" to meet GHG reductions expected under SB 375 (i.e., Sustainable Communities Strategy).<sup>51</sup> As warned by CARB (emphasis added), "with emissions from the transportation sector continuing to rise despite increases in fuel efficiency and decreases in the carbon content of fuel, ***California will not achieve the necessary [GHG] emissions reductions to meet mandates for 2030*** and beyond ...."<sup>52</sup> This is further supported by two recent climate change reports where scientists described (emphasis added) the ***quickenning rate of carbon dioxide emissions as a "speeding freight train"*** with an unexpected surge in people buying more cars and driving them farther than in the past — "***more than offsetting any gains from the spread of electric vehicles.***"<sup>53</sup> Therefore, the Project may require more GHG-reducing measures to offset the lost GHG reductions anticipated under the outdated, unmonitored GGRP, such as the net-zero approach utilized in the wake of the Supreme Court's *Newhall Ranch* decision. See *Newhall Ranch*, 62 Cal.4<sup>th</sup> at 226 ("a greater degree of reduction may be needed from new land use projects ...."); see also *Californians for Alternatives to Toxics v. Department of Food and Agriculture* (2005) 136 Ca1.App.4<sup>th</sup> 1, 17 ("[c]ompliance with the law is not enough to support a finding of no significant impact

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<sup>48</sup> See California Natural Resources Agency (Dec. 2009) Final Statement of Reasons for Regulatory Action: Amendments to State CEQA Guidelines Addressing Analysis and Mitigation of GHG Emissions Pursuant to SB-97, p. 23 (while a Platinum LEED® rating may be relevant to emissions from a building's energy use, "that performance standard may not reveal sufficient information to evaluate transportation-related emissions associated with that proposed project"), [http://resources.ca.gov/ceqa/docs/Final\\_Statement\\_of\\_Reasons.pdf](http://resources.ca.gov/ceqa/docs/Final_Statement_of_Reasons.pdf).

<sup>49</sup> *Ibid.*, p. 89; see also CAPCOA (Aug. 2010) Quantifying Greenhouse Gas Mitigation Measures, p. 32, A3 ("... in practice is that if there is a rule that requires, for example, increased energy efficiency in a new building, the project proponent cannot count that increased efficiency as a mitigation or credit unless the project goes beyond what the rule requires; and in that case, only the efficiency that is in excess of what is required can be counted."), <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>.

<sup>50</sup> *Ibid.*, CAPCOA, p. 433.

<sup>51</sup> CARB (Nov. 2018) 2018 Progress Report, p. 4-7 (emphasis added), [https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report\\_SB150\\_112618\\_02\\_Report.pdf](https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf).

<sup>52</sup> *Ibid.*

<sup>53</sup> New York Times (12/5/18) Greenhouse Gas Emissions Accelerate Like a 'Speeding Freight Train' in 2018 (emphasis added), <https://www.nytimes.com/2018/12/05/climate/greenhouse-gas-emissions-2018.html>; see also Global Carbon Project (Dec. 2018) Global Carbon Budget 2018, <https://www.earth-syst-sci-data.net/10/2141/2018/essd-10-2141-2018.pdf>; R.B. Jackson, et al. (Dec. 2015) Global Energy Growth Is Outpacing Decarbonization, <http://iopscience.iop.org/article/10.1088/1748-9326/aaf303/pdf>.

under the CEQA.”). Additional reduction efforts may be required for the Project, including those new, feasible mitigation measures found in CAPCOA’s *Quantifying Greenhouse Gas Mitigation Measures*, which attempt to reduce GHG levels.

### *2) The City’s LA Green Plan and Sustainable City pLAN are not CAPs*

The DEIR determines that the Project’s GHG impact would be less than significant as a result of consistency with the City’s LA Green Plan and Sustainable City pLAN (p. IV.E-38). However, these regulatory plans do not meet the criteria for an officially adopted GHG reduction program, commonly referred to as a Climate Action Plan (“CAP”), for use as a threshold of significance for GHG emissions. As the CEQA Guidelines §§ 15064.4(b)(3) and 15183.5(b)(1) make clear, a qualified CAP “must be adopted by the relevant public agency through a public review process,” and the CAP should include:

- (1) **Inventory:** Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities (e.g., projects) within a defined geographic area (e.g., lead agency jurisdiction);
- (2) **Establish GHG Reduction Goal:** Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
- (3) **Analyze Project Types:** Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- (4) **Craft Performance Based Mitigation Measures:** Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- (5) **Monitoring:** Establish a mechanism to monitor the CAP progress toward achieving said level and to require amendment if the plan is not achieving specified levels;

Here, the DEIR fails to demonstrate that the LA Green Plan and Sustainable City pLAN include the above-listed requirements to be considered a qualified CAP for the City. As such, the DEIR leaves an analytical gap showing that compliance with said plans can be used for project-level significance determination. Thus, compliance with these regulatory plans and policies should not be used as a threshold with which to determine the significance of the proposed Project’s GHG impact.

### *3) Incorrect and Unsubstantiated Analysis of Greenhouse Gas Emissions*

In addition to the Project’s incorrect reliance upon consistency with plans and regulations to determine Project significance, the DEIR fails to adequately compare the Project’s annual GHG emissions to the applicable SCAQMD threshold.

Review of the DEIR demonstrates that the Project would produce 14,922 metric tons of CO<sub>2</sub> equivalents per year (MT CO<sub>2</sub>e/year) (see excerpt below) (IV.E-85, Table IV.E-9).

**TABLE IV.E-9  
ANNUAL GREENHOUSE GAS EMISSIONS**

Emissions Sources	Project CO <sub>2</sub> e (Metric Tons per Year) <sup>a,b</sup>	
	Project Without GHG Reduction Characteristics, Features, and Measures	Proposed Project
Existing Site (refer to Table IV.E-2)	7,125	7,125
<b>Proposed Project Operational</b>		
On-Road Mobile Sources <sup>c</sup>	17,397	11,800
Stationary (Emergency Generators)	27	27
Area	20	20
Electricity	9,448	6,862
Natural Gas	1,869	1,846
Water Conveyance and Wastewater Treatment	663	505
Solid Waste	242	242
Construction (Amortized)	745	745
Proposed Subtotal	30,411	22,047
Percent Reduction (Project Only)	—	28%
Net Operational (Proposed – Existing)	23,286	14,922
Percent Reduction (Net Operational Total)	—	36%

<sup>a</sup> Totals may not add up exactly due to rounding in the modeling calculations.

<sup>b</sup> Detailed GHG emissions assumptions and calculations are provided in Appendix F-2 and Appendix F-3 of the GHG Technical Report

<sup>c</sup> On-road Mobile Sources:  $17,397 - 11,800 = 5,597 / 17,397 = 32.2\%$  reduction.

SOURCE: ESA, 2018.

As you can see in the excerpt above, the DEIR concludes that the Project will produce 14,922 MT CO<sub>2</sub>e/year from construction and operation. However, the DEIR fails to compare these emissions to relevant thresholds, claiming that the SCAQMD has not adopted a GHG significance threshold for land use development projects (p. IV.E-18). While the DEIR is correct in stating that the SCAQMD *Interim Thresholds* were never adopted, this does not mean, however, that they are inapplicable to the proposed Project or otherwise can be ignored. As explained below, consistent with CEQA Guidelines, the SCAQMD's interim thresholds should have been used by the DEIR. It is commonly recognized by

California air districts that a project's impact on climate change is cumulative in nature.<sup>54</sup> According to the Technical Advisory prepared by the Office of Planning and Research ("OPR"), "[t]he potential effects of a project may be individually limited but cumulatively considerable[]" and that "[l]ead agencies should not dismiss a proposed project's direct and/or indirect climate change impacts without careful consideration, supported by substantial evidence ... [including] analysis should be provided for any project that may significantly contribute to new GHG emissions, either individually or cumulatively, directly or indirectly."<sup>55</sup> Furthermore, OPR rightfully acknowledge, consistent with state regulatory scheme and CEQA case law, that "thresholds cannot be used to determine automatically whether a given effect will or will not be significant; instead, thresholds of significance can be used only as a measure of whether a certain environmental effect will normally be determined to be significant or normally will be determined to be less than significant by the agency."<sup>56</sup> Recognizing this principle, CEQA Guidelines 15064.7(c) permit the use of thresholds developed by other public agencies.

Similarly, the California Supreme Court has made clear that CEQA demands robust GHG analysis to assess a project's impact on climate change, and while lead agencies have discretion, that discretion must be exercised "based to the extent possible on scientific and factual data" and "stay[ing] in step with evolving scientific knowledge and state regulatory schemes." *Cleveland National Forest Foundation*

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<sup>54</sup> See e.g., SCAQMD (Oct. 2008), *supra* fn. 28, p. 1-4-5 (citing the OPR Technical Advisor: "When assessing whether a project's effects on climate change are 'cumulatively considerable' even though its GHG contribution may be individually limited, the lead agency must consider the impact of the project when viewed in connection with the effects of past, current, and probable future projects."), [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgattachmente.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf); Bay Area Air Quality Management District ("BAAQMD") (May 2017) CEQA Air Quality Guidelines, p. 2-1 ("No single project could generate enough GHG emissions to noticeably change the global average temperature [but rather] [t]he combination of GHG emissions from past, present, and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts."), [http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en); San Luis Obispo County Air Pollution Control District ("SLOAPCD") (Mar. 28, 2012) GHG Threshold and Supporting Evidence, p. 5 ("No single land use project could generate enough GHG emissions to noticeably change the global average temperature. Cumulative GHG emissions, however, contribute to global climate change and its significant adverse environmental impacts. Thus, the primary goal in adopting GHG significance thresholds, analytical methodologies, and mitigation measures is to ensure new land use development provides its fair share of the GHG reductions needed to address cumulative environmental impacts from those emissions."), <https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/Greenhouse%20Gas%20Thresholds%20and%20Supporting%20Evidence%204-2-2012.pdf>; Sacramento Metropolitan Air Quality Management District ("SMAQMD") (May 2018) Guide to Air Quality Assessment in Sacramento County, p. 6-1-3, ("(GHG) emissions adversely affect the environment through contributing, on a cumulative basis, to global climate change ... *the District recommends that lead agencies address the impacts of climate change on a proposed project and its ability to adapt to these changes in CEQA documents...* [thus urging] evaluating whether the GHG emissions associated with a proposed project will be responsible for making a cumulatively considerable contribution to global climate change." [emphasis original]), <http://www.airquality.org/LandUseTransportation/Documents/Ch6GHGFinal5-2018.pdf>.

<sup>55</sup> OPR (June 19, 2008) Technical Advisory on CEQA and Climate Change, p. 6, <http://opr.ca.gov/docs/june08-ceqa.pdf>.

<sup>56</sup> OPR (Nov. 2017) Proposed Updates to the CEQA Guidelines, p. 7 (citing CEQA Guidelines §§ 15064 and 15064.7 and *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1108-1109), [http://opr.ca.gov/docs/20171127\\_Comprehensive\\_CEQA\\_Guidelines\\_Package\\_Nov\\_2017.pdf](http://opr.ca.gov/docs/20171127_Comprehensive_CEQA_Guidelines_Package_Nov_2017.pdf).

v. *San Diego Assn. of Governments* (“*Cleveland II*”) (2017) 3 Cal.5th 497, 504, 515, 518 (quoting CEQA Guidelines § 15064(b)); see also 519 (noting to meet the State’s long-term climate goals, “regulatory clarification, together with improved methods of analysis, may well change the manner in which CEQA analysis of long-term [GHG] emission impacts is conducted.”). Hence, a GHG analysis which “understates the severity of a project’s impacts impedes meaningful public discussion and skews the decision maker’s perspective concerning the environmental consequences of the project, the necessity for mitigation measures, and the appropriateness of project approval.” *Id.*, on remand (“*Cleveland III*”), 17 Cal.App.5th 413, 444; see also *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564 (quoting *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 392).

SCAQMD’s multi-tiered approach under its *Interim Threshold* was not officially adopted as a valid threshold or part of a plan “adopted by the relevant public agency through a public review process” as CEQA requires.<sup>57</sup> Moreover, SCAQMD developed its thresholds when AB 32 was the governing statute for GHG reductions in California. AB 32 requires California to reduce GHG emissions to 1990 levels by 2020. Health & Saf. Code § 38500 *et seq.* However, in September 2016, before the release of the DEIR, Governor Brown signed Senate Bill 32, enacting Health & Saf. Code § 38566. This statute (“SB 32”) requires California to achieve a new, more aggressive 40 percent reduction in GHG emissions over the 1990 level by the end of 2030. As a result, the Project’s reliance on AB 32 is incorrect and the Project must instead comply with Senate Bill 32 (SB 32), which would include a more aggressive GHG threshold.

Consistent with the edicts of SB 32, other air control districts have adopted more aggressive GHG thresholds for project-level analysis, including but not limited to the Sacramento Metropolitan Air Quality Management District (SMAQMD), the Bay Area Air Quality Management District (BAAQMD), and the San Luis Obispo Air Pollution Control District (SLOAPCD) (as summarized in the tables below). Given the cumulative nature of GHG emissions and consistent with CEQA Guidelines § 15064.7(c), these recommended thresholds are appropriate for projects in the SCAQMD regions.

SMAQMD (May 2018) Guide to Air Quality Assessment <sup>58</sup>		
Land Development and Construction Projects		
	Construction Phase	Operational Phase
Greenhouse Gas Emissions (GHG) Thresholds		
GHG as CO <sub>2</sub> e	1,100 metric tons/year	1,100 metric tons/year
Stationary Source Only		
	Construction Phase	Operational Phase
Greenhouse Gas Emissions (GHG) Thresholds		
GHG as CO <sub>2</sub> e	1,100 metric tons/year	10,000 metric tons/year

- 1) Construction phase of all project types – 1,100 MT CO<sub>2</sub>e/yr.

<sup>57</sup> SCAQMD (Dec. 5, 2008), *supra* fn. 50, p. 3.

<sup>58</sup> SMAQMD (May 2018), *supra* fn. 50, p. 6-10-12; see also SMAQMD Thresholds of Significance Table, <http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable5-2015.pdf>.

- 2) Operational phase of a land development project – 1,100 MT CO<sub>2</sub>e/yr (noting a 72-room hotel and a 122-unit high-rise apartment building would each be equivalent to the 1,100 MT CO<sub>2</sub>e/yr threshold).<sup>59</sup>
- 3) Stationary source operational emissions – 10,000 MT CO<sub>2</sub>e/yr.

BAAQMD (May 2017) CEQA Air Quality Guidelines <sup>60</sup>	
GHGs – Projects other than Stationary Sources	Compliance with Qualified GHG Reduction Strategy OR 1,100 MT of CO <sub>2</sub> e/yr OR 4.6 MT CO <sub>2</sub> e/SP/yr (residents+employees)
GHGs –Stationary Sources	10,000 MT/yr

While providing 10,000 MT CO<sub>2</sub>e/yr for stationary-source projects, other projects (e.g., residential, commercial, public land uses):

- 1) CAP: Compliance with a qualified GHG Reduction Strategy; or
- 2) Bright Line: Annual emissions less than 1,100 MT CO<sub>2</sub>e/year; or
- 3) Efficiency Level: 4.6 MT CO<sub>2</sub>e/SP/year (residents + employees).<sup>61</sup>

SLOAPCD (Mar. 2012) GHG Thresholds and Supporting Evidence <sup>62</sup>	
GHG Emissions Threshold Summary	
Residential and Commercial Projects	Compliance with Qualified GHG Reduction Strategy OR Bright-Line Threshold of 1,150 MT of CO <sub>2</sub> e/yr. OR Efficiency Threshold of 4.9 MT CO <sub>2</sub> e/SP*/yr.
Industrial (Stationary Sources)	10,000 MT of CO <sub>2</sub> e/yr.

- 1) CAP: Consistency with qualitative reduction strategies (e.g., Climate Action Plans).
- 2) Bright-Line Threshold: 1,150 MT CO<sub>2</sub>e/year after inclusion of emission-reducing features of a proposed project, those still exceeding the threshold would have to reduce their emissions below that level to be considered less than significant.
- 3) Efficiency-Based Threshold: 4.9 MT CO<sub>2</sub>e/SP/year dependent on per capita basis for residential projects or the sum of jobs and residents for mixed-use projects (noting 0.64 employees per 1,000 SF of hotel development).

<sup>59</sup> SMAQMD (Apr. 2018) SMAQMD Operational Screening Levels (showing that a 190-room hotel like Option A or a 160-unit high-rise apartment like Option B would exceed the 72-room and 122-unit thresholds), <http://www.airquality.org/LandUseTransportation/Documents/Ch4+Ch6OperationalScreening4-2018.pdf>.

<sup>60</sup> BAAQMD (May 2017), *supra* fn. 50, p. 2-2-4. Like the SCAQMD area, BAAQMD is designated as a nonattainment area for state/national ozone and particulate matter (PM) and thresholds would seem particularly apt for the 5<sup>th</sup> and Hill Project. *Compare id.* at p. 2-1 with SCAQMD NAAQS/CAAQS Attainment Status (noting “extreme” and “serious” nonattainment for multiple ozone and PM standards), <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naqs-qaqs-feb2016.pdf>.

<sup>61</sup> The BAAQMD has not formally adopted an efficiency level after 2020. However, other projects within BAAQMD’s jurisdiction have extrapolated 2030 efficiency thresholds in order to comply with SB 32 reduction targets. For example, the Park View Towers Project’s Addendum to the Final Supplemental Environmental Impact Report utilizes a 2030 efficiency threshold of 2.6 MT CO<sub>2</sub>e/year. Based on this efficiency threshold, the proposed Project would exceed threshold and result in a significant impact. Park View Tower’s Addendum available at: <http://www.sanjoseca.gov/DocumentCenter/View/80743>

<sup>62</sup> SLOAPCD (Mar. 28, 2012), *supra* fn. 50, p. 25-30, 42.

Although more demanding, the above-listed thresholds adopted by these air districts are analogous with the application of SCAQMD's screening threshold for mixed-use developments (3,000 MT CO<sub>2</sub>e/year) and SCAQMD's Tier 4 efficiency target goals (4.8 MTCO<sub>2</sub>e/SP/year for target year 2020 and 3.0 MTCO<sub>2</sub>e/SP/year for target year 2035).<sup>63</sup> The actions taken by other air districts to reduce GHG emissions through more stringent thresholds is the most persuasive rationale as to why the *Interim Thresholds* apply as the current standard set of evolving scientific knowledge and regulatory schemes. Even though the SCAQMD's interim thresholds may be outdated and may not be adopted, they are consistent with the methods of analysis that is regularly practiced by other air districts and furthers CEQA's demand for "'conservative analysis' to afford 'fullest possible protection of the environment.'"<sup>64</sup> Hence, the DEIR's GHG analysis is not consistent with evolving standards, nor is the conclusion that the Project has a less than significant GHG impact supported by substantial evidence.

Finally, the DEIR's quantification of Project GHG emissions is incorrect considering that it relies on a flawed CalEEMod model to determine emissions. As previously discussed, the DEIR's CalEEMod model fails to include all proposed land uses and relies on an incorrect land use size, incorrect land use population, unsubstantiated mitigation to construction equipment fuel type, incorrect number of worker trips, and incorrectly applied construction mitigation measures. As a result, the DEIR's CalEEMod models underestimate emissions and should not be relied upon to assess the Project's GHG emissions.

#### 4) Updated Greenhouse Gas Analysis Demonstrates Significant Impact

Notwithstanding the flawed GHG evaluation discussed above, applicable thresholds demonstrate that the Project would have a significant GHG impact. As previously mentioned, in December 2008, SCAQMD released its *Interim Thresholds* that proposed the use of a 1,400 MT CO<sub>2</sub>e/yr threshold for commercial developments, a 3,000 MT CO<sub>2</sub>e/yr threshold for mixed-use developments, a 3,500 MT CO<sub>2</sub>e/yr threshold for residential developments, and a 10,000 MTCO<sub>2</sub>e/yr threshold for industrial projects.<sup>65</sup> Because the proposed Project is a mixed-use development, the most appropriate screening threshold to apply to the Project would be the 3,000 MT CO<sub>2</sub>e/yr threshold recommended by the SCAQMD for mixed-use developments.

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<sup>63</sup> See SCAQMD (Dec. 5, 2008) Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2); see also SCAQMD (Oct. 2008) Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgattachmente.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf); SCAQMD (Sep. 28, 2010) Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group # 15, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf).

<sup>64</sup> "Warehouse Truck Trip Study Data Results and Usage Presentation: Inland Empire Logistics Council." SCAQMD, June 2014, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/final-ielc\\_6-19-2014.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/final-ielc_6-19-2014.pdf?sfvrsn=2), p. 3; see also *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 390 ("The foremost principle under CEQA is that the Legislature intended the act to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.") (internal citations omitted).

<sup>65</sup> *Supra* fn. 61.

The CalEEMod output files disclose the Project’s mitigated GHG emissions (p. IV.E-85, Table IV.E-9). When these emissions are compared to the 3,000 MT CO<sub>2</sub>e/year threshold, we find that the Project’s GHG emissions exceed the SCAQMD’s mixed-use threshold (see table below).

<b>DEIR Annual Greenhouse Gas Emissions</b>	
<b>Project Phase</b>	<b>Proposed Project (MT CO<sub>2</sub>e/year)</b>
On-Road Mobile Sources	11,800
Stationary (Emergency Generators)	27
Area	20
Electricity	6,862
Natural Gas	1,846
Water Conveyance and Wastewater Treatment	505
Solid Waste	242
Construction (Amortized)	745
Proposed Subtotal	22,047
Percent Reduction (Project Only)	28%
<b>Net Operational (Proposed – Existing)</b>	<b>14,922</b>
SCAQMD Significance Threshold	3,000
<b>Exceed?</b>	<b>Yes</b>

As demonstrated in the table above, the proposed Project would generate a total of approximately 14,922 MT CO<sub>2</sub>e/year, which significantly exceeds the 3,000 MT CO<sub>2</sub>e/year mixed-use project screening threshold.<sup>66</sup> According to SCAQMD guidance, when emissions exceed the screening-level threshold, a more detailed review of the project’s GHG emissions is warranted.<sup>67</sup> SCAQMD proposed per capita efficiency targets to be used in these detailed reviews. SCAQMD proposed a 2020 efficiency target of 4.8 MTCO<sub>2</sub>e/sp/yr for project-level analyses and 6.6 MTCO<sub>2</sub>e/sp/yr for plan-level projects (e.g., program-level projects such as general plans). Those per capita efficiency targets are based on AB 32’s GHG reduction target and the 2020 GHG emissions inventory prepared for CARB’s 2008 Scoping Plan. SCAQMD also created a 2035 efficiency threshold by reducing the 2020 thresholds by 40 percent, resulting in an efficiency threshold for plans of 4.1 MTCO<sub>2</sub>e/sp/yr and an efficiency threshold at the project level of 3.0 MTCO<sub>2</sub>e/s/yr.<sup>68</sup> Therefore, per SCAQMD guidance, because the Project’s GHG emissions exceed SCAQMD’s 3,000 MTCO<sub>2</sub>e/yr screening-level threshold and the DEIR asserts that the Project will not be operational until 2023, the Project’s emissions should be compared to the proposed 2035 efficiency target of 3.0 MT CO<sub>2</sub>e/sp/yr (p. II-48).

<sup>66</sup> It should further be noted that this amounts to a mere 2.1 percent reduction of GHG emissions as compared to the Project’s unmitigated emissions (i.e., 9,211 MT CO<sub>2</sub>e/year). See pp. 193, pp. 195.

<sup>67</sup> SCAQMD (12/5/08), *supra* fn. 61, p. 6; see also SCAQMD (9/28/10), *supra* fn. 61, p. 2.

<sup>68</sup> *Ibid.*

According to CAPCOA’s CEQA & Climate Change report, service population is defined as “the sum of the number of residents and the number of jobs supported by the project.”<sup>69</sup> The DEIR states that the proposed Project would generate approximately 2,739 new residents (with full occupancy) and 186 new employees (p. IV.J-13). As a result, we estimate that the Project’s service population would be approximately 2,925 people<sup>70</sup>. Dividing the Project’s GHG emissions by a service population value of 2,925, we find that the Project would emit approximately 5.1 MTCO<sub>2</sub>e/sp/yr.<sup>71</sup> When we compare the Project’s per service population GHG emissions to the SCAQMD 2035 efficiency target of 3.0 MTCO<sub>2</sub>e/sp/yr, we find that the Project would result in a significant GHG impact (see table below).

<b>Annual Greenhouse Gas Emissions Efficiency</b>		
<b>Source</b>	<b>Project Emissions</b>	<b>Unit</b>
DEIR Annual Emissions	14,922	MT CO <sub>2</sub> e/year
Maximum Service Population	2,925	Residents & Employees
<b>Per Service Population Annual Emissions</b>	<b>5.1</b>	<b>MT CO<sub>2</sub>e/sp/year</b>
2035 SCAQMD Project Level Efficiency Threshold	3.0	MT CO <sub>2</sub> e/sp/year
<b>Exceed?</b>	<b>Yes</b>	-

As you can see in the table above, when we compare the per service population emissions estimated by the DEIR to the SCAQMD threshold of 3.0 MTCO<sub>2</sub>e/sp/yr for 2035, we find that the Project’s emissions would exceed the threshold, thus resulting in a potentially significant impact. According to CEQA Guidelines § 15064.4(b), if there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, a full CEQA analysis must be prepared for the project. The DEIR may not ignore this analysis and application of routinely used GHG thresholds by claiming discretion in deciding which thresholds it wishes to employ. As one court explained when setting aside an EIR where commenters questioned the city’s use of a particular threshold, the discretion granted to lead agencies are not “unbounded” and (emphasis added):

“[T]he fact that a particular environmental effect *meets a particular threshold cannot be used as an automatic determinant that the effect is or is not significant* ... a threshold of significance *cannot be applied in a way that would foreclose the consideration of other substantial evidence tending to show the environmental effect to which the threshold relates might be significant.*” *East Sacramento Partnership for a Livable City v. City of Sacramento* (2016) 5 Cal.App.5th 281, 300, 303-304 (internal citations omitted).

Thus, the results of the above analysis provide substantial evidence that the proposed Project’s GHG emissions are still cumulatively considerable notwithstanding its purported compliance with CARB’s 2017 Climate Change Scoping Plan, SCAG’s 2016 RTP/SCS, the LA Green Plan, and the Sustainable City

<sup>69</sup> CAPCOA (Jan. 2008) CEQA & Climate Change, p. 71-72, <http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf>.

<sup>70</sup> Calculated: (2,739 residents + 186 employees) = (2,925 service population)

<sup>71</sup> Calculated: (14,922 MTCO<sub>2</sub>e/yr / (2,925 service population) = (5.10 MTCO<sub>2</sub>e/sp/yr)

pLAN (as challenged herein). Therefore, an updated CEQA analysis must be prepared for the Project, and mitigation should be implemented where necessary, per CEQA guidelines.

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,

A handwritten signature in blue ink that reads "Matt Hagemann".

Matt Hagemann, P.G., C.Hg.

A handwritten signature in black ink that reads "Paul Rosenfeld".

Paul E. Rosenfeld, Ph.D.



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**Matthew F. Hagemann, P.G., C.Hg., QSD, QSP**

**Geologic and Hydrogeologic Characterization  
Industrial Stormwater Compliance  
Investigation and Remediation Strategies  
Litigation Support and Testifying Expert  
CEQA Review**

**Education:**

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.

B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

**Professional Certifications:**

California Professional Geologist

California Certified Hydrogeologist

Qualified SWPPP Developer and Practitioner

**Professional Experience:**

Matt has 25 years of experience in environmental policy, assessment and remediation. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) while also working with permit holders to improve hydrogeologic characterization and water quality monitoring.

Matt has worked closely with U.S. EPA legal counsel and the technical staff of several states in the application and enforcement of RCRA, Safe Drinking Water Act and Clean Water Act regulations. Matt has trained the technical staff in the States of California, Hawaii, Nevada, Arizona and the Territory of Guam in the conduct of investigations, groundwater fundamentals, and sampling techniques.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2014;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

**Senior Regulatory and Litigation Support Analyst:**

With SWAPE, Matt’s responsibilities have included:

- Lead analyst and testifying expert in the review of over 100 environmental impact reports since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, Valley Fever, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at industrial facilities.
- Manager of a project to provide technical assistance to a community adjacent to a former Naval shipyard under a grant from the U.S. EPA.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.
- Expert witness on two cases involving MTBE litigation.
- Expert witness and litigation support on the impact of air toxins and hazards at a school.
- Expert witness in litigation at a former plywood plant.

With Komex H2O Science Inc., Matt’s duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.

- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

### **Executive Director:**

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

### **Hydrogeology:**

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

**Policy:**

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9. Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, *Oxygenates in Water: Critical Information and Research Needs*.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

### **Geology:**

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

### **Teaching:**

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt taught physical geology (lecture and lab and introductory geology at Golden West College in Huntington Beach, California from 2010 to 2014.

### **Invited Testimony, Reports, Papers and Presentations:**

**Hagemann, M.F.**, 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

**Hagemann, M.F.**, 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

**Hagemann, M.F.**, 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Colorado.

**Hagemann, M.F.**, 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

**Hagemann, M.F.**, 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

**Hagemann, M.F.**, 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

**Hagemann, M.F.**, 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

**Hagemann, M.F.**, 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

**Hagemann, M.F.**, 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal representatives, Parker, AZ.

**Hagemann, M.F.**, 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

**Hagemann, M.F.**, 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

**Hagemann, M.F.**, 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

**Hagemann, M.F.**, 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

**Hagemann, M.F.**, 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

**Hagemann, M.F.**, 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

**Hagemann, M.F.**, 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

**Hagemann, M.F.**, 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

**Hagemann, M.F.**, 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

**Hagemann, M.F.**, 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

**Hagemann, M.F.**, 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

**Hagemann, M.F.**, and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F.** 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

**Hagemann, M.F.**, 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

**Hagemann, M.F.**, 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

**Hagemann, M.F.**, and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

**Hagemann, M.F.**, Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

**Hagemann, M. F.**, Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

**Hagemann, M.F.**, 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

**Hagemann, M.F.** and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

**Hagemann, M.F.**, 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

**Hagemann, M.F.**, 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

**Other Experience:**

Selected as subject matter expert for the California Professional Geologist licensing examination, 2009-2011.



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## ***Paul Rosenfeld, Ph.D.***

**Chemical Fate and Transport & Air Dispersion Modeling**

*Principal Environmental Chemist*

**Risk Assessment & Remediation Specialist**

### **Education:**

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on VOC filtration.  
M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.  
B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

### **Professional Experience:**

Dr. Rosenfeld is the Co-Founder and Principal Environmental Chemist at Soil Water Air Protection Enterprise (SWAPE). His focus is the fate and transport of environmental contaminants, risk assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from unconventional oil drilling, oil spills, boilers, incinerators and other industrial and agricultural sources relating to nuisance and personal injury. His project experience ranges from monitoring and modeling of pollution sources as they relate to human and ecological health. Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing petroleum, chlorinated solvents, pesticides, radioactive waste, PCBs, PAHs, dioxins, furans, volatile organics, semi-volatile organics, perchlorate, heavy metals, asbestos, PFOA, unusual polymers, MtBE, fuel oxygenates and odor. Dr. Rosenfeld has evaluated greenhouse gas emissions using various modeling programs recommended by California Air Quality Management Districts.

### **Professional History:**

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner  
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)  
UCLA School of Public Health; 2003 to 2006; Adjunct Professor  
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator  
UCLA Institute of the Environment, 2001-2002; Research Associate  
Komex H<sub>2</sub>O Science, 2001 to 2003; Senior Remediation Scientist  
National Groundwater Association, 2002-2004; Lecturer  
San Diego State University, 1999-2001; Adjunct Professor  
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager  
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager  
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor  
King County, Seattle, 1996 – 1999; Scientist  
James River Corp., Washington, 1995-96; Scientist  
Big Creek Lumber, Davenport, California, 1995; Scientist  
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist  
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist  
Bureau of Land Management, Kremmling Colorado 1990; Scientist

## **Publications:**

Chen, J. A., Zapata, A R., Sutherland, A. J., Molmen, D. R., Chow, B. S., Wu, L. E., **Rosenfeld, P. E.**, Hesse, R. C., (2012) Sulfur Dioxide and Volatile Organic Compound Exposure To A Community In Texas City Texas Evaluated Using Aermოდ and Empirical Data. *American Journal of Environmental Science*, 8(6), 622-632.

**Rosenfeld, P.E.** & Feng, L. (2011). *The Risks of Hazardous Waste*. Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2011). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Agrochemical Industry*, Amsterdam: Elsevier Publishing.

Gonzalez, J., Feng, L., Sutherland, A., Waller, C., Sok, H., Hesse, R., **Rosenfeld, P.** (2010). PCBs and Dioxins/Furans in Attic Dust Collected Near Former PCB Production and Secondary Copper Facilities in Sauget, IL. *Procedia Environmental Sciences*. 113–125.

Feng, L., Wu, C., Tam, L., Sutherland, A.J., Clark, J.J., **Rosenfeld, P.E.** (2010). Dioxin and Furan Blood Lipid and Attic Dust Concentrations in Populations Living Near Four Wood Treatment Facilities in the United States. *Journal of Environmental Health*. 73(6), 34-46.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2010). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Wood and Paper Industries*. Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2009). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Petroleum Industry*. Amsterdam: Elsevier Publishing.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P.** (2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. *WIT Transactions on Ecology and the Environment, Air Pollution*, 123 (17), 319-327.

Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. *Organohalogen Compounds*, 70, 002252-002255.

Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. *Organohalogen Compounds*, 70, 000527-000530.

Hensley, A.R. A. Scott, J. J. J. Clark, **Rosenfeld, P.E.** (2007). Attic Dust and Human Blood Samples Collected near a Former Wood Treatment Facility. *Environmental Research*. 105, 194-197.

**Rosenfeld, P.E.**, J. J. J. Clark, A. R. Hensley, M. Suffet. (2007). The Use of an Odor Wheel Classification for Evaluation of Human Health Risk Criteria for Compost Facilities. *Water Science & Technology* 55(5), 345-357.

**Rosenfeld, P. E.**, M. Suffet. (2007). The Anatomy Of Odour Wheels For Odours Of Drinking Water, Wastewater, Compost And The Urban Environment. *Water Science & Technology* 55(5), 335-344.

Sullivan, P. J. Clark, J.J.J., Agardy, F. J., **Rosenfeld, P.E.** (2007). *Toxic Legacy, Synthetic Toxins in the Food, Water, and Air in American Cities*. Boston Massachusetts: Elsevier Publishing,

**Rosenfeld P.E.**, and Suffet, I.H. (Mel) (2007). Anatomy of an Odor Wheel. *Water Science and Technology*.

**Rosenfeld, P.E.**, Clark, J.J.J., Hensley A.R., Suffet, I.H. (Mel) (2007). The use of an odor wheel classification for evaluation of human health risk criteria for compost facilities. *Water Science And Technology*.

- Rosenfeld, P.E.,** and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash. *Water Science and Technology*. 49(9),171-178.
- Rosenfeld P. E.,** J.J. Clark, I.H. (Mel) Suffet (2004). The Value of An Odor-Quality-Wheel Classification Scheme For The Urban Environment. *Water Environment Federation's Technical Exhibition and Conference (WEFTEC) 2004*. New Orleans, October 2-6, 2004.
- Rosenfeld, P.E.,** and Suffet, I.H. (2004). Understanding Odorants Associated With Compost, Biomass Facilities, and the Land Application of Biosolids. *Water Science and Technology*. 49(9), 193-199.
- Rosenfeld, P.E.,** and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash, *Water Science and Technology*, 49( 9), 171-178.
- Rosenfeld, P. E.,** Grey, M. A., Sellew, P. (2004). Measurement of Biosolids Odor and Odorant Emissions from Windrows, Static Pile and Biofilter. *Water Environment Research*. 76(4), 310-315.
- Rosenfeld, P.E.,** Grey, M and Suffet, M. (2002). Compost Demonstration Project, Sacramento California Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Integrated Waste Management Board Public Affairs Office, Publications Clearinghouse (MS-6), Sacramento, CA Publication #442-02-008*.
- Rosenfeld, P.E.,** and C.L. Henry. (2001). Characterization of odor emissions from three different biosolids. *Water Soil and Air Pollution*. 127(1-4), 173-191.
- Rosenfeld, P.E.,** and Henry C. L., (2000). Wood ash control of odor emissions from biosolids application. *Journal of Environmental Quality*. 29, 1662-1668.
- Rosenfeld, P.E.,** C.L. Henry and D. Bennett. (2001). Wastewater dewatering polymer affect on biosolids odor emissions and microbial activity. *Water Environment Research*. 73(4), 363-367.
- Rosenfeld, P.E.,** and C.L. Henry. (2001). Activated Carbon and Wood Ash Sorption of Wastewater, Compost, and Biosolids Odorants. *Water Environment Research*, 73, 388-393.
- Rosenfeld, P.E.,** and Henry C. L., (2001). High carbon wood ash effect on biosolids microbial activity and odor. *Water Environment Research*. 131(1-4), 247-262.
- Chollack, T. and **P. Rosenfeld**. (1998). Compost Amendment Handbook For Landscaping. Prepared for and distributed by the City of Redmond, Washington State.
- Rosenfeld, P. E.** (1992). The Mount Liamuiga Crater Trail. *Heritage Magazine of St. Kitts*, 3(2).
- Rosenfeld, P. E.** (1993). High School Biogas Project to Prevent Deforestation On St. Kitts. *Biomass Users Network*, 7(1).
- Rosenfeld, P. E.** (1998). Characterization, Quantification, and Control of Odor Emissions From Biosolids Application To Forest Soil. Doctoral Thesis. University of Washington College of Forest Resources.
- Rosenfeld, P. E.** (1994). Potential Utilization of Small Diameter Trees on Sierra County Public Land. Masters thesis reprinted by the Sierra County Economic Council. Sierra County, California.
- Rosenfeld, P. E.** (1991). How to Build a Small Rural Anaerobic Digester & Uses Of Biogas In The First And Third World. Bachelors Thesis. University of California.

## **Presentations:**

**Rosenfeld, P.E.**, Sutherland, A; Hesse, R.; Zapata, A. (October 3-6, 2013). Air dispersion modeling of volatile organic emissions from multiple natural gas wells in Decatur, TX. *44th Western Regional Meeting, American Chemical Society*. Lecture conducted from Santa Clara, CA.

Sok, H.L.; Waller, C.C.; Feng, L.; Gonzalez, J.; Sutherland, A.J.; Wisdom-Stack, T.; Sahai, R.K.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Atrazine: A Persistent Pesticide in Urban Drinking Water. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

Feng, L.; Gonzalez, J.; Sok, H.L.; Sutherland, A.J.; Waller, C.C.; Wisdom-Stack, T.; Sahai, R.K.; La, M.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Bringing Environmental Justice to East St. Louis, Illinois. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

**Rosenfeld, P.E.** (April 19-23, 2009). Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS) Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*, Lecture conducted from Tuscon, AZ.

**Rosenfeld, P.E.** (April 19-23, 2009). Cost to Filter Atrazine Contamination from Drinking Water in the United States” Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*. Lecture conducted from Tuscon, AZ.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P.** (20-22 July, 2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. Brebbia, C.A. and Popov, V., eds., *Air Pollution XVII: Proceedings of the Seventeenth International Conference on Modeling, Monitoring and Management of Air Pollution*. Lecture conducted from Tallinn, Estonia.

**Rosenfeld, P. E.** (October 15-18, 2007). Moss Point Community Exposure To Contaminants From A Releasing Facility. *The 23<sup>rd</sup> Annual International Conferences on Soils Sediment and Water*. Platform lecture conducted from University of Massachusetts, Amherst MA.

**Rosenfeld, P. E.** (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23<sup>rd</sup> Annual International Conferences on Soils Sediment and Water*. Platform lecture conducted from University of Massachusetts, Amherst MA.

**Rosenfeld, P. E.** (October 15-18, 2007). Somerville Community Exposure To Contaminants From Wood Treatment Facility Emissions. *The 23<sup>rd</sup> Annual International Conferences on Soils Sediment and Water*. Lecture conducted from University of Massachusetts, Amherst MA.

**Rosenfeld P. E.** (March 2007). Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP). *The Association for Environmental Health and Sciences (AEHS) Annual Meeting*. Lecture conducted from San Diego, CA.

**Rosenfeld P. E.** (March 2007). Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama. *The AEHS Annual Meeting*. Lecture conducted from San Diego, CA.

Hensley A.R., Scott, A., **Rosenfeld P.E.**, Clark, J.J.J. (August 21 – 25, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006*. Lecture conducted from Radisson SAS Scandinavia Hotel in Oslo Norway.

Hensley A.R., Scott, A., **Rosenfeld P.E.**, Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition*. Lecture conducted from Boston Massachusetts.

**Paul Rosenfeld Ph.D.** (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference*. Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

**Paul Rosenfeld Ph.D.** (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

**Paul Rosenfeld Ph.D.** (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel in Irvine, California.

**Paul Rosenfeld Ph.D.** (September 26-27, 2005). Fate, Transport and Persistence of PDBEs. *Mealey's Groundwater Conference*. Lecture conducted from Ritz Carlton Hotel, Marina Del Ray, California.

**Paul Rosenfeld Ph.D.** (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

**Paul Rosenfeld Ph.D.** (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

**Paul Rosenfeld Ph.D.** (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

**Paul Rosenfeld, Ph.D.** and James Clark Ph.D. and Rob Hesse R.G. (May 5-6, 2004). Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. *National Groundwater Association. Environmental Law Conference*. Lecture conducted from Congress Plaza Hotel, Chicago Illinois.

**Paul Rosenfeld, Ph.D.** (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse (2004). Perchlorate Contamination of the Colorado River. *Meeting of tribal representatives*. Lecture conducted from Parker, AZ.

**Paul Rosenfeld, Ph.D.** (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association*. Lecture conducted from Radison Hotel, Sacramento, California.

**Rosenfeld, P. E.**, Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference Orlando, FL*.

**Paul Rosenfeld, Ph.D.** and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants..* Lecture conducted from Hyatt Regency Phoenix Arizona.

**Paul Rosenfeld, Ph.D.** (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum*. Lecture conducted from Marriott Hotel, Anaheim California.

**Paul Rosenfeld, Ph.D.** (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable*. Lecture conducted from Sacramento California.

**Rosenfeld, P.E.** and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association.* Lecture conducted from Barcelona Spain.

**Rosenfeld, P.E.** and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association.* Lecture conducted from Barcelona Spain.

**Rosenfeld, P.E.** and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association.* Lecture conducted from Vancouver Washington..

**Rosenfeld, P.E.** and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conference.* Lecture conducted from Indianapolis, Maryland.

**Rosenfeld, P.E.** (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation.* Lecture conducted from Anaheim California.

**Rosenfeld, P.E.** (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest.* Lecture conducted from Ocean Shores, California.

**Rosenfeld, P.E.** (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association.* Lecture conducted from Sacramento California.

**Rosenfeld, P.E.,** C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings.* Lecture conducted from Bellevue Washington.

**Rosenfeld, P.E.,** and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America.* Lecture conducted from Salt Lake City Utah.

**Rosenfeld, P.E.,** C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell.* Lecture conducted from Seattle Washington.

**Rosenfeld, P.E.,** C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest.* Lecture conducted from Lake Chelan, Washington.

**Rosenfeld, P.E.,** C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings.* Lecture conducted from Bellevue Washington.

**Rosenfeld, P.E.,** C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America.* Lecture conducted from Anaheim California.

## **Teaching Experience:**

UCLA Department of Environmental Health (Summer 2003 through 2010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

## **Academic Grants Awarded:**

California Integrated Waste Management Board. \$41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: \$10,000 grant awarded to San Diego State University. Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. \$100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. \$20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: \$10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: \$15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. \$500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993.

## **Deposition and/or Trial Testimony:**

- In The Superior Court of the State of California, County of Alameda  
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants  
Case No.: RG14711115  
Rosenfeld Deposition, September, 2015
- In The Iowa District Court In And For Poweshiek County  
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants  
Case No.: LALA002187  
Rosenfeld Deposition, August 2015
- In The Iowa District Court For Wapello County  
Jerry Dovico, et al., Plaintiffs vs. Valley View Sine LLC, et al., Defendants  
Law No.: LALA105144 - Division A  
Rosenfeld Deposition, August 2015
- In The Iowa District Court For Wapello County  
Doug Pauls, et al., et al., Plaintiffs vs. Richard Warren, et al., Defendants  
Law No.: LALA105144 - Division A  
Rosenfeld Deposition, August 2015
- In The Circuit Court of Ohio County, West Virginia  
Robert Andrews, et al. v. Antero, et al.  
Civil Action N0. 14-C-30000  
Rosenfeld Deposition, June 2015
- In The Third Judicial District County of Dona Ana, New Mexico  
Betty Gonzalez, et al. Plaintiffs vs. Del Oro Dairy, Del Oro Real Estate LLC, Jerry Settles and Deward  
DeRuyter, Defendants  
Rosenfeld Deposition: July 2015
- In The Iowa District Court For Muscatine County  
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant  
Case No 4980  
Rosenfeld Deposition: May 2015
- In the Circuit Court of the 17<sup>th</sup> Judicial Circuit, in and For Broward County, Florida  
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.  
Case Number CACE07030358 (26)  
Rosenfeld Deposition: December 2014
- In the United States District Court Western District of Oklahoma  
Tommy McCarty, et al., Plaintiffs, v. Oklahoma City Landfill, LLC d/b/a Southeast Oklahoma City  
Landfill, et al. Defendants.  
Case No. 5:12-cv-01152-C  
Rosenfeld Deposition: July 2014
- In the County Court of Dallas County Texas  
Lisa Parr et al, *Plaintiff*, vs. Aruba et al, *Defendant*.  
Case Number cc-11-01650-E  
Rosenfeld Deposition: March and September 2013  
Rosenfeld Trial: April 2014
- In the Court of Common Pleas of Tuscarawas County Ohio

John Michael Abicht, et al., *Plaintiffs*, vs. Republic Services, Inc., et al., *Defendants*  
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)  
Rosenfeld Deposition: October 2012

In the Court of Common Pleas for the Second Judicial Circuit, State of South Carolina, County of Aiken  
David Anderson, et al., *Plaintiffs*, vs. Norfolk Southern Corporation, et al., *Defendants*.  
Case Number: 2007-CP-02-1584

In the Circuit Court of Jefferson County Alabama  
Jaeanette Moss Anthony, et al., *Plaintiffs*, vs. Drummond Company Inc., et al., *Defendants*  
Civil Action No. CV 2008-2076  
Rosenfeld Deposition: September 2010

In the Ninth Judicial District Court, Parish of Rapides, State of Louisiana  
Roger Price, et al., *Plaintiffs*, vs. Roy O. Martin, L.P., et al., *Defendants*.  
Civil Suit Number 224,041 Division G  
Rosenfeld Deposition: September 2008

In the United States District Court, Western District Lafayette Division  
Ackle et al., *Plaintiffs*, vs. Citgo Petroleum Corporation, et al., *Defendants*.  
Case Number 2:07CV1052  
Rosenfeld Deposition: July 2009

In the United States District Court for the Southern District of Ohio  
Carolyn Baker, et al., *Plaintiffs*, vs. Chevron Oil Company, et al., *Defendants*.  
Case Number 1:05 CV 227  
Rosenfeld Deposition: July 2008

In the Fourth Judicial District Court, Parish of Calcasieu, State of Louisiana  
Craig Steven Arabie, et al., *Plaintiffs*, vs. Citgo Petroleum Corporation, et al., *Defendants*.  
Case Number 07-2738 G

In the Fourteenth Judicial District Court, Parish of Calcasieu, State of Louisiana  
Leon B. Brydels, *Plaintiffs*, vs. Conoco, Inc., et al., *Defendants*.  
Case Number 2004-6941 Division A

In the District Court of Tarrant County, Texas, 153<sup>rd</sup> Judicial District  
Linda Faust, *Plaintiff*, vs. Burlington Northern Santa Fe Rail Way Company, Witco Chemical Corporation  
A/K/A Witco Corporation, Solvents and Chemicals, Inc. and Koppers Industries, Inc., *Defendants*.  
Case Number 153-212928-05  
Rosenfeld Deposition: December 2006, October 2007  
Rosenfeld Trial: January 2008

In the Superior Court of the State of California in and for the County of San Bernardino  
Leroy Allen, et al., *Plaintiffs*, vs. Nutro Products, Inc., a California Corporation and DOES 1 to 100,  
inclusive, *Defendants*.  
John Loney, Plaintiff, vs. James H. Didion, Sr.; Nutro Products, Inc.; DOES 1 through 20, inclusive,  
*Defendants*.  
Case Number VCVVS044671  
Rosenfeld Deposition: December 2009  
Rosenfeld Trial: March 2010

In the United States District Court for the Middle District of Alabama, Northern Division  
James K. Benefield, et al., *Plaintiffs*, vs. International Paper Company, *Defendant*.  
Civil Action Number 2:09-cv-232-WHA-TFM  
Rosenfeld Deposition: July 2010, June 2011

In the Superior Court of the State of California in and for the County of Los Angeles  
Leslie Hensley and Rick Hensley, *Plaintiffs*, vs. Peter T. Hoss, as trustee on behalf of the Cone Fee Trust; Plains Exploration & Production Company, a Delaware corporation; Rayne Water Conditioning, Inc., a California Corporation; and DOES 1 through 100, *Defendants*.  
Case Number SC094173  
Rosenfeld Deposition: September 2008, October 2008

In the Superior Court of the State of California in and for the County of Santa Barbara, Santa Maria Branch Clifford and Shirley Adelhelm, et al., all individually, *Plaintiffs*, vs. Unocal Corporation, a Delaware Corporation; Union Oil Company of California, a California corporation; Chevron Corporation, a California corporation; ConocoPhillips, a Texas corporation; Kerr-McGee Corporation, an Oklahoma corporation; and DOES 1 through 100, *Defendants*.  
Case Number 1229251 (Consolidated with case number 1231299)  
Rosenfeld Deposition: January 2008

In the United States District Court for Eastern District of Arkansas, Eastern District of Arkansas  
Harry Stephens Farms, Inc, and Harry Stephens, individual and as managing partner of Stephens Partnership, *Plaintiffs*, vs. Helena Chemical Company, and Exxon Mobil Corp., successor to Mobil Chemical Co., *Defendants*.  
Case Number 2:06-CV-00166 JMM (Consolidated with case number 4:07CV00278 JMM)  
Rosenfeld Deposition: July 2010

In the United States District Court for the Western District of Arkansas, Texarkana Division  
Rhonda Brasel, et al., *Plaintiffs*, vs. Weyerhaeuser Company and DOES 1 through 100, *Defendants*.  
Civil Action Number 07-4037  
Rosenfeld Deposition: March 2010  
Rosenfeld Trial: October 2010

In the District Court of Texas 21<sup>st</sup> Judicial District of Burleson County  
Dennis Davis, *Plaintiff*, vs. Burlington Northern Santa Fe Rail Way Company, *Defendant*.  
Case Number 25,151  
Rosenfeld Trial: May 2009

In the United States District Court of Southern District of Texas Galveston Division  
Kyle Cannon, Eugene Donovan, Genaro Ramirez, Carol Sassler, and Harvey Walton, each Individually and on behalf of those similarly situated, *Plaintiffs*, vs. BP Products North America, Inc., *Defendant*.  
Case 3:10-cv-00622  
Rosenfeld Deposition: February 2012  
Rosenfeld Trial: April 2013

In the Circuit Court of Baltimore County Maryland  
Philip E. Cvach, II et al., *Plaintiffs* vs. Two Farms, Inc. d/b/a Royal Farms, Defendants  
Case Number: 03-C-12-012487 OT  
Rosenfeld Deposition: September 2013

# Exhibit C



October 11, 2019

Mr. Richard Drury  
Lozeau Drury  
1939 Harrison Street, Suite 150  
Oakland, CA 94612

**Subject: Times Mirror Square Project Draft Environmental Impact  
Report (SCH No. 2017061083) P19035**

Dear Mr. Drury:

At your request, I have reviewed the Draft Environmental Impact Report (hereinafter the "DEIR") for the Times Mirror Square Project (the "Project") in the City of Los Angeles (the "City"). My review is specific to the Traffic and Circulation sections of that document and related appendices.

My qualifications to perform this review include registration as a Civil and Traffic Engineer in California and over 50 years professional consulting engineering practice in the traffic and transportation industry. I have both prepared and performed adequacy reviews of numerous transportation and circulation sections of environmental impact reports prepared under the California Environmental Quality Act (CEQA) including residential and mixed use complexes. My professional resume is attached. Findings of my review are summarized below.

### **Overview**

The DEIR discloses that the Project would have significant traffic impact in the Existing + Project condition at the intersection of Broadway with W. 2<sup>nd</sup> and in the Future (2023 + Project condition at six intersections:

1. S. Figueroa Street & W. 2nd Street (PM peak hour)
5. Hill Street & W. 1st Street (AM peak hour)

10. Broadway & W. 1st Street (both peak hours)
11. S. Broadway & W 2nd Street (both peak hours)
12. S. Broadway & W. 3rd Street (AM peak hour)
17. S. Spring Street & W. 2nd Street (AM peak hour).

It is critical that the severity of impact at these locations be accurately disclosed since the DEIR finds that physical improvements at these locations are infeasible. As a consequence, in order to approve this Project, findings of overriding considerations will have to be made. To make such findings, public policy-makers and the public must have confidence that the severity of impacts that are overridden are accurately disclosed.

There are reasons why the true severity of the Project's impacts have not been disclosed. One of these is that with the significant impacts at the intersections disclosed as noted above, it is highly likely that there would be queuing impacts at those locations. Yet the DEIR fails to consider queues at those locations. It only analyzes queues at the Project driveways.

Another reason is because the DEIR analysis distained to consider the traffic consequences of the Downtown Streetcar operation. This streetcar would operate in street-running configuration southbound on Broadway and northbound on Hill Street in the Project vicinity. Seven of the DEIR's study intersections and four of the intersections disclosed to be significantly impacted by the subject Project would be on the streetcar route. The operations and/or lane reservations for the streetcar would inevitably have deleterious effects on traffic that could only intensify the severity of the Projects traffic impacts that have been disclosed. Also, the traffic impacts of the Project could have deleterious effect on streetcar operations.

Another reason is the trip generation analysis applies an obsolete basic trip generation data resource and applies trip generation adjustment factors in ways that are inconsistent with the timing of certain transit improvements and the characteristics of the setting of the Project. As a consequence, the Project's contribution of net new trips is understated.

Yet another reason is that the traffic analysis assumes that 35 percent of the Project's vehicle trips will originate or be destined within a roughly circular area of the downtown ranging in radius from about 0.75 to 0.85 miles from the intersection of W. 2<sup>nd</sup> and Broadway. While this percentage is likely true of the total person-trips generated by the Project, most of the vehicle trips generated are likely to originate or be destined outside of this circle. As a consequence, the Project's contribution of traffic to critical gateway intersections at and near freeway ramps serving the downtown is understated.

Finally, the analysis fails to consider the impacts of increasing reliance on Transportation Network Companies (TNCs or ridesharing).

We explore the above issues in the paragraphs below.

### **Failure to Consider Queuing**

As noted above, the DEIR discloses that the Project would have significant traffic impacts at 6 intersections in the 2023 project completion scenario. At 4 of these locations the impacts involve operations in the Level-of-Service (LOS) E or F. Locations experiencing LOS E or F operations are highly likely to have queuing problems which further degrade conditions. Yet the DEIR performed no queue analysis at these obvious locations.

### **Failure to Consider the Effects of the Downtown Streetcar**

As noted above, the City has approved plans for a downtown streetcar operation that would run by the Project site southbound on Broadway and close to the Project site on Hill Street. It would run through 4 of the intersections where the DEIR discloses the Project would have significant traffic impacts. The DEIR dismisses consideration of the streetcar project in the traffic analysis of the subject Project, Citing the fact that as of August 3, 2018 the Streetcar Project was not fully funded.<sup>1</sup> However, the Notice of Preparation (“NOP”) on the subject Project was not issued until June 30, 2017. By that date the LA Bureau of Engineering published a CEQA FEIR on the Streetcar on October 24, 2016 and it was certified by the City Council on November 29, 2016. The LA City Council also approved the streetcar route on November 29, 2016. Hence, the streetcar project was reasonably foreseeable at the time of the NOP for the Times-Mirror EIR and its design was defined at a level of detail sufficient for traffic impact analysis.

Disregarding the streetcar based on funding status is inconsistent with the City’s treatment of other developments contained in the list of Related Projects LADOT provides as input to the cumulative analysis. There is no evidence of consideration whether a project is fully funded to be entered onto the related projects list. The only criterion seems to be that a project has formally filed for planning, zoning and environmental approvals.

### **Obsolete Trip Generation Data Resource, Adjustments Inconsistent With Timing of Transit Improvements and Adjustments Inconsistent With the Nature of Project Components**

The DEIR’s transportation impact analysis relies on basic trip generation rates from the Institute of Transportation Engineers publication, *Trip Generation*, 9<sup>th</sup>

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<sup>1</sup> See DEIR at page II-15

*Edition*, released in 2012. The subsequent *10<sup>th</sup> Edition* was released in late 2017. A significant improvement of the *10<sup>th</sup> Edition* over the *9<sup>th</sup> Edition* is a focus on data for high rise residential and mixed use developments in dense urban settings. Even though the *10<sup>th</sup> Edition* was released a few months later than the date of the NOP, the EIR traffic impact analysis, which was not completed until early May, 2018,<sup>2</sup> could easily have relied on the superior edition of the data source.

Because of the limitations of early editions of *Trip Generation*, which focused on sites involving single land use types which were most easily countable in suburban settings where transit and pedestrian activity tended to be minimal as opposed to dense urban, well-transit-served, highly pedestrianized areas with mixed use developments, and also did not distinguish between new trips generated by the project as differentiated from trips attracted from existing traffic (passers-by), adjustment factors were developed to take account of these considerations. However, in the subject DEIR some adjustments seem to have been misapplied.

In specific, the DEIR analysis takes a 25 percent peak hour transit credit on the trips of the Project's non-residential components based on the assumed 2023 completion of the of the 2<sup>nd</sup> St./Broadway Regional Connector Station immediately adjacent to the Project site (same completion year as the Project). This is fine for the 2023 analysis. However, for the Existing + Project analysis those Project components should only get the 15 percent transit credit the analysis assumes for the existing uses of the site since that adjacent station did not exist in 2017.

Also, the analysis assumes a 40 percent attracted passer-by discount on trips to/from the supermarket component of the Project. However, this is a passer-by attraction rate generally only achieved in supermarkets located along suburban arterials in centers with copious surface parking. This is not even close to realistic when people are already encased in their vehicles on urban streets in a dense urban downtown trying to get somewhere else and where they would have to enter and exit a multi-level parking garage or hunt for scarce street parking.

Reasonable changes to both of these adjustment factors could significantly alter the severity of the impacts disclosed and might result in impacts at other locations. In particular, at intersection 7, Hill Street with W. 3<sup>rd</sup>, which is on the cusp of the Project causing sufficient volume/capacity (V/C) change<sup>3</sup> to be found to be significantly impactful (and is also on the route of the downtown streetcar) appropriate changes to these adjustment factors would certainly result in findings of significant impact.

### **The Project Trip Distribution Understates Traffic at Critical Locations**

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<sup>2</sup> Based on the dates imprinted on the Appendix L ICU computation sheets.

<sup>3</sup> See DEIR Appendix L, Table 8 at page 37.

The DEIR traffic analysis assumes that 35 percent of the Project's vehicle trips will originate or be destined within a roughly circular area of the downtown ranging in radius from about 0.75 to 0.85 miles from the intersection of W. 2<sup>nd</sup> and Broadway. It is understood that the City of Los Angeles Travel Demand Model, the reported basis for the 35 percent local trips assumption, is a person-trip mode. While this percentage is likely true of the total person-trips generated by the Project, most of the vehicle trips generated are likely to originate or be destined outside of this circle. As a consequence, the Project's contribution of traffic to critical gateway intersections at and near freeway ramps serving the downtown is understated.

### **Lack of Consideration of Transportation Network Companies (Ridesharing) Effects on Tripmaking and Mode Choice**

The rise of Transportation Network Companies (ridesharing operations like Uber and Lyft) has dramatically changed the way people travel in urban areas in recent years. Recent studies have found that TNCs have cut into transit, walk and bike shares of trip-making and caused induced trips (trips that would not otherwise be made) and, due to the recirculation to access new rides and careless loading and unloading, caused an approximate doubling in congestion and vehicle miles traveled (VMT) over that which would be ordinarily be accounted for by land use development in dense urban areas.<sup>4</sup> The DEIR has made no effort to estimate traffic due to TNC use due to the Project. This is a critical flaw.

### **Conclusion**

This concludes my comments on the Times-Mirror Project DEIR transportation element. Given the foregoing, I conclude that the DEIR transportation analysis must be revised and recirculated in draft status.

Sincerely,

Smith Engineering & Management  
A California Corporation

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<sup>4</sup> *TNCs & Congestion*, San Francisco County Transportation Authority, October, 2018

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Daniel T. Smith Jr., P.E.  
President

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**Attachment 1**  
**Resume of Daniel T. Smith Jr., P.E.**



SMITH ENGINEERING & MANAGEMENT

**DANIEL T. SMITH, Jr.**  
**President**

**EDUCATION**

Bachelor of Science, Engineering and Applied Science, Yale University, 1967  
Master of Science, Transportation Planning, University of California, Berkeley, 1968

**PROFESSIONAL REGISTRATION**

California No. 21913 (Civil)      Nevada No. 7969 (Civil)      Washington No. 29337 (Civil)  
California No. 938 (Traffic)      Arizona No. 22131 (Civil)

**PROFESSIONAL EXPERIENCE**

Smith Engineering & Management, 1993 to present. President.  
DKS Associates, 1979 to 1993. Founder, Vice President, Principal Transportation Engineer.  
De Leuw, Cather & Company, 1968 to 1979. Senior Transportation Planner.  
Personal specialties and project experience include:

**Litigation Consulting.** Provides consultation, investigations and expert witness testimony in highway design, transit design and traffic engineering matters including condemnations involving transportation access issues; traffic accidents involving highway design or traffic engineering factors; land use and development matters involving access and transportation impacts; parking and other traffic and transportation matters.

**Urban Corridor Studies/Alternatives Analysis.** Principal-in-charge for State Route (SR) 102 Feasibility Study, a 35-mile freeway alignment study north of Sacramento. Consultant on I-280 Interstate Transfer Concept Program, San Francisco, an AA/EIS for completion of I-280, demolition of Embarcadero freeway, substitute light rail and commuter rail projects. Principal-in-charge, SR 238 corridor freeway/expressway design/environmental study, Hayward (Calif.) Project manager, Sacramento Northeast Area multi-modal transportation corridor study. Transportation planner for I-80N West Terminal Study, and Harbor Drive Traffic Study, Portland, Oregon. Project manager for design of surface segment of Woodward Corridor LRT, Detroit, Michigan. Directed staff on I-80 National Strategic Corridor Study (Sacramento-San Francisco), US 101-Sonoma freeway operations study, SR 92 freeway operations study, I-880 freeway operations study, SR 152 alignment studies, Sacramento RTD light rail systems study, Tasman Corridor LRT AA/EIS, Fremont-Warm Springs BART extension plan/EIR, SRs 70/99 freeway alternatives study, and Richmond Parkway (SR 93) design study.

**Area Transportation Plans.** Principal-in charge for transportation element of City of Los Angeles General Plan Framework, shaping nations largest city two decades into 21<sup>st</sup> century. Project manager for the transportation element of 300-acre Mission Bay development in downtown San Francisco. Mission Bay involves 7 million gsf office/commercial space, 8,500 dwelling units, and community facilities. Transportation features include relocation of commuter rail station; extension of MUNI-Metro LRT; a multi-modal terminal for LRT, commuter rail and local bus; removal of a quarter mile elevated freeway; replacement by new ramps and a boulevard; an internal roadway network overcoming constraints imposed by an internal tidal basin; freeway structures and rail facilities; and concept plans for 20,000 structured parking spaces. Principal-in-charge for circulation plan to accommodate 9 million gsf of office/commercial growth in downtown Bellevue (Wash.). Principal-in-charge for 64 acre, 2 million gsf multi-use complex for FMC adjacent to San Jose International Airport. Project manager for transportation element of Sacramento Capitol Area Plan for the state governmental complex, and for Downtown Sacramento Redevelopment Plan. Project manager for Napa (Calif.) General Plan Circulation Element and Downtown Riverfront Redevelopment Plan, on parking program for downtown Walnut Creek, on downtown transportation plan for San Mateo and redevelopment plan for downtown Mountain View (Calif.), for traffic circulation and safety plans for California cities of Davis, Pleasant Hill and Hayward, and for Salem, Oregon.

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**Transportation Centers.** Project manager for Daly City Intermodal Study which developed a \$7 million surface bus terminal, traffic access, parking and pedestrian circulation improvements at the Daly City BART station plus development of functional plans for a new BART station at Colma. Project manager for design of multi-modal terminal (commuter rail, light rail, bus) at Mission Bay, San Francisco. In Santa Clarita Long Range Transit Development Program, responsible for plan to relocate system's existing timed-transfer hub and development of three satellite transfer hubs. Performed airport ground transportation system evaluations for San Francisco International, Oakland International, Sea-Tac International, Oakland International, Los Angeles International, and San Diego Lindberg.

**Campus Transportation.** Campus transportation planning assignments for UC Davis, UC Berkeley, UC Santa Cruz and UC San Francisco Medical Center campuses; San Francisco State University; University of San Francisco; and the University of Alaska and others. Also developed master plans for institutional campuses including medical centers, headquarters complexes and research & development facilities.

**Special Event Facilities.** Evaluations and design studies for football/baseball stadiums, indoor sports arenas, horse and motor racing facilities, theme parks, fairgrounds and convention centers, ski complexes and destination resorts throughout western United States.

**Parking.** Parking programs and facilities for large area plans and individual sites including downtowns, special event facilities, university and institutional campuses and other large site developments; numerous parking feasibility and operations studies for parking structures and surface facilities; also, resident preferential parking .

**Transportation System Management & Traffic Restraint.** Project manager on FHWA program to develop techniques and guidelines for neighborhood street traffic limitation. Project manager for Berkeley, (Calif.), Neighborhood Traffic Study, pioneered application of traffic restraint techniques in the U.S. Developed residential traffic plans for Menlo Park, Santa Monica, Santa Cruz, Mill Valley, Oakland, Palo Alto, Piedmont, San Mateo County, Pasadena, Santa Ana and others. Participated in development of photo/radar speed enforcement device and experimented with speed humps. Co-author of Institute of Transportation Engineers reference publication on neighborhood traffic control.

**Bicycle Facilities.** Project manager to develop an FHWA manual for bicycle facility design and planning, on bikeway plans for Del Mar, (Calif.), the UC Davis and the City of Davis. Consultant to bikeway plans for Eugene, Oregon, Washington, D.C., Buffalo, New York, and Skokie, Illinois. Consultant to U.S. Bureau of Reclamation for development of hydraulically efficient, bicycle safe drainage inlets. Consultant on FHWA research on effective retrofits of undercrossing and overcrossing structures for bicyclists, pedestrians, and handicapped.

#### **MEMBERSHIPS**

Institute of Transportation Engineers Transportation Research Board

#### **PUBLICATIONS AND AWARDS**

*Residential Street Design and Traffic Control*, with W. Homburger *et al.* Prentice Hall, 1989.

Co-recipient, Progressive Architecture Citation, *Mission Bay Master Plan*, with I.M. Pei WRT Associated, 1984.

*Residential Traffic Management, State of the Art Report*, U.S. Department of Transportation, 1979.

*Improving The Residential Street Environment*, with Donald Appleyard *et al.*, U.S. Department of Transportation, 1979.

*Strategic Concepts in Residential Neighborhood Traffic Control*, International Symposium on Traffic Control Systems, Berkeley, California, 1979.

*Planning and Design of Bicycle Facilities: Pitfalls and New Directions*, Transportation Research Board, Research Record 570, 1976.

Co-recipient, Progressive Architecture Award, *Livable Urban Streets, San Francisco Bay Area and London*, with Donald Appleyard, 1979.

# Exhibit D

# Indoor Air Quality in New California Homes with Mechanical Ventilation

Wanyu Chan<sup>1,\*</sup>, Yang-Seon Kim<sup>1</sup>, Brett Singer<sup>1</sup>, Iain Walker<sup>1</sup>

<sup>1</sup>Lawrence Berkeley National Laboratory, Berkeley, USA

\*Corresponding email: wrchan@lbl.gov

## SUMMARY

The Healthy Efficient New Gas Homes (HENGH) study measured indoor air quality and mechanical ventilation use in 70 new California homes. This paper summarizes preliminary results collected from 42 homes. In addition to measurements of formaldehyde, nitrogen dioxide (NO<sub>2</sub>), and PM<sub>2.5</sub> that are discussed here, HENGH also monitored other indoor environmental parameters (e.g., CO<sub>2</sub>) and indoor activities (e.g., cooking, fan use) using sensors and occupant logs. Each home was monitored for one week. Diagnostic tests were performed to characterize building envelope and duct leakage, and mechanical system airflow. Comparisons of indoor formaldehyde, NO<sub>2</sub>, and PM<sub>2.5</sub> with a prior California New Home Study (CNHS) (Offermann, 2009) suggest that contaminant levels are lower than measured from about 10 years ago. The role of mechanical ventilation on indoor contaminant levels will be evaluated.

## KEYWORDS

Formaldehyde; nitrogen dioxide; particles; home performance; field study

## 1 INTRODUCTION

The HENGH field study (2016–2018) aimed to measure indoor air quality in 70 new California homes that have mechanical ventilation. Eligible houses were built in 2011 or later; had an operable whole-dwelling mechanical ventilation system; used natural gas for space heating, water heating, and/or cooking; and had no smoking in the home. Study participants were asked to rely on mechanical ventilation and avoid window use during the one-week monitoring period. All homes had a venting kitchen range hood or over the range microwave and bathroom exhaust fans. This paper presents summary results of formaldehyde, NO<sub>2</sub>, and PM<sub>2.5</sub> measurements in 42 homes. The full dataset is expected to be available in summer 2018.

## 2 METHODS

Integrated one-week concentrations of formaldehyde and NO<sub>x</sub> were measured using SKC UME<sub>x</sub>-100 and Ogawa passive samplers. Formaldehyde samplers were deployed in the main living space, master bedroom, and outdoors. PM<sub>2.5</sub> were measured using a pair of photometers (ES-642/BT-645, MetOne Instruments) indoor in the main living space and outdoors. PM<sub>2.5</sub> filter samples were collected using a co-located pDR-1500 (ThermoFisher) in a subset of the homes and time-resolved photometer data were adjusted using the gravimetric measurements. Results are compared with a prior field study CNHS (2007–2008) (Offermann, 2009) that monitored for contaminant concentrations over a 24-hour period in 108 homes built between 2002 and 2004, including a subset of 26 homes with whole-dwelling mechanical ventilation.

## 3 RESULTS

Figure 1 compares the indoor concentrations of formaldehyde, NO<sub>2</sub>, and PM<sub>2.5</sub> measured by the two studies. Results of HENGH are one-week averaged concentrations, whereas CHNS are 24-hour averages. HENGH measured lower indoor concentrations of formaldehyde and PM<sub>2.5</sub>, compared to CNHS. For NO<sub>2</sub>, the indoor concentrations measured by the two studies

are similar. Summary statistics of indoor and outdoor contaminant concentrations (mean and median concentrations; N=number of homes with available data) are presented in Table 1.

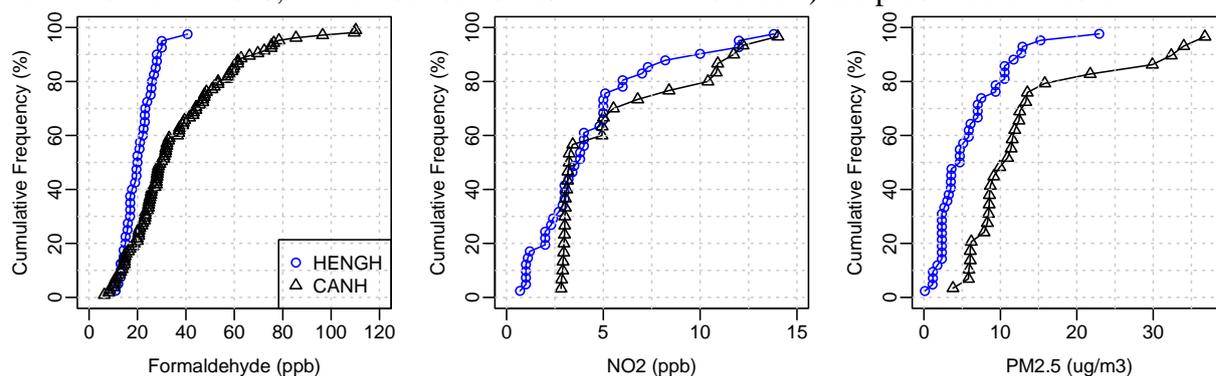


Figure 1. Comparisons of indoor contaminant concentrations measured by two studies.

Table 1. Summary statistics of indoor and outdoor contaminant concentrations.

	HENGH - Indoor			CNHS - Indoor			HENGH - Outdoor			CNHS - Outdoor		
	N	Median	Mean	N	Median	Mean	N	Median	Mean	N	Median	Mean
Formaldehyde (ppb)	39	20.0	20.6	104	29.5	36.3	38	2.0	2.0	43	1.8	2.8
NO <sub>2</sub> (ppb)	40	3.7	4.4	29	3.2	5.4	40	3.0	3.1	11	3.1	3.5
PM <sub>2.5</sub> (ug/m <sup>3</sup> )	41	4.7	5.8	28	10.4	13.3	42	5.9	7.7	11	8.7	7.9

#### 4 DISCUSSION

The lower formaldehyde concentrations measured by HENGH in comparison to CNHS may be attributable to California's regulation to limit formaldehyde emissions from composite wood products that came into effect between the two studies. Gas cooking is a significant source of indoor NO<sub>2</sub> (Mullen et al., 2016). Even though NO<sub>2</sub> concentrations measured by HENGH are similar to levels found in CNHS, the two studies differed in that HENGH homes all use gas for cooking, whereas almost all homes (98%) from the prior study used electric ranges. More analysis is needed to determine the effectiveness of source control, such as range hood use during cooking, on indoor concentrations of cooking emissions such as NO<sub>2</sub> and PM<sub>2.5</sub>. Lower PM<sub>2.5</sub> indoors measured by HENGH compared to CNHS may be explained from a combination of lower outdoor PM<sub>2.5</sub> levels, reduced particle penetration due to tighter building envelopes (Stephens and Siegel, 2012) combined with exhaust ventilation, and use of medium efficiency air filter (MERV 11 or better) in some HENGH homes. Further analysis of the data will evaluate the role of mechanical ventilation, including local exhaust and whole-dwelling ventilation system, on measured indoor contaminant levels.

#### 5 CONCLUSIONS

New California homes now have lower indoor formaldehyde levels than previously measured, likely as a result of California's formaldehyde emission standards. Indoor concentrations of NO<sub>2</sub> and PM<sub>2.5</sub> measured are also low compared to a prior study of new homes in California.

#### ACKNOWLEDGEMENT

LBNL work on the project was supported by the California Energy Commission. Field data collection was performed by the Gas Technology Institute. Support for field teams was provided by Pacific Gas & Electric and the Southern California Gas Company.

#### 6 REFERENCES

Mullen NA et al. 2016 *Indoor Air* 26(2):231–245.

Offermann FJ. 2009. California Air Resource Board and California Energy Commission  
Report CEC-500-2009-085.  
Stephens B, Siegel JA. 2012 *Indoor Air* 22(6):501–513.

DEPARTMENT OF  
CITY PLANNING

COMMISSION OFFICE  
(213) 978-1300

CITY PLANNING COMMISSION

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CITY OF LOS ANGELES  
CALIFORNIA



ERIC GARCETTI  
MAYOR

Exhibit C  
VTT-74761-1A

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Mailing Date: April 1, 2020

Appeal Period Ends: April 10, 2020

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RE: Vesting Tentative Tract Map No.: 74761  
Address: 121 – 147 S. Spring Street; 100 – 142  
S. Broadway; 202 – 234 W. 1<sup>st</sup> Street; 205 – 221  
W. 2<sup>nd</sup> Street  
Community Plan: Central City  
Plan Overlay: SN – Historic Broadway Sign  
District  
Zone: C2-4D-SN  
Council District: 14 – Huizar  
CEQA No.: ENV-2016-4676-EIR

Pursuant to Sections 21082.1(c) and 21081.6 of the Public Resources Code, the Advisory Agency has reviewed and considered the information contained in the Environmental Impact Report prepared for this project, which includes the Draft EIR, No. ENV-2016-4676-EIR (State Clearinghouse House No. 2017061083), dated March 2019, the Final EIR, dated September 2019, and the Errata, dated March 2020 (Times Mirror Square Project EIR), as well as the whole of the administrative record, and

**CERTIFIED** the following:

- 1) The Times Mirror Square Project EIR has been completed in compliance with the California Environmental Quality Act (CEQA);
- 2) The Times Mirror Square Project EIR was presented to the Advisory Agency as a decision-making body of the lead agency; and
- 3) The Times Mirror Square Project EIR reflects the independent judgment and analysis of the lead agency.

**ADOPTED** the following:

- 1) The related and prepared Times Mirror Square Project EIR Environmental Findings;
- 2) The Statement of Overriding Considerations; and
- 3) The Mitigation Monitoring Program prepared for the Times Mirror Square Project EIR.

Pursuant to Section 17.15 of the Los Angeles Municipal Code (LAMC), the Advisory Agency **APPROVED:**

**Vesting Tentative Tract Map No. 74761** (map stamp-dated June 28, 2018), located at 121 – 147 S. Spring Street, 100 – 142 S. Broadway, 202 – 234 W. 1st Street, and 205 –

221 W. 2nd Street for the merger of a portion of public right of way along Broadway and resubdivision of the project site into **nine lots for condominium purposes** for a mixed-use project containing up to 1,127 residential units and up to 34,572 square feet of new commercial floor area, and a haul route for the export of up to 364,000 cubic yards of soils.

The subdivider is hereby advised that the LAMC may not permit this maximum approved density. Therefore, verification should be obtained from the Department of Building and Safety, which will legally interpret the Zoning code as it applies to this particular property. For an appointment with the Development Services Center call (213) 482-7077, (818) 374-5050, or (310) 231-2901.

The Advisory Agency's consideration is subject to the following conditions:

The final map must record within 36 months of this approval, unless a time extension is granted before the end of such period.

**NOTE** on clearing conditions: When two or more **agencies** must clear a condition, subdivider should follow the sequence indicated in the condition. For the benefit of the applicant, subdivider shall maintain record of all conditions cleared, including all material supporting clearances and be prepared to present copies of the clearances to each reviewing agency as may be required by its staff at the time of its review.

#### **BUREAU OF ENGINEERING - SPECIFIC CONDITIONS**

*(Additional BOE Improvement Conditions are listed in "Standard Condition" section on page 11)*

1. That a 2-foot wide strip of land be dedicated along 2<sup>nd</sup> Street adjoining proposed Lot No.7 including a 15-foot by 15-foot property line cut corners or a 20-foot radius property line at the intersection with Broadway.
2. That a 6-foot wide public sidewalk easement be provided along 1<sup>st</sup> Street adjoining the tract in accordance with Downtown Street Standards.
3. That a 5-foot wide public sidewalk easement be provided along Broadway from the new property line after the street merger area in accordance with Downtown Street Standards.
4. That the City Department of Transportation after approval of the tentative tract by Planning Department in a letter to City Engineer shall determine that the merger area is not necessary for future Public Street.
5. That Department of the City Planning also determine that the proposed merger area is consistent with all applicable General Plan Elements of Highway and Circulation Elements for LA Mobility Plan.
6. In the event that Department of Transportation has no objection to the street merger then a 5-foot wide existing public right- of-way (40-foot measured from centerline of Broadway) excluding the cut corner at the intersection with 2<sup>nd</sup> Street and as shown on the tentative tract map stamp dated June 28, 2018 be permitted to be merged with the remainder of the tract map pursuant to Section 66499.20.2 of the State Government Code, and in addition, the following conditions be exe the applicant and administered by the City Engineer:

- a. That consents to the street being merged and waivers of any damages that may accrue as a result of such mergers be obtained from all property owners who might have certain rights in the area being merged.
  - b. That satisfactory arrangements be made with all public utility agencies maintaining existing facilities within the area being merged.
7. That any surcharge fee in conjunction with the street merger requests be paid.
8. That the subdivider make a request to the Central District Office of the Bureau of Engineering to determine the capacity of existing sewers in this area.
9. That a set of drawings for airspace lots be submitted to the City Engineer showing the following:
  - a. Plan view at different elevations.
  - b. Isometric views.
  - c. Elevation views.
  - d. Section cuts at all locations where air space lot boundaries change.
10. That the owners of the property record an agreement satisfactory to the City Engineer stating that they will grant the necessary private easements for ingress and egress purposes to serve proposed airspace lots to use upon the sale of the respective lots and they will maintain the private easements free and clear of obstructions and in safe conditions for use at all times.

#### **DEPARTMENT OF BUILDING AND SAFETY, GRADING DIVISION**

11. Prior to issuance of a grading or building permit, or prior to recordation of the final map, the subdivider shall make suitable arrangements to assure compliance, satisfactory to the Department of Building and Safety, Grading Division, with all the requirements and conditions contained in the letter dated January 9, 2017 attached to the case file for Tract No. VTT-74761.

#### **DEPARTMENT OF BUILDING AND SAFETY, ZONING DIVISION**

12. Prior to recordation of the final map, the Department of Building and Safety, Zoning Division shall certify that no Building or Zoning Code violations exist on the subject site. In addition, the following items shall be satisfied:
  - a. Obtain permits for the demolition or removal of all existing structures on the site. Accessory structures and uses are not permitted to remain on lots without a main structure or use. Provide copies of the demolition permits and signed inspection cards to show completion of the demolition work.
  - b. Provide a copy of affidavits AFF-36889 and AF-90-1466762-MB. Show compliance with all the conditions/requirements of the above affidavits as applicable. Termination of above affidavits may be required after the Map has been recorded. Obtain approval from the Department, on the termination form, prior to recording.

- c. Provide a copy of CPC case CPC-2016-4675-TDR-VCU-MCUP. Show compliance with all the conditions/requirements of the CPC case as applicable.
- d. Show all street dedication as required by Bureau of Engineering and provide net lot area after all dedication. "Area" requirements shall be re-checked as per net lot area after street dedication.

Notes:

The submitted Map may not comply with the number of guest parking spaces required by the Advisory Agency.

The proposed building plans have not been checked for and shall comply with Building and Zoning Code requirements. With the exception of revised health or safety standards, the subdivider shall have a vested right to proceed with the proposed development in substantial compliance with the ordinances, policies, and standards in effect at the time the subdivision application was deemed complete. Plan check will be required before any construction, occupancy or change of use.

If the proposed development does not comply with the current Zoning Code, all zoning violations shall be indicated on the Map.

An appointment is required for the issuance of a clearance letter from the Department of Building and Safety. The applicant is asked to contact Laura Duong at (213) 482-0434 to schedule an appointment.

#### **BUREAU OF STREET LIGHTING**

13. Prior to the recordation of the final map or issuance of the Certificate of Occupancy (C of O), street lighting improvement plans shall be submitted for review and the owner shall provide a good faith effort via a ballot process for the formation or annexation of the property within the boundary of the development into a Street Lighting Maintenance Assessment District.

#### **DEPARTMENT OF TRANSPORTATION**

14. That the project be subject to any recommendations from the Department of Transportation.

#### **FIRE DEPARTMENT**

15. Prior to the recordation of the final map, a suitable arrangement shall be made satisfactory to the Fire Department, binding the subdivider and all successors to the following:
  - a. Submittal of plot plans for Fire Department review and approval prior to recordation of Tract Map Action.

**DEPARTMENT OF WATER AND POWER**

16. Arrangements shall be made for compliance with the Los Angeles Department of Water and Power (LADWP) Water System Rules and requirements, satisfactory to the LADWP memo dated July 26, 2018. Upon compliance with these conditions and requirements, LADWP's Water Services Organization will forward the necessary clearances to the Bureau of Engineering. (This condition shall be deemed cleared at the time the City Engineer clears Condition No. S-1.(c).)

**DEPARTMENT OF RECREATION AND PARKS**

17. That the Quimby Fee be based on the C2 Zone. Note: since this tract case is vested, the Project is not subject to the update in RAP fees per Ordinance No.184,505.

**BUREAU OF SANITATION**

18. Satisfactory arrangements shall be made with the Bureau of Sanitation, Wastewater Collection Systems Division for compliance with its sewer system review and requirements. Upon compliance with its conditions and requirements, the Bureau of Sanitation, Wastewater Collection Systems Division will forward the necessary clearances to the Bureau of Engineering. (This condition shall be deemed cleared at the time the City Engineer clears Condition No. S-1. (d).)

**INFORMATION TECHNOLOGY AGENCY**

19. To assure that cable television facilities will be installed in the same manner as other required improvements, please email [cabletv.ita@lacity.org](mailto:cabletv.ita@lacity.org) that provides an automated response with the instructions on how to obtain the Cable TV clearance. The automated response also provides the email address of 3 people in case the applicant/owner has any additional questions.

**URBAN FORESTRY DIVISION AND THE DEPARTMENT OF CITY PLANNING**

20. Prior to the issuance of a grading permit, a plot plan prepared by a reputable tree expert, indicating the location, size, type, and condition of all existing trees on the site shall be submitted for approval by the Department of City Planning. All trees in the public right-of-way shall be provided per the current Urban Forestry Division standards.

**Note:** Removal of all trees in the public right-of-way shall require approval of the Board of Public Works. Contact: Urban Forestry Division at: (213) 485-5675. Failure to comply with this condition as written shall require the filing of a modification to this tract map in order to clear the condition.

**DEPARTMENT OF CITY PLANNING-SITE SPECIFIC CONDITIONS**

21. Prior to the recordation of the final map, the subdivider shall prepare and execute a Covenant and Agreement (Planning Department General Form CP-6770) in a manner satisfactory to the Planning Department, binding the subdivider and all successors to the following:

- a. Limit the proposed development to nine lots for condominium purposes.
  - b. Off-street parking for residential and commercial uses shall comply with the requirements of Case No. CPC-2016-4675-TDR-VCU-MCUP. In the event that Case No. CPC-2016-4675-TDR-VCU-MCUP is not approved, the project shall comply with LAMC Section 12.21-A,4.
  - c. The applicant shall install an air filters capable of achieving a Minimum Efficiency Rating Value (MERV) of at least 13 or better.
  - d. That a solar access report shall be submitted to the satisfaction of the Advisory Agency prior to obtaining a grading permit.
  - e. That the subdivider considers the use of natural gas and/or solar energy and consults with the Department of Water and Power and Southern California Gas Company regarding feasible energy conservation measures.
  - f. Recycling bins shall be provided at appropriate locations to promote recycling of paper, metal, glass, and other recyclable material.
  - g. The applicant shall install shielded lighting to reduce any potential illumination affecting adjacent properties.
22. Prior to the issuance of the building permit or the recordation of the final map, a copy of CPC-2016-4675-TDR-VCU-MCUP shall be submitted to the satisfaction of the Advisory Agency. In the event CPC-2016-4675-TDR-VCU-MCUP is not approved, the subdivider shall submit a tract modification.
23. The Project shall comply with the Downtown Street Standards, including all applicable public sidewalk easements.
24. Haul Route Conditions
- a. Loaded haul vehicles traveling from the project site shall travel via the following haul route.
    - i. Loaded haul vehicles traveling from the project site shall exit the site by turning right onto Broadway, turn right to travel east on W. 1<sup>st</sup> Street, turn left on northbound Main Street, turn right on Aliso Street, and merge onto the southbound US-101 freeway.
  - b. Empty haul vehicles traveling to the project site facility shall travel via the following haul route:
    - i. Empty haul vehicles traveling to the project site shall exit the northbound US-101 freeway onto Los Angeles Street, travel south to 2<sup>nd</sup> Street, turn right onto westbound W. 2<sup>nd</sup> Street, turn right onto Broadway, and turn right to access the Project Site.
  - c. Hauling hours of operation are restricted to the hours between 7:00 A.M. and 5:00



- If the City determines, pursuant to Public Resources Code Section 21074 (a)(2), that the object or artifact appears to be tribal cultural resource, the City shall provide any effected tribe a reasonable period of time, not less than 14 days, to conduct a site visit and make recommendations to the Project Permittee and the City regarding the monitoring of future ground disturbance activities, as well as the treatment and disposition of any discovered tribal cultural resources.
- The project Permittee shall implement the tribe's recommendations if a qualified archaeologist, retained by the City and paid for by the project Permittee, reasonably concludes that the tribe's recommendations are reasonable and feasible.
- The project Permittee shall submit a tribal cultural resource monitoring plan to the City that includes all recommendations from the City and any effected tribes that have been reviewed and determined by the qualified archaeologist to be reasonable and feasible. The project Permittee shall not be allowed to recommence ground disturbance activities until this plan is approved by the City.
- If the project Permittee does not accept a particular recommendation determined to be reasonable and feasible by the qualified archaeologist, the project Permittee may request mediation by a mediator agreed to by the Permittee and the City who has the requisite professional qualifications and experience to mediate such a dispute. The project Permittee shall pay any costs associated with the mediation.
- The project Permittee may recommence ground disturbance activities outside of a specified radius of the discovery site, so long as this radius has been reviewed by the qualified archaeologist and determined to be reasonable and appropriate.
- Copies of any subsequent prehistoric archaeological study, tribal cultural resources study or report, detailing the nature of any significant tribal cultural resources, remedial actions taken, and disposition of any significant tribal cultural resources shall be submitted to the South Central Coastal Information Center (SCCIC) at California State University, Fullerton.
- Notwithstanding the above, any information determined to be confidential in nature, by the City Attorney's office, shall be excluded from submission to the SCCIC or the general public under the applicable provisions of the California Public Records Act, California Public Resources Code, and shall comply with the City's AB 52 Confidentiality Protocols.

26. **Indemnification and Reimbursement of Litigation Costs.**

Applicant shall do all of the following:

(i) Defend, indemnify and hold harmless the City from any and all actions against the City relating to or arising out of, in whole or in part, the City's processing and approval of this entitlement, including but not limited to, an action to attack, challenge, set aside, void, or otherwise modify or annul the approval of the entitlement, the environmental review of the entitlement, or the approval of subsequent permit decisions, or to claim personal property damage, including from inverse condemnation or any other constitutional claim.

(ii) Reimburse the City for any and all costs incurred in defense of an action related to or arising out of, in whole or in part, the City's processing and approval of the entitlement, including but not limited to payment of all court costs and attorney's fees, costs of any judgments or awards against the City (including an award of attorney's fees), damages,

and/or settlement costs.

(iii) Submit an initial deposit for the City's litigation costs to the City within 10 days' notice of the City tendering defense to the applicant and requesting a deposit. The initial deposit shall be in an amount set by the City Attorney's Office, in its sole discretion, based on the nature and scope of action, but in no event shall the initial deposit be less than \$50,000. The City's failure to notice or collect the deposit does not relieve the applicant from responsibility to reimburse the City pursuant to the requirement in paragraph (ii).

(iv) Submit supplemental deposits upon notice by the City. Supplemental deposits may be required in an increased amount from the initial deposit if found necessary by the City to protect the City's interests. The City's failure to notice or collect the deposit does not relieve the applicant from responsibility to reimburse the City pursuant to the requirement in paragraph (ii).

(v) If the City determines it necessary to protect the City's interest, execute an indemnity and reimbursement agreement with the City under terms consistent with the requirements of this condition.

The City shall notify the applicant within a reasonable period of time of its receipt of any action and the City shall cooperate in the defense. If the City fails to notify the applicant of any claim, action, or proceeding in a reasonable time, or if the City fails to reasonably cooperate in the defense, the applicant shall not thereafter be responsible to defend, indemnify or hold harmless the City.

The City shall have the sole right to choose its counsel, including the City Attorney's office or outside counsel. At its sole discretion, the City may participate at its own expense in the defense of any action, but such participation shall not relieve the applicant of any obligation imposed by this condition. In the event the applicant fails to comply with this condition, in whole or in part, the City may withdraw its defense of the action, void its approval of the entitlement, or take any other action. The City retains the right to make all decisions with respect to its representations in any legal proceeding, including its inherent right to abandon or settle litigation.

For purposes of this condition, the following definitions apply:

"City" shall be defined to include the City, its agents, officers, boards, commissions, committees, employees, and volunteers.

"Action" shall be defined to include suits, proceedings (including those held under alternative dispute resolution procedures), claims, or lawsuits. Actions includes actions, as defined herein, alleging failure to comply with any federal, state or local law.

Nothing in the definitions included in this paragraph are intended to limit the rights of the City or the obligations of the applicant otherwise created by this condition.

#### **DEPARTMENT OF CITY PLANNING-ENVIRONMENTAL MITIGATION MEASURES.**

27. The project shall be in substantial conformance with the mitigation measures in the MMP from the Project's Final Environmental Impact Report, and attached to the subject case

file. The implementing and enforcing agencies may determine substantial conformance with mitigation measures in the MMP. If substantial conformance results in effectively deleting or modifying the mitigation measure, the Director of Planning shall provide a written justification supported by substantial evidence as to why the mitigation measure, in whole or in part, is no longer needed and its effective deletion or modification will not result in a new significant impact or a more severe impact to a previously identified significant impact.

If the Project is not in substantial conformance to the adopted mitigation measures or MMP, a modification or deletion shall be treated as a new discretionary action under CEQA Guidelines, Section 15162(c) and will require preparation of an addendum or subsequent CEQA clearance. Under this process, the modification or deletion of a mitigation measure shall not require a Tract Map Modification unless the Director of Planning also finds that the change to the mitigation measures results in a substantial change to the Project or the non-environmental conditions of approval.

#### **DEPARTMENT OF CITY PLANNING - STANDARD CONDOMINIUM CONDITIONS**

- C-1. That approval of this tract constitutes approval of model home uses, including a sales office and off-street parking. Where the existing zoning is (T) or (Q) for multiple residential use, no construction or use shall be permitted until the final map has recorded or the proper zone has been effectuated. If models are constructed under this tract approval, the following conditions shall apply:
1. Prior to recordation of the final map, the subdivider shall submit a plot plan for approval by the Division of Land Section of the Department of City Planning showing the location of the model dwellings, sales office and off-street parking. The sales office must be within one of the model buildings.
  2. All other conditions applying to Model Dwellings under Section 12.22-A, 10 and 11 and Section 17.05-O of the LAMC shall be fully complied with satisfactory to the Department of Building and Safety.
- C-2. Prior to the recordation of the final map, the subdivider shall pay or guarantee the payment of a park and recreation fee based on the latest fee rate schedule applicable. The amount of said fee to be established by the Advisory Agency in accordance with LAMC Section 17.12 and is to be paid and deposited in the trust accounts of the Park and Recreation Fund.
- C-3. Prior to obtaining any grading or building permits before the recordation of the final map, a landscape plan, prepared by a licensed landscape architect, shall be submitted to and approved by the Advisory Agency in accordance with CP-6730.
- In the event the subdivider decides not to request a permit before the recordation of the final map, a covenant and agreement satisfactory to the Advisory Agency guaranteeing the submission of such plan before obtaining any permit shall be recorded.
- C-4. In order to expedite the development, the applicant may apply for a building permit for an apartment building. However, prior to issuance of a building permit for apartments, the registered civil engineer, architect or licensed land surveyor shall certify in a letter to the

Advisory Agency that all applicable tract conditions affecting the physical design of the building and/or site, have been included into the building plans. Such letter is sufficient to clear this condition. In addition, all of the applicable tract conditions shall be stated in full on the building plans and a copy of the plans shall be reviewed and approved by the Advisory Agency prior to submittal to the Department of Building and Safety for a building permit.

OR

If a building permit for apartments will not be requested, the project civil engineer, architect or licensed land surveyor must certify in a letter to the Advisory Agency that the applicant will not request a permit for apartments and intends to acquire a building permit for a condominium building(s). Such letter is sufficient to clear this condition.

### **BUREAU OF ENGINEERING - STANDARD CONDITIONS**

- S-1. (a) That the sewerage facilities charge be deposited prior to recordation of the final map over all of the tract in conformance with Section 64.11.2 of the LAMC.
- (b) That survey boundary monuments be established in the field in a manner satisfactory to the City Engineer and located within the California Coordinate System prior to recordation of the final map. Any alternative measure approved by the City Engineer would require prior submission of complete field notes in support of the boundary survey.
- (c) That satisfactory arrangements be made with both the Water System and the Power System of the Department of Water and Power with respect to water mains, fire hydrants, service connections and public utility easements.
- (d) That any necessary sewer, street, drainage and street lighting easements be dedicated. In the event it is necessary to obtain off-site easements by separate instruments, records of the Bureau of Right-of-Way and Land shall verify that such easements have been obtained. The above requirements do not apply to easements of off-site sewers to be provided by the City.
- (e) That drainage matters be taken care of satisfactory to the City Engineer.
- (f) That satisfactory street, sewer and drainage plans and profiles as required, together with a lot grading plan of the tract and any necessary topography of adjoining areas be submitted to the City Engineer.
- (g) That any required slope easements be dedicated by the final map.
- (h) That each lot in the tract complies with the width and area requirements of the Zoning Ordinance.
- (i) That 1-foot future streets and/or alleys be shown along the outside of incomplete public dedications and across the termini of all dedications abutting unsubdivided property. The 1-foot dedications on the map shall include a restriction against their use of access purposes until such time as they are accepted for public use.

- (j) That any 1-foot future street and/or alley adjoining the tract be dedicated for public use by the tract, or that a suitable resolution of acceptance be transmitted to the City Council with the final map.
  - (k) That no public street grade exceeds 15%.
  - (l) That any necessary additional street dedications be provided to comply with the Americans with Disabilities Act (ADA) of 1990.
- S-2. That the following provisions be accomplished in conformity with the improvements constructed herein:
- (a) Survey monuments shall be placed and permanently referenced to the satisfaction of the City Engineer. A set of approved field notes shall be furnished, or such work shall be suitably guaranteed, except where the setting of boundary monuments requires that other procedures be followed.
  - (b) Make satisfactory arrangements with the Department of Transportation with respect to street name, warning, regulatory and guide signs.
  - (c) All grading done on private property outside the tract boundaries in connection with public improvements shall be performed within dedicated slope easements or by grants of satisfactory rights of entry by the affected property owners.
  - (d) All improvements within public streets, private street, alleys and easements shall be constructed under permit in conformity with plans and specifications approved by the Bureau of Engineering.
  - (e) Any required bonded sewer fees shall be paid prior to recordation of the final map.
- S-3. That the following improvements be either constructed prior to recordation of the final map or that the construction be suitably guaranteed:
- (a) Construct on-site sewers to serve the tract as determined by the City Engineer.
  - (b) Construct any necessary drainage facilities.
  - (c) Install street lighting facilities to serve the tract as required by the Bureau of Street Lighting as required below:  
  
Construct new pedestrian lights: six (6) on Broadway, six (6) on 2<sup>nd</sup> Street, four (4) on 1<sup>st</sup> Street, and eight (8) on Spring Street. Construct new street light: one (1) on Spring Street. If street widening per BOE improvement conditions, relocate and upgrade street lights; eight (8) on Broadway, four (4) on 2<sup>nd</sup> Street, and six (6) on 1<sup>st</sup> Street.
- Notes: The quantity of street lights identified may be modified slightly during the plan check process based on illumination calculations and equipment selection.

Conditions set: 1) in compliance with a Specific Plan, 2) by LADOT, or 3) by other legal instrument excluding the Bureau of Engineering conditions, requiring an improvement that will change the geometrics of the public roadway or driveway apron may require additional or the reconstruction of street lighting improvements as part of that condition.

- (d) Plant street trees and remove any existing trees within dedicated streets or proposed dedicated streets as required by the Street Tree Division of the Bureau of Street Maintenance. All street tree plantings shall be brought up to current standards. When the City has previously been paid for tree planting, the subdivider or contractor shall notify the Street Tree Division (213-485-5675) upon completion of construction to expedite tree planting.
- (e) Repair or replace any off-grade or broken curb, gutter and sidewalk satisfactory to the City Engineer.
- (f) Construct access ramps for the handicapped as required by the City Engineer.
- (g) Close any unused driveways satisfactory to the City Engineer.
- (h) Construct any necessary additional street improvements to comply with the Americans with Disabilities Act (ADA) of 1990.
- (i) That the following improvements be either constructed prior to recordation of the final map or that the construction be suitably guaranteed:
  - a. Reconstruct all the existing sidewalks adjoining 1<sup>st</sup> Street, Broadway and Spring Street to provide full-width sidewalks with tree wells if necessary all satisfactory to the Central District B-permit Section.
  - b. Improve 2<sup>nd</sup> Street adjoining the subdivision by the construction of the following:
    - 1. A concrete curb, a concrete gutter, and an 8- foot and 15-foot variable width full-width concrete sidewalk with tree wells.
    - 2. Suitable surfacing to join the existing pavements and to complete a 22-foot half roadway.
    - 3. Any necessary removal and reconstruction of existing improvements.
    - 4. The necessary transitions to join the existing improvements.

#### NOTES:

The Advisory Agency approval is the maximum number of units permitted under the tract action. However the existing or proposed zoning may not permit this number of units.

Satisfactory arrangements shall be made with the Los Angeles Department of Water and Power, Power System, to pay for removal, relocation, replacement or adjustment of power facilities due to this development. The subdivider must make arrangements for the underground installation of all new utility lines in conformance with LAMC Section 17.05N.

The final map must record within 36 months of this approval, unless a time extension is granted before the end of such period.

The Advisory Agency hereby finds that this tract conforms to the California Water Code, as required by the Subdivision Map Act.

The subdivider should consult the Department of Water and Power to obtain energy saving design features which can be incorporated into the final building plans for the subject development. As part of the Total Energy Management Program of the Department of Water and Power, this no-cost consultation service will be provided to the subdivider upon his request.

## **FINDINGS OF FACT (CEQA)**

### **I. INTRODUCTION**

The Environmental Impact Report (EIR), consisting of the Draft EIR and the Final EIR, is intended to serve as an informational document for public agency decision-makers and the general public regarding the objectives and components of the Times Mirror Square Project (Project), located at the city block bounded by W. 1<sup>st</sup> Street, S. Spring Street, W. 2<sup>nd</sup> Street, and S. Broadway (Site or Project Site), consisting of construction of two new high-rise mixed-use towers, the 37-story "North Tower" and 53-story "South Tower," along with rehabilitation of three existing buildings, including an eight-story building (Times Building), a four-story building (Plant Building), and a 10-story building (Mirror Building). The North and South Towers, which would be constructed above a five-story parking podium (Podium), would contain a maximum of 1,127 residential units, up to 34,572 square feet of commercial floor area, and a combined floor area of up to 1,135,803 square feet. Overall, including the existing buildings to remain that total up to 376,105 square feet, the Project would comprise up to 1,511,908 square feet of floor area, resulting in a maximum 9.42 Floor Area Ratio (FAR).

### **II. ENVIRONMENTAL DOCUMENTATION BACKGROUND**

The Project was reviewed by the Los Angeles Department of City Planning (serving as Lead Agency) in accordance with the requirements of the California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000, et seq.) and the State's CEQA Guidelines (14 Cal. Code Regs. §15000, et seq.) The City prepared an Initial Study in accordance with CEQA Guidelines Section 15063(a). At the beginning of the environmental review process and pursuant to the provisions of Section 15082 of the State CEQA Guidelines, the City circulated a Notice of Preparation (NOP) to State, regional, and local agencies, and members of the public for a 32-day review period, commencing June 30, 2017 and ending July 31, 2017. The purpose of the NOP was to formally convey that the City was preparing a Draft EIR for the proposed Project, and to solicit input regarding the scope and content of the environmental information to be included in the Draft EIR.

The NOP included notification that a public scoping meeting would be held on July 25, 2017. The meeting was held in an open house format and provided interested individuals, groups, and public

agencies the opportunity to view materials, ask questions, and provide oral and written comments to the City regarding the scope and focus of the Draft EIR as described in the NOP and Initial Study. Written comment letters responding to the NOP were submitted to the City by public agencies and interested individuals and organizations.

The NOP and Initial Study are provided in Appendices A-1 and A-2 of the Draft EIR. Scoping meeting materials and letters and comments received during the comment period and at the scoping meeting are included in Appendices A-3 and A-4, respectively, of the Draft EIR.

The Draft EIR evaluated in detail the potential effects of the Project. It also analyzed the effects of a reasonable range of five alternatives to the Project, including a “No Project” alternative. The Draft EIR for the Project (State Clearinghouse No. 2017061083), incorporated herein by reference in full, was prepared pursuant to CEQA and the State *CEQA Guidelines*. Terms and abbreviations used in these findings but not defined here shall have the meanings given to them in the Draft EIR. The Draft EIR was circulated for a public review period that commenced on March 28, 2019 and was initially set to end on May 13, 2019 (for a total of 47 days). Subsequently, a Notice of Extension was filed on April 1, 2019, which extended the final day of the comment period from May 13, 2019 to May 20, 2019 (a total of 54 days). The Draft EIR was made available for review on the City’s website. Copies of the Draft EIR were also made available at four libraries and the Department of City Planning’s offices. Notices regarding availability of the Draft EIR were sent to those within a 500-foot radius of the Project Site, as well as individuals who provided comments during the NOP comment period, or requested notice.

During the Draft EIR public review period, the City Planning Department received 12 comment letters on the Draft EIR from agencies, organizations, and individuals through written correspondence and emails. Three additional comments were received after the close of the comment period. Copies of the written comments received are provided in the Final EIR. Pursuant to CEQA Guidelines Section 15088, the City, as Lead Agency, reviewed all comments received during the review period for the Draft EIR and responded to each comment in Section 2, Responses to Comments, of the Final EIR. The City also responded to each of the three comments received after the close of the comment period.

The City published a Final EIR for the Project on September 20, 2019, which is hereby incorporated by reference in full. The Final EIR is intended to serve as an informational document for public agency decision-makers and the general public regarding objectives and components of the Project. The Final EIR includes written responses to all comments received on the Draft EIR during the public review period, as well as any necessary revisions, clarifications, and corrections to the Draft EIR. Responses were sent to all public agencies that made comments on the Draft EIR at least 10 days prior to certification of the Final EIR pursuant to CEQA Guidelines Section 15088(b). In addition, all individuals who commented on the Draft EIR also received a copy of the Final EIR. The Final EIR was also made available for review on the City’s website. Copies of the Final EIR were also made available at four libraries and the Department of City Planning’s offices. Notices regarding availability of the Final EIR were sent to those within a 500-foot radius of the Project Site, as well as individuals who commented on the Draft EIR, provided comments during the NOP comment period, or requested notice.

A duly noticed public hearing for the Project was held by the Deputy Advisory Agency and the Hearing Officer on behalf of the City Planning Commission on October 16, 2019.

Following publication of the Final EIR, the Lozeau Drury law firm, on behalf of Supporters Alliance for Environmental Responsibility (SAFER), submitted a letter dated October 16, 2019 with

attachments (the Lozeau Drury Letter) providing comments on the EIR. The City caused to have complete responses to these comments prepared (March 2020 Responses) and the responses are available in the subject case file. As detailed therein, the Lozeau Drury Letter does not provide credible evidence that the Project would result in new or substantially increased impacts than what was analyzed in the Draft EIR, that there is significant new information, or that any of the other criteria for recirculation under CEQA Guidelines Section 15088.5 has been met. Therefore, recirculation of the Draft EIR is not required.

As stated on Page II-48 of Chapter II, Project Description, of the Draft EIR, the Project would be constructed in one phase, commencing in 2019, followed by an approximate four-year construction period ending with buildout and occupancy in 2023. Due to the passage of time, Project construction would commence in 2020 and would end with buildout and occupancy in 2024. As set forth in it the March 2020 Errata to the EIR (Errata), this delay in occupancy of one year would not materially change the conclusions of the EIR. Specifically, the Errata demonstrates that this minor change will not result in any new or increased significant impacts, or otherwise require recirculation of the EIR.

The documents and other materials that constitute the record of proceedings on which the City's CEQA findings are based are located at the Department of City Planning, Environmental Review Section, 221 North Figueroa Street, Suite 1350, Los Angeles, California 90012. This information is provided in compliance with Public Resources Code Section 21081.6(a)(2).

### **III. FINDINGS REQUIRED TO BE MADE BY LEAD AGENCY UNDER CEQA**

Public Resources Code Section 21081(a) and CEQA Guidelines Section 15091(a) require a public agency, prior to approving a project, to identify significant impacts and make one or more of three possible findings for each of the significant impacts.

- A. The first possible finding is that “[c]hanges or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.” (Public Resources Code Section 21081(a)(1); CEQA Guidelines Section 15091(a)(1)); and
- B. The second possible finding is that “[s]uch changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.” (Public Resources Code Section 21081(a)(2); CEQA Guidelines Section 15091(a)(2)); and
- C. The third possible finding is that “[s]pecific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible, the mitigation measures or Project alternatives identified in the final EIR.” (Public Resources Code Section 21081(a)(3); CEQA Guidelines Section 15091(a)(3)).

The findings reported in the following pages incorporate the facts and discussions of the environmental impacts that are found to be significant in the Final EIR for the Project as fully set forth therein. Section 15091(a) of the CEQA Guidelines requires findings to address environmental impacts that an EIR identifies as “significant.” For each of the significant impacts associated with the Project, either before or after mitigation, the following information is provided:

1. Description of Significant Effects – A specific description of the environmental effects identified in the EIR, including a judgment regarding the significance of the impact;
2. Project Design Features – Reference to the identified Project Design Features that are a part of the Project (numbering of the features corresponds to the numbering in the EIR);
3. Mitigation Measures – Reference to the identified mitigation measures or actions that are required as part of the Project to reduce the identified significant impacts (numbering of the mitigation measures correspond to the Mitigation Monitoring Program, which is included as Section 4 of the Final EIR);
4. Finding – One or more of the three specific findings in direct response to Public Resources Section 21081(a) and CEQA Guidelines Section 15091(a);
5. Rationale for Finding – A summary of the reasons for the finding(s); and
6. Reference – A notation on the specific section in the EIR which includes the evidence and discussion of the identified impact.

With respect to a project for which significant impacts are not avoided or substantially lessened either through the adoption of feasible mitigation measures or feasible environmentally superior alternatives, a lead agency, after adopting proper findings based on substantial evidence, may nevertheless approve the project if the agency first adopts a statement of overriding considerations setting forth the specific reasons why the agency found that the project's benefits rendered acceptable its unavoidable adverse environmental effects. (CEQA Guidelines Sections 15093, 15043(b); see also Public Resources Code Section 21081(b).)

#### **IV. DESCRIPTION OF THE PROJECT**

As described in Section II., *Project Description*, of the Draft EIR, the Project proposes to preserve and rehabilitate the existing Times, Plant, and Mirror Buildings and demolish the existing Executive Building and parking structure for construction of the new North and South Towers. A proposed Paseo would separate the existing Times, Plant, and Mirror Buildings from the new towers and bisect the Project Site between the W. 1<sup>st</sup> Street and W. 2<sup>nd</sup> Street sidewalks. The three buildings to be retained, which have a total existing floor area of approximately 376,105 square feet, currently include office and cafeteria uses and are aligned along S. Spring Street, with frontages along both W. 1<sup>st</sup> Street and W. 2<sup>nd</sup> Street. Under the Project, there would be approximately 307,288 square feet of commercial office uses, approximately 18,817 square feet of commercial restaurant uses, and an approximately 50,000 square-foot grocery store. The three retained and rehabilitated historic buildings would be separated from the west side of the block by the Paseo.

The Project's North and South Towers would be constructed over a 5-story Podium and, from street grade, the North Tower would rise 37 stories or approximately 495 feet above grade. The South Tower would rise 53 stories or approximately 665 feet above grade. The North Tower would contain 450 residential units and the South Tower would contain 677 residential units, for a total of 1,127 residential units. Total residential floor area within the two towers would be approximately 1,071,692 square feet. With the addition of open space amenities, lounges, loading areas, and an additional 34,572 square feet of restaurant uses, total new construction

would amount to 1,135,803 square feet. The Project would provide 1,240 bicycle parking spaces for the residential uses and 34 bicycle parking spaces for the commercial uses. The Project is designed for approximately 1,744 vehicle parking spaces in the five-level above-ground Podium and nine-level subterranean parking structure.

## **V. ENVIRONMENTAL IMPACTS FOUND NOT TO BE SIGNIFICANT OR LESS THAN SIGNIFICANT BY THE INITIAL STUDY**

The City Planning Department prepared an Initial Study dated June 30, 2017, which is located in Appendix A-2 of the Draft EIR. The City has determined through the Initial Study that there is no substantial evidence that the Project could cause significant environmental effects in the following areas:

- I. Aesthetics**
  - a. Scenic Vista
  - b. Scenic Resources within Scenic Highway
  - c. Degrade Existing Visual Character
  - d. Light or Glare
  
- II. Agricultural and Forest Resources**
  - a. Farmland
  - b. Existing Zoning for Agricultural Use
  - c. Forest Land or Timberland Zoning
  - d. Loss or Conversion of Forest Land
  - e. Other Changes in the Existing Environment
  
- III. Air Quality**
  - e. Objectionable Odors
  
- IV. Biological Resources<sup>2</sup>**
  - b. Riparian Habitat and Wetlands
  - c. Wetlands
  - d. Movement of any Resident or Migratory Species
  - e. Local Preservation Policies
  - f. Habitat Conservation Plans
  
- V. Cultural Resources**
  - d. Human Remains
  
- VI. Geological Resources**
  - a(iv). Landslides
  - e. Septic Tanks
  
- VIII. Hazards and Hazardous Materials**

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<sup>2</sup> As discussed in the Initial Study, the potential exists for protected bird species to be nesting in the street trees during Project construction. In order to avoid disturbance of nesting birds, the Project will implement a standard City mitigation measure to reduce impacts to nesting birds to a less than significant level. With the implementation of Mitigation Measure BIO-MM-1, included in the Mitigation Monitoring Program provided in Section IV of the Final EIR, impacts to sensitive plant and animal species would be less than significant and no further analysis of this topic in the EIR is required.

- e. Airport Land Use Plans
- f. Private Airstrips
- h. Wildland Fires

**IX. Hydrology and Water Quality**

- b. Groundwater Supplies or Groundwater Recharge
- g. Mapped 100-Year Flood Hazard Areas
- h. 100-Year Flood Hazard
- i. Flood Risk
- j. Seiche, Tsunami or Mudflow

**X. Land Use and Planning**

- a. Divide an Established Community
- c. Habitat or Natural Community Conservation Plans

**XI. Mineral Resources**

- a. Loss of Known Mineral Resources
- b. Loss of Mineral Resources Recovery Site

**XII. Noise**

- e. Airport Land Use Plans
- f. Private Airstrips

**XIII. Population and Housing**

- b. Displacement of Existing Housing
- c. Displacement of Existing Residents

**XVI. Transportation and Traffic**

- c. Air Traffic Patterns
- d. Hazards to a Design Feature or Incompatible Uses

**VI. ENVIRONMENTAL IMPACTS FOUND NOT TO BE SIGNIFICANT PRIOR TO MITIGATION**

Impacts of the Project that were determined to be less than significant in the EIR (including having a less than significant impact as a result of implementation of project design features and regulatory compliance measures) and that require no mitigation are identified below. The City has reviewed the record and has determined that the following environmental impact categories will not result in any significant impacts and that no mitigation measures are needed, and no additional findings are needed. This information does not repeat the full discussions of environmental impacts contained in the EIR. The City ratifies, adopts, and incorporates the analysis, explanation, findings, responses to comments, and conclusions of the EIR.

**1. Aesthetics**

As described Section IV.A., *Aesthetics*, of the Draft EIR, the Project represents infill development proposed within a transit priority area and, therefore, pursuant to PRC Section 21099(d)(1) and ZI No. 2452, aesthetic impacts on the environment are not considered significant. Evaluation of the Project's physical impacts associated with aesthetics is not required in the EIR. However, the Draft EIR includes an analysis that follows the methodology guidance in the 2006 L.A. CEQA Thresholds Guide (*Thresholds Guide*) for informational purposes only.

(A) Analysis of Project Impacts

(i) Scenic Vista

As described on pages IV.A-17 through IV.A-18 of the Draft EIR, construction of the Project would not have a substantial adverse effect on a scenic vista. Furthermore, such analysis is provided for informational purposes only. The aesthetics impacts of the Project shall not be considered significant pursuant to SB 743 and ZI No. 2452.

As described on pages IV.A-19 through IV.A-34 of the Draft EIR, operation of the Project would not have a substantial adverse effect on a scenic vista across or toward the Project Site, including views of the Times, Plant and Mirror Buildings from key public view locations. Furthermore, such analysis is provided for informational purposes only. The aesthetics impacts of the Project shall not be considered significant pursuant to SB 743 and ZI No. 2452.

(ii) Scenic Resources

As described on pages IV.A-34 through IV.A-35 of the Draft EIR, construction impacts relative to scenic resources would be less than significant. Furthermore, such analysis is provided for informational purposes only. The aesthetics impacts of the Project shall not be considered significant as a matter of law pursuant to SB 743 and ZI No. 2452.

As described on pages IV.A-35 through IV.A-37 of the Draft EIR, Project operation would not damage locally recognized scenic resources, including those within a state scenic highway, and impacts would be less than significant. Specifically, as described on page IV.A-35 of the Draft EIR, the Project would restore the historical and architectural integrity of the Times Building, as well as rehabilitate the Mirror and Plant Buildings. The rehabilitation of the Times, Plant, and Mirror Buildings would not materially impair their appearance and condition, and the integrity of all three buildings would be enhanced. Such analysis is provided for informational purposes only. The aesthetics impacts of the Project shall not be considered significant as a matter of law pursuant to SB 743 and ZI No. 2452.

(iii) Visual Character and Quality

a. Construction

As described on pages IV.A-37 through IV.A-38 of the Draft EIR, the Project would result in the removal of the existing Executive Building and the parking structure, which are historic resources and, as such, may be considered to contribute to the aesthetic character under the *Thresholds Guide*. However, in accordance with SB 743 (codified in Public Resources Code Section 21099(d)(1)), impacts to aesthetics would not be considered significant, and no mitigation would be required. Per ZI No. 2452, aesthetic impacts, including impacts to visual character, as defined in the *Thresholds Guide*, shall not be considered a significant impact for a qualifying mixed-use project in a Transit Priority Area, such as the Project. Furthermore, such analysis is provided for informational purposes only. The aesthetics impacts of the Project shall not be considered significant as a matter of law pursuant to SB 743 and ZI No. 2452.

b. Operation

As described on pages IV.A-38 through IV.A-42 of the Draft EIR, the Project would not substantially degrade the existing visual character or quality of the site and its surroundings. As

described on page IV.A-41 of the Draft EIR, the rehabilitation of the Times, Mirror, and Plant Buildings would represent an aesthetic benefit since it would restore the original west wall of the Times Building (thereby upgrading its architectural integrity), restore the aging LA Times signage and clock, and restore the original finishes and features of the historical buildings. In addition, the removal of the Executive Building and parking structure would create an aesthetic benefit to another scenic resource, which would contribute to the valued visual character of the area. Therefore, visual character impacts would be less than significant. Such analysis is provided for informational purposes only. The aesthetics impacts of the Project shall not be considered significant as a matter of law pursuant to SB 743 and ZI No. 2452.

(iv) Shade/Shadow Evaluation

As described on pages IV.A-42 through IV.A-51 of the Draft, EIR, because the Project would exceed the City's shading factors during the Winter Solstice at the Federal Courthouse solar array, it would substantially degrade the existing visual character of that site. However, the shade analysis is provided for informational purposes only. The aesthetics impacts of the Project shall not be considered significant as a matter of law pursuant to SB 743 and ZI No. 2452.

(v) Light and Glare

As described on page IV.A-51 of the Draft EIR, Project construction lighting would not adversely affect day or nighttime views in the area. Furthermore, such analysis is provided for informational purposes only. The aesthetics impacts of the Project shall not be considered significant as a matter of law pursuant to SB 743 and ZI No. 2452

As described on pages IV.A-51 through IV.A-52 of the Draft EIR, the Project's brightest components, including architectural lighting and street-level commercial signage, would be consistent with Project's own residential and commercial uses and would not generate excessive lighting that would adversely affect daytime or nighttime views in the area.

As described on pages IV.A-52 through IV.A-53 of the Draft EIR, with exterior lighting directed onto the building surface or shielded, the Project would not adversely affect nighttime views in the area. Furthermore, such analysis is provided for informational purposes only. The aesthetics impacts of the Project shall not be considered significant as a matter of law pursuant to SB 743 and ZI No. 2452.

(B) Cumulative Impacts

(i) Views

As described on page IV.A-55 of the Draft EIR, the Project would not contribute to adverse cumulative view impacts. Furthermore, such analysis is provided for informational purposes only. The aesthetics impacts of the Project shall not be considered significant as a matter of law pursuant to SB 743 and ZI No. 2452.

(ii) Scenic Resources

As described on pages IV.A-55 through IV.A-56 of the Draft EIR, the Project would demolish the Executive Building and parking structure, which are historic resources and, as such, may be considered to contribute to the aesthetic character under the *Thresholds Guide*. If the related projects also result in the removal or significant alteration of scenic resources, cumulative impacts

could occur. However, in accordance with SB 743, which supersedes the *Thresholds Guide*, the Project's aesthetic impacts, including impacts on scenic resources, would not be significant and would not contribute to a cumulatively significant impact.

(iii) Visual Character and Quality

a. Visual Character

As described on pages IV.A-56 through IV.A-57 of the Draft EIR, the Project would demolish the Executive Building and parking structure, which are historic resources and, as such, may be considered to contribute to the aesthetic character under the *Thresholds Guide*. If the related projects also result in the removal or significant alteration of scenic resources, cumulative impacts could occur. However, in accordance with SB 743, which supersedes the *Thresholds Guide*, the Project's aesthetic impacts, including to visual character, would not be significant and would not contribute to a cumulatively significant impact. Therefore, the Project's impacts to visual character would not be cumulatively considerable, and cumulative visual character impacts would be less than significant.

b. Shading

As described on page IV.A-58 of the Draft EIR, the Project in combination with related projects would not cumulatively exceed the City's shade threshold at sensitive receptor locations. Furthermore, such analysis is provided for informational purposes only. The aesthetics impacts of the Project shall not be considered significant pursuant to SB 743 and ZI No. 2452

(iv) Light and Glare

As described on pages IV.A-58 through IV.A-59 of the Draft EIR, because of Downtown's high ambient light, it is anticipated that new development would not be out of character with the existing high existing light and glare environment of the Downtown to the extent that daytime and nighttime views would be adversely affected. Furthermore, such analysis is provided for informational purposes only. The aesthetics impacts of the Project shall not be considered significant pursuant to SB 743 and ZI No. 2452.

(C) Project Design Features

The City finds that Project Design Features PDF AES-1 through PDF AES-5, set forth below and incorporated into the Project, further reduce the non-significant aesthetics impacts of the Project.

**PDF-AES-1: Construction Fencing:** Temporary construction fencing will be placed along the periphery of the Project Site to screen construction activity of new buildings and any rehabilitation of exteriors of the Times, Plant, and Mirror Buildings from view at the street level. The fence will be located along all perimeters of the Project Site with a minimum height of 8 feet. The Project Applicant will ensure through appropriate postings and daily visual inspections that no unauthorized materials are posted on any temporary construction barriers or temporary pedestrian walkways that are accessible/visible to the public, and that such temporary barriers and walkways are maintained in a visually attractive manner (i.e., free of trash, graffiti, peeling postings and of uniform paint color or graphic treatment) throughout the construction period.

**PDF-AES-2: Screening of Utilities:** Mechanical, electrical, and roof top equipment (including Heating, Ventilation, and Air Conditioning [HVAC] systems), as well as building appurtenances, will be integrated into the Project's architectural design (e.g., placed behind parapet walls) and be screened from view from public rights-of-way.

**PDF-AES-3: Glare:** Glass used in building façades will be anti-reflective or treated with an anti-reflective coating in order to minimize glare (e.g., minimize the use of glass with mirror coatings). Consistent with applicable energy and building code requirements, including Section 140.3 of the California Energy Code as may be amended, glass with coatings required to meet the Energy Code requirements shall be permitted.

**PDF-AES-4: Lighting:** Construction and operational lighting, including vehicle headlights within the parking podium, will be shielded and/or directed downward (or on the specific on-site feature to be lit) in such a manner as to preclude light pollution or light trespass onto adjacent uses that would cause more than two foot-candles of lighting intensity or generate direct glare onto exterior glazed windows or glass doors of existing and anticipated future adjacent uses.

**PDF-AES-5 Screening of Loading Areas:** All commercial loading for the new development will be conducted interior to the buildings or screened from public view.

#### (D) Conclusion

The analysis in the Draft EIR with respect to views, scenic resources, visual character, shade/shadow, and light and glare is provided for informational purposes only. The impacts of the Project relative to these issue areas shall not be considered significant pursuant to SB 743 and ZI No. 2452. Therefore, potential impacts to aesthetics would be less than significant, and no mitigation measures are required.

## 2. Geology and Soils

#### (A) Analysis of Project Impacts

As described on pages IV.D-19 through IV.D-20 of the Draft EIR, the Project would not exacerbate existing environmental conditions related to fault rupture, and the impact would be less than significant.

As described on pages IV.D-20 through IV.D-23 of the Draft EIR, development of the Project would not cause or exacerbate existing seismic conditions on the Project Site, and potential impacts related to strong seismic ground shaking would be less than significant.

As described on pages IV.D-23 through IV.D-25 of the Draft EIR, development of the Project would not cause or exacerbate existing liquefaction conditions on the Project Site, and the impact would be less than significant, and development of the Project would not cause or exacerbate existing seismic-related ground failure conditions due to seepage at the Project Site and the impact would be less than significant. Development of the Project would not cause or exacerbate existing seismic-related ground failure conditions at adjacent properties, and the impact would be less than significant.

As described on page IV.D-25 of the Draft EIR, no impacts with regards to landslides caused in whole or in part by the Project's exacerbation of the existing environmental conditions would occur.

As described on pages IV.D-25 through IV.D-26 of the Draft EIR, with implementation and compliance with applicable regulatory requirements, the Project would not result in substantial erosion or the loss of topsoil. Impacts related to the erosion of topsoil would be less than significant.

As described on pages IV.D-26 through IV.D-27 of the Draft EIR, the Project would not exacerbate existing environmental conditions related to seismically-induced settlement, subsidence, or hydroconsolidation (collapse). Impacts would be less than significant.

As described on pages IV.D-27 through IV.D-28 of the Draft EIR, the Project would not exacerbate existing environmental conditions related to expansive soils, and impacts would be less than significant, and development of the Project would not cause or exacerbate existing environmental conditions related to corrosive soils at the Project Site, and impacts would be less than significant.

As described on page IV.D-28 of the Draft EIR, no impacts with regards to soils incapable of adequate supporting septic tanks or alternative waste disposal systems would occur.

As described on page IV.D-28 of the Draft EIR, the Project would not destroy, permanently cover, or materially and adversely modify distinct and prominent geologic or topographic features, and no impact related to landform alteration would occur.

#### (B) Cumulative Impacts

As described on pages IV.D-29 through IV.D-30 of the Draft EIR, the Project would not have a cumulatively considerable geology and soils impact when viewed in connection with the potential effects of the related projects. Cumulative impacts related to geology and soils would be less than significant.

#### (C) Project Design Features

The City finds that Project Design Features PDF GEO-1 and PDF GEO-2, set forth below and incorporated into the Project, further reduce the less-than-significant geology and soils impacts of the Project.

**PDF-GEO-1:** To determine if seismic upgrades are warranted for the Times and Plant Buildings, a qualified seismic engineer will prepare a Feasibility Study (Phase 1) that identifies: (1) existing structural system limitations; (2) assessment of the existing structural systems and findings regarding what upgrades would be required and renovation concepts; (3) a narrative summary and concept sketches of the various mandatory upgrade alternatives that could be implemented; and (4) identify voluntary upgrades that could be pursued to improve seismic performance.

Following Phase 1, and once a more developed concept of the existing buildings is developed, a Seismic Evaluation (Phase 2) will be prepared that provides: (1) a detailed assessment of the final programming concepts; (2) mandatory upgrade/evaluation requirements; (3) a detailed evaluation of the Times and Plant Buildings; and (3) a schematic design of the mandatory/voluntary upgrades. The schematic design of the

mandatory/voluntary upgrades will be reviewed by a qualified historic preservation consultant to support compliance with the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings, with a letter report verifying that the upgrades would comply with the Secretary of the Interior's Standards provided by the historic preservation consultant to LADBS.

Upon completion of both phases, the Applicant and seismic engineer will coordinate with LADBS to review and approve the approach, findings, and recommendations of the reports. All the above will occur prior to the issuance of building permits for the Project.

**PDF-GEO-2:** The foundations for the proposed new buildings will extend to, and shall derive support from, the underlying competent bedrock.

(D) Conclusion

The Project would not exacerbate existing environmental conditions related to geology and soils, with compliance with applicable regulatory requirements, and with implementation of the proposed Project Design Features. Impacts would be less than significant. No mitigation measures are required.

### 3. Greenhouse Gas Emissions

(A) Significance Threshold

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds. However, the SCAQMD has not adopted a GHG significance threshold for land use development projects (e.g., mixed-use/commercial projects). As described on pages IV.E-36 through IV.E-38 of the Draft EIR, in the absence of any adopted numeric threshold, the significance of the Project's greenhouse gas (GHG) emissions is evaluated qualitatively consistent with *CEQA Guidelines* Section 15064.4(b) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. The City has exercised its discretion and determined that the Project would not have a significant effect on the environment if the Project is found to be consistent with the applicable regulatory plans and policies to reduce GHG emissions, including the emissions reduction measures discussed within CARB's 2017 Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, and the City's *LA Green Plan*, and *Sustainable City pLAN*.

(B) Analysis of Project Impacts

As described on pages IV.E-39 through IV.E-88 of the Draft EIR, the Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of GHGs, and Project-specific impacts with regard to greenhouse gas emissions would be less than significant.

(C) Cumulative Impacts

As described on pages IV.E-88 through IV.E-91 of the draft EIR, given the Project's consistency with state, SCAG, and City of Los Angeles GHG emission reduction goals and objectives, the Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. In the absence of adopted standards and

established significance thresholds, and given this consistency, it is concluded that the Project's incremental contribution to greenhouse gas emissions and their effects on climate change would not be cumulatively considerable, and the Project's cumulative contribution to global climate change would be less than significant.

(D) Project Design Features

The Project would be designed to incorporate green building techniques and other sustainability features; however, there are no PDFs proposed specifically to reduce GHG emissions. The PDFs described in Sections IV.B, *Air Quality*, and IV.R, *Water Supply*, of the Draft EIR would further reduce the Project's less-than-significant impacts with respect to GHG emissions.

(E) Conclusion

The Project would result in less than significant impacts with respect to GHG emissions. Therefore, no mitigation measures are required.

**4. Hazards and Hazardous Materials**

(A) Analysis of Project Impacts

As described on page IV.F-25 of the Draft EIR, construction and operation of the Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The impact would be less than significant.

As described on pages IV.F-26 through IV.F-29 of the Draft EIR, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and impacts would be less than significant.

As described on pages IV.F-29 through IV.F-31 of the Draft EIR, with continued compliance with all applicable local, state, and federal laws and regulations relating to environmental protection and the management of hazardous materials, as well as adherence to manufacturer's instructions for safe handling and disposal of hazardous materials, potential impacts upon people, the environment, and nearby schools (including day care centers and preschools within a quarter mile of the Project Site) associated with the use, storage, and management of hazardous materials during operation of the Project would be less than significant. Based on the above, with continued compliance with existing hazardous materials regulations and adherence to manufacturer's instructions for the safe handling of such materials, the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school or expose people and the environment to hazardous materials. The impact would be less than significant.

As described on page IV.F-31 of the Draft EIR, the Project would not exacerbate existing environmental conditions related to listed hazardous materials sites, and impacts would be less than significant.

As described on pages IV.F-31 through IV.F-32 of the Draft EIR, the Project would not be located on a site which is within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and would not result in a safety hazard for people residing or working in the Project area. No impacts would occur.

As described on page IV.F-32 of the Draft EIR, the Project would not result in a safety hazard to people residing or working within two miles of a private airport, and no impact would result. No impacts with regards to safety hazards within the vicinity of a private airstrip would occur.

As described on pages IV.F-32 through IV.F-33 of the Draft EIR, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

As described on page IV.F-33 of the Draft EIR, the Project would not expose people or structures to a significant risk involving wildland fires caused in whole or in part from the Project's exacerbation of existing environmental conditions. Thus, no impacts related to wildland fires would occur.

#### (B) Cumulative Impacts

As described on pages IV.F-33 through IV.F-35 of the Draft EIR, the Project would result in less than significant hazards and hazardous materials impacts, would not add to the hazards and hazardous materials impacts of the related project, and would not contribute considerably to cumulative hazards and hazardous materials impacts. In addition, with ongoing updating of emergency and evacuation plans by the City, and with compliance by cumulative projects with the regulatory requirements specified in the Draft EIR, the cumulative impact on emergency preparedness would be less than significant.

#### (C) Project Design Features

The City finds that Project Design Feature PDF HAZ-1, set forth below and incorporated into the Project, would further reduce the less-than-significant hazards and hazardous materials impacts of the Project.

**PDF-HAZ-1:** While the Phase I/II ESA did not encounter any RECs or conditions that may warrant mitigation, in the event that unforeseen suspect impacted soils are encountered during mass excavation activities for the future subterranean parking garage, such soil will be properly profiled and managed under a conventional soil management plan to be implemented by the Project excavation contractor and environmental consultant. The plan will require removal, transport, and disposal of all impacted soils in accordance with all applicable regulatory requirements and under the oversight of all governmental agencies with jurisdiction.

#### (D) Conclusion

The Project would result in less than significant impacts with respect to hazards and hazardous materials. Therefore, no mitigation measures are required.

### 5. Hydrology and Water Quality

#### (A) Analysis of Project Impacts

As described on pages IV.G-24 through IV.G-25 of the Draft EIR, the Project would not violate any water quality standards or waste discharge requirements during construction, and impacts would be less than significant.

As described on pages IV.G-25 through IV.G-27 of the Draft EIR, the Project would not violate any water quality standards or waste discharge requirements during operation, and impacts would be less than significant.

As described on pages IV.G-27 through IV.G-28 of the Draft EIR, impacts from depletion of groundwater or interference with groundwater recharge would be less than significant.

As described on pages IV.G-28 through IV.G-29 of the Draft EIR, the Project would not permanently or substantially alter the Project Site drainage existing drainage patterns of the Project Site or area, including through alteration of the course of a stream or river, in a manner that which would result in substantial erosion or siltation on- or off-site, and impacts would be less than significant.

As described on page IV.G-29 of the Draft EIR, the Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff, in a manner that would result in flooding on- or off-site. Impacts would be less than significant.

As described on page IV.G-30 of the Draft EIR, the Project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff during construction. Impacts would be less than significant.

As described on pages IV.G-31 through IV.G-33 of the Draft EIR, the Project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff during operation. Impacts would be less than significant.

As described on pages IV.G-33 through IV.G-34 of the Draft EIR, the Project would not otherwise substantially degrade water quality, and the impact would be less than significant.

As described on page IV.G-34 of the Draft EIR, the Project would not place housing within a 100-year flood plain as mapped on federal Flood Hazard Boundary or Flood Insurance Rate Maps or other flood hazard delineation maps. Impacts would be less than significant, and no mitigation measures would be required.

As described on page IV.G-35 of the Draft EIR, the Project would not place within a 100-year<sup>3</sup> flood plain, structures which would impede or redirect flood flows. Impacts would be less than significant, and no mitigation measures would be required.

As described on page IV.G-35 of the Draft EIR, the Project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. Impacts would be less than significant, and no mitigation measures would be required.

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<sup>3</sup> Note that page IV.G-35 of the Draft EIR contains a typographical error, inadvertently referring to a “10-year” floor plain rather than a “100-year” flood plain.

As described on page IV.G-35 of the Draft EIR, the Project would not expose people or structures to inundation by seiche, tsunami, or mudflow. No impacts with regards to inundation by seiche, tsunami, or mudflow would occur, and no mitigation measures would be required.

(B) Cumulative Impacts

As described on pages IV.G-35 through IV.G-37 of the Draft EIR, regulatory measures would avoid significant impacts on drainage/flooding conditions and the quality of water reaching the public drainage system, and based on the above, cumulative hydrology (drainage) and surface water quality impacts would be less than significant.

(C) Project Design Features

No Project Design Features are specifically proposed for hydrology and water quality.

(D) Conclusion

With compliance with existing regulations, the Project would result in less than significant impacts with respect to hydrology and water quality. Therefore, no mitigation measures are required.

## 6. Land Use and Planning

(A) Analysis of Project Impacts

As described on page IV.H-24 of the Draft EIR, impacts related to physically dividing an established community would be less than significant, and no mitigation measures are required.

As described on pages IV.H-24 through IV.H-64 of the Draft EIR, the Project would not conflict with applicable City and regional land use plans and policies adopted for the purpose of avoiding or mitigating a significant environmental effect.

As described on page IV.H-64 of the Draft EIR, as discussed in the Initial Study, the Project would not conflict with the provisions of any adopted applicable conservation plan. No impact would occur, and no mitigation measures are required.

(B) Cumulative Impacts

As described on pages IV.H-64 through IV.H-67 of the Draft EIR, cumulative impacts with regard to land use consistency would be less than significant and would not be cumulatively considerable.

(C) Project Design Features

No specific Project Design Features pertaining to land use are proposed.

(D) Conclusion

With compliance with existing regulations, the Project would result in less than significant impacts with respect to land use policy and planning. Therefore, no mitigation measures would be required.

## 7. Population and Housing

### (A) Analysis of Project Impacts

As described on page IV.J-12 of the Draft EIR, Project construction would not induce substantial direct or indirect population growth, and impacts would be less than significant.

As described on pages IV.J-12 through IV.J-17 of the Draft EIR, Project operation would not directly induce substantial population growth through the Project's contribution to housing or through the Project's contribution to employment; and the Project would not induce substantial population growth indirectly through the extension of roads or other infrastructure. In each case, impacts would be less than significant.

As described on page IV.J-17 of the Draft EIR, no impacts with regards to displacing existing housing would occur.

As described on page IV.J-17 of the Draft EIR, no impacts with regards to displacing people would occur.

### (B) Cumulative Impacts

As described on pages IV.J-18 through IV.J-20 of the Draft EIR, the Project, considered together with the related projects, would not induce substantial population growth through contributions to population, housing, or employment either directly or indirectly. Therefore, cumulative impacts on population growth, housing, and employment would not be cumulatively considerable.

### (C) Project Design Features

No specific Project Design Features are proposed with regard to population and housing.

### (D) Conclusion

The Project would result in less than significant impacts with respect to population and housing. Therefore, no mitigation measures are required.

## 8. Public Services – Police Protection

Section 35 of Article XIII of the California Constitution at subdivision (a)(2) provides: "The protection of public safety is the first responsibility of local government and local officials have an obligation to give priority to the provision of adequate public safety services." Section 35 of Article XIII of the California Constitution was adopted by the voters in 1993 under Proposition 172. Proposition 172 directed the proceeds of a 0.50-percent sales tax to be expended exclusively on local public safety services. California Government Code Sections 30051-30056 provide rules to implement Proposition 172. Public safety services include fire protection. Section 30056 mandates that cities are not allowed to spend less of their own financial resources on their combined public safety services in any given year compared to the 1992-93 fiscal year. Therefore, an agency is required to use Proposition 172 to supplement its local funds used on fire protection services, as well as other public safety services. In *City of Hayward v. Board of Trustee of California State University* (2015) 242 Cal. App. 4th 833, the court found that Section 35 of Article XIII of the California Constitution requires local agencies to provide public safety services, including fire protection and police services, and that it is reasonable to conclude that the city will

comply with that provision to ensure that public safety services are provided. Although that case specifically addressed fire services, its holding also applies to other public services.

(A) Analysis of Project Impacts

(i) Construction

As described on pages IV.K-12 through IV.K-13 of the Draft EIR, impacts on police protection services during Project construction would be less than significant.

(ii) Operation

As described on pages IV.K-13 through IV.K-17 of the Draft EIR, impacts on police protection services during Project operation would be less than significant.

(B) Cumulative Impacts

As described on pages IV.K-17 through IV.K-21 of the Draft EIR, the Project would not result in a cumulatively considerable or substantial adverse physical impact associated with the provision or need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts in order to maintain acceptable service ratios, response times or other performance objectives for police protection. Project impacts would not be cumulatively considerable, and cumulative impacts would be less than significant.

(C) Project Design Features

The City finds that Project Design Features PDF POL-1 through PDF POL-3, set forth below and incorporated into the Project, further reduce the non-significant impacts to police protection services from the Project.

**PDF-POL-1: On-Site Construction Security Measures:** During construction, on-site security measures will include: an eight-foot tall construction security fence, with gated and locked entry, around the construction site during the construction period; the provision of 24-hour visible private security personnel that monitors vehicle and pedestrian access to, and patrols, the construction site; and a construction management plan to ensure that emergency service providers have adequate access to the Project Site and neighboring businesses during construction and that Project construction traffic does not interfere with emergency vehicle response. During construction activities, the Contractor will document the security measures; and the documentation will be made available to the Construction Monitor.

**PDF-POL-2: Provision of Project Diagrams to LAPD:** Once prior to the issuance of a building permit and once prior to occupancy, the Applicant will provide the LAPD Central Area Commanding Officer with a diagram of the Project Site, including access routes, gate access codes, and additional information, as required, to facilitate potential LAPD responses.

**PDF-POL-3: On-Site Operational Security Measures:** The Project will provide an extensive security program to ensure the safety of residents, employees, and other visitors to the Project Site. The Project will incorporate strategies in design and planning, as well as active security features. On-site security measures during Project operation will include:

- Installing and utilizing a 24-hour security camera network throughout the underground and above-grade parking structure; the elevators; the common and amenity spaces; the lobby areas; and the rooftop and ground level outdoor open spaces.
- Maintaining all security camera footage for at least 30 days, and providing such footage to LAPD as needed.
- Controlling access to all building elevators, residences, and resident-only common areas through an electronic key fob specific to each user.
- Training employees on appropriate security policies for the Project's buildings. Duties of the staff will include, but would not be limited to, assisting residents and visitors with site access; monitoring entrances and exits of buildings; managing and monitoring fire/life/safety systems; and monitoring the property.
- Providing a 24-hour/seven-day security program for the Paseo.
- Access to commercial uses will be unrestricted during business hours, with public access discontinued after businesses have closed.
- Secure access points will be limited and located in areas of high visibilities.
- Hallways and corridors will be straight forward with no dark corners, as possible.
- Outdoor areas will be exposed to windows and allow for natural surveillance.
- Clear transitional zones will be provided between public, semi-public and private spaces.
- Access key cards and cameras will be used.
- Interior and exterior spaces will be well lit with proper signage to direct the flow of people and decrease opportunities for crime.

(D) Conclusion

Project-related police protection impacts would be less than significant, and no mitigation measures are required.

## **9. Public Services – Fire Protection**

Section 35 of Article XIII of the California Constitution at subdivision (a)(2) provides: “The protection of public safety is the first responsibility of local government and local officials have an obligation to give priority to the provision of adequate public safety services.” Section 35 of Article XIII of the California Constitution was adopted by the voters in 1993 under Proposition 172. Proposition 172 directed the proceeds of a 0.50-percent sales tax to be expended exclusively on local public safety services. California Government Code Sections 30051-30056 provide rules to implement Proposition 172. Public safety services include fire protection. Section 30056 mandates that cities are not allowed to spend less of their own financial resources on their combined public safety services in any given year compared to the 1992-93 fiscal year. Therefore,

an agency is required to use Proposition 172 to supplement its local funds used on fire protection services, as well as other public safety services. In *City of Hayward v. Board of Trustee of California State University* (2015) 242 Cal. App. 4th 833, the court found that Section 35 of Article XIII of the California Constitution requires local agencies to provide public safety services, including fire protection and police services, and that it is reasonable to conclude that the city will comply with that provision to ensure that public safety services are provided.

(A) Analysis of Project Impacts

(i) Construction

As described on pages IV.L-16 through IV.L-18 of the Draft EIR, Project construction would not result in substantial adverse physical impacts associated with the provision of or need for new or altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives. Impacts would be less than significant.

(ii) Operation

As described on pages IV.L-18 through IV.L-20 of the Draft EIR, Project operation would not result in substantial adverse physical impacts associated with the provision of or need for new or altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives. Impacts would be less than significant.

(B) Cumulative Impacts

As described on pages IV.L-20 through IV.L-26 of the Draft EIR, the Project's impacts would not be cumulatively considerable, and cumulative impacts would be less than significant.

(C) Project Design Features

No specific Project Design Features are proposed for fire protection services.

(D) Conclusion

Project-level and cumulative impacts on fire protection would be less than significant. No mitigation measures are required.

**10. Public Services – Schools**

(A) Analysis of Project Impacts

(i) Construction

As described on pages IV.M-9 through IV.M-10 of the Draft EIR, construction impacts on schools would be less than significant.

(ii) Operation

As described on pages IV.M-10 through IV.M-15 of the Draft EIR, impacts on schools from Project

operation would be less than significant.

(B) Cumulative Impacts

As described on pages IV.M-15 through IV.M-23 of the Draft EIR, the Project would have less-than-significant impacts on the capacities of the schools that would serve it, and the Project and all cumulative projects would be subject to developer fees that would mitigate impacts on school facilities. Project impacts would not be cumulatively considerable, and cumulative impacts would be less than significant.

(C) Project Design Features

No specific Project Design Features are proposed with regard to schools.

(D) Conclusion

Potential impacts to schools as a result of Project implementation would be less than significant. No mitigation measures are required.

**11. Public Services – Parks and Recreation**

(A) Analysis of Project Impacts

(i) Construction

As described on page IV.N-11 of the Draft EIR, impacts on parks and recreational resources during construction would be less than significant.

(ii) Operation

As described on pages IV.N-11 through IV.N-18 of the Draft EIR, impacts on parks and recreational resources during operation would be less than significant.

(B) Cumulative Impacts

As described on pages IV.N-18 through IV.N-19 of the Draft EIR, cumulative impacts on parks and recreation facilities would be less than significant.

(C) Project Design Features

No specific Project Design Features are proposed with regard to parks and recreation.

(D) Conclusion

Project-level and cumulative impacts on parks and recreation would be less than significant. No mitigation measures are required.

**12. Public Services – Libraries**

(A) Analysis of Project Impacts

(i) Construction

As described on page IV.O-9 of the Draft EIR, construction impacts on library services would be less than significant.

(ii) Operation

As described on pages IV.O-10 through IV.O-12 of the Draft EIR, the Project's operational impacts to libraries would be less than significant.

(B) Cumulative Impacts

As described on pages IV.O-12 through IV.O-18 of the Draft EIR, Project impacts on libraries would not be cumulatively considerable, and cumulative impacts would be less than significant.

(C) Project Design Features

No specific Project Design Features are proposed with regard to libraries.

(D) Conclusion

Project-level and cumulative impacts to libraries would be less than significant. No mitigation measures are required.

**13. Tribal Cultural Resources**

(A) Analysis of Project Impacts

As described on pages IV.Q-10 through IV.Q-11 of the Draft EIR, the Project would not cause a substantial adverse change in the significance of a tribal cultural resource, as defined in Public Resources Code Section 21074, and impacts would be less than significant.

While no tribal cultural resources are anticipated to be affected by the Project, the City has established a standard condition of approval under its police power and land use authority to address any inadvertent discovery of a tribal cultural resource. In accordance with this condition of approval, all related activities would be conducted in accordance with regulatory requirements.

(B) Cumulative Impacts

As described on page IV.Q-11 of the Draft EIR, the Project would not contribute to cumulatively significant impacts to tribal cultural resources.

(C) Project Design Features

No specific Project Design Features are proposed with regard to tribal cultural resources.

(D) Conclusion

Project-level and cumulative impacts to tribal cultural resources would be less than significant. No mitigation measures are required.

## 14. Utilities and Service Systems – Water Supply

### (A) Analysis of Project Impacts

#### (i) Water Infrastructure

##### a. Construction

As described on page IV.R-25 of the Draft EIR, the Project would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, and the impact would be less than significant.

##### b. Operation

As described on pages IV.R-26 through IV.R-27 of the Draft EIR, Project operation would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, and the impact would be less than significant.

#### (ii) Water Supply

##### I. Construction

As described on page IV.R-28 of the Draft EIR, sufficient water supplies would be available from existing entitlements and resources for Project construction activities, and the impacts would be less than significant.

##### II. Operation

As described on pages IV.R-28 through IV.R-33 of the Draft EIR, based on the analysis contained therein, and as stated in the Water Supply Assessment (WSA), there would be sufficient domestic water supplies available to serve the Project from existing LADWP water entitlements and resources, and no new or expanded water entitlements or resources would be required. Therefore, the operational water supply impacts of the Project would be less than significant.

### (B) Cumulative Impacts

#### (i) Water Infrastructure

As described on page IV.R-33 of the Draft EIR, the Project's contribution to cumulatively significant impacts on the water infrastructure system would be less than cumulatively considerable. Cumulative impacts on water infrastructure would be less than significant.

##### a. Water Supply

As described on pages IV.R-33 through IV.R-37 of the Draft EIR, the Project would not have a cumulatively considerable impact on water supply and cumulative impacts would be less than significant.

### (C) Project Design Features

The City finds that Project Design Feature PDF-WS-1, set forth below and incorporated into the Project, would further reduce the less-than-significant water supply impacts of the Project.

**PDF-WS-1 (Water Conservation Features):** The Project shall incorporate the following specific additional water conservation features:<sup>4</sup>

- High Efficiency Toilets with flush volume of 1.0 gallons per flush or less;
- ENERGY STAR Certified Residential Clothes Washers – Front-loading with an Integrated Water Factor of 3.6 or less and capacity of 4.3 cubic feet (cu ft);
- Showerheads with a flow rate of 1.5 gpm or less;
- Domestic Water Heating System located close in proximity to point(s) of use;
- Individual Metering and billing for water use for commercial space;
- Drip/Subsurface Irrigation (Micro-Irrigation);
- Proper Hydro-zoning/Zoned Irrigation (group plants with similar water requirements together); and
- Drought Tolerant Plants – 70 percent of total landscaping.

(D) Conclusion

Project-level and cumulative impacts with respect to water supply would be less than significant. Therefore, no mitigation measures are required.

**15. Utilities and Service Systems – Wastewater**

(i) Analysis of Project Impacts

As described on page IV.S-13 of the Draft EIR, construction of the Project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, and impacts would be less than significant.

As described on page IV.S-14 of the Draft EIR, operation of the Project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, and impacts would be less than significant.

As described on pages IV.S-14 through IV.S-15 of the Draft EIR, Project construction would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, and impacts would be less than significant.

As described on pages IV.S-15 through IV.S-18 of the Draft EIR, Project operation would not require or result in the construction of new wastewater treatment facilities or expansion of existing

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<sup>4</sup> Los Angeles Department of Water and Power, Board Letter Approval for the Water Supply Assessment, August 18, 2017, page 4.

facilities, the construction of which could cause significant environmental effects.

As described on page IV.S-19 of the Draft EIR, impacts from Project construction on wastewater treatment capacity would be less than significant.

As described on page IV.S-19 of the Draft EIR, the Hyperion Water Reclamation Plant Sanitary Sewer System (Hyperion Sanitary Sewer System), the wastewater treatment provider that would serve the Project, has adequate capacity to serve the Project's operational wastewater treatment demand, in addition to its existing commitments and impacts resulting from Project operation would be less than significant.

(ii) Cumulative Impacts

As described on pages IV.S-19 through IV.S-23 of the Draft EIR, the Project, considered together with the related projects, would not exceed wastewater treatment requirements of the applicable RWQCB; require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or result in a determination by the Hyperion Sanitary Sewer System, the wastewater treatment provider that would serve the Project, that it does not have adequate capacity to serve Project and related project demand in addition to its existing commitments. Cumulative impacts would be less than significant.

(iii) Project Design Features

No specific Project Design Features are proposed with regard to wastewater.

(iv) Conclusion

Project-level and cumulative impacts with respect to wastewater would be less than significant. No mitigation measures are required.

## **16. Utilities and Service Systems – Solid Waste**

### (A) Analysis of Project Impacts

As described on pages IV.T-15 through IV.T-17 of the Draft EIR, the Project's construction-related solid waste impact would be less than significant.

As described on pages IV.T-17 through IV.T-19 of the Draft EIR, operational impacts on the ability of landfills with sufficient permitted capacity to accommodate the Project's solid waste disposal would be less than significant.

As described on pages IV.T-19 through IV.T-20 of the Draft EIR, the Project would comply with applicable federal, state, and local statutes and regulations governing solid waste, and impacts would be less than significant.

### (B) Cumulative Impacts

As described on pages IV.T-20 through IV.T-22 of the Draft EIR, cumulative construction impacts related to landfill capacity to accommodate solid waste disposal needs would be less than significant.

As described on pages IV.T-22 through IV.T-23 of the Draft EIR, cumulative operation impacts related to landfill capacity would be less than significant.

As described on pages IV.T-23 through IV.T-24 of the Draft EIR, cumulative impacts related to consistency of the Project and related projects with federal, state, and local statutes and regulations related to solid waste would be less than significant.

(C) Project Design Features

No specific Project Design Features are proposed with regard to solid waste.

(D) Conclusion

Project-level and cumulative impacts with respect to solid waste would be less than significant. No mitigation measures are required.

**17. Energy Conservation and Infrastructure**

(A) Analysis of Project Impacts

As described on pages IV.U-18 through IV.U-42 of the Draft EIR, the Project would not result in the wasteful, unnecessary or inefficient use of energy during construction or operation, and impacts would be less than significant.

As described on pages IV.U-43 through IV.U-46 of the Draft EIR, Project impacts related to energy supply or distribution infrastructure capabilities that could result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, would be less than significant during construction and operation.

(B) Cumulative Impacts

As described on pages IV.U-46 through IV.U-50 of the Draft EIR, based on the analysis provided therein, the Project would not contribute to cumulative impacts and would not result in a cumulatively considerable contribution related to the wasteful, inefficient, and unnecessary consumption of energy (i.e., electricity, natural gas, and transportation energy) during construction or operation. As such, the Project's impacts would not be cumulatively considerable; therefore, the Project would not have significant cumulative energy use impacts.

As described on pages IV.U-50 through IV.U-53 of the Draft EIR, based on the analyses provided therein, the Project would not contribute to cumulative impacts related to energy (i.e., electricity, natural gas, transportation energy) supply or distribution infrastructure capabilities that could result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. As such, the Project's impacts would not be cumulatively considerable, and its cumulative energy infrastructure impacts are concluded to be less than significant.

(C) Land Use Characteristics

As described on pages IV.U-17 through IV.U-18 of the Draft EIR, the Project would represent an urban infill development, since it would be undertaken on a currently developed site, and would be located near existing off-site commercial, residential, and retail destinations and in close

proximity to existing public transit stops, which would result in reduced vehicle trips and VMT. This would be in comparison to a business-as-usual project of similar size and land uses without close access to off-site destinations and public transit stops. As the Project comprises mixed uses including residential uses, and the Project Site is a previously developed “infill” site located within 750 feet of Metro’s Los Angeles Civic Center/Grand Park Station and directly across W. 2<sup>nd</sup> Street from Metro’s 2<sup>nd</sup> Street and Broadway Station (currently under construction), the Project meets the criteria of the City as a High Quality Transit Area (HQTA). The Project would result in a corresponding reduction in transportation-related emissions compared to a business-as-usual project that is developed at a site without existing off-site destinations and public transit stops. Additional detailed information regarding these land use characteristics are provided in Section IV. B, *Air Quality*, and Section IV.E, *Greenhouse Gas Emissions* of the Draft EIR.

#### (D) Project Design Features

The Project would include project design features designed to improve energy efficiency as set forth in Sections IV.B, *Air Quality*; Sections IV.P, *Transportation and Traffic*; and Section IV.R, *Water Supply* of the Draft EIR. These City finds that these Project Design Features, incorporated into the Project, further reduce the less-than-significant energy use and infrastructure impacts of the Project.

#### (E) Conclusion

Project-level and cumulative impacts with regard to energy use and infrastructure would be less than significant. Therefore, no mitigation measures are required.

### **VII. ENVIRONMENTAL IMPACTS FOUND TO BE LESS THAN SIGNIFICANT AFTER MITIGATION**

Certain impacts with respect to air quality, cultural resources, noise, and transportation and traffic were concluded by the Draft EIR to be less than significant with the implementation of mitigation measures described in the Final EIR. Because other impacts with respect to air quality, cultural resources, noise, and transportation and traffic were found to be significant even after mitigation, however, for organizational purposes, the entire discussion and findings with respect to those impact areas is set forth below in Section VIII., of these findings.

With respect to those impacts that were concluded by the Draft EIR to be less than significant with the implementation of mitigation measures described in the Final EIR, as more particularly described in Section VIII. below, based on that analysis and other evidence in the administrative record relating to the project, the City finds and determines that mitigation measures described in the Final EIR reduce potentially significant impacts identified for such environmental impact categories to below the level of significance. Pursuant to Public Resources Code Section 21081, the City finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid each of the applicable significant effects on the environment.

Additionally, as discussed below, the EIR determined that the Project has potentially significant environmental impacts to biological resources. The EIR identified feasible mitigation measures to avoid or substantially reduce the environmental impacts to biological resources to a level of less than significant. Based on the information and analysis set forth in the EIR, the Project would not have any significant environmental impacts in this area, as long as all identified feasible mitigation measures are incorporated into the Project. The City again ratifies, adopts, and incorporates the full analysis, explanation, findings, responses to comments, and conclusions of the EIR.

## 18. Biological Resources

### (A) Impact Summary

The Project Site is entirely developed with five buildings and a parking structure and, as such is entirely impermeable. The Project Site has been operating as an urban use for decades. At present, the adjacent street rights-of-ways (ROWS) are planted with 29 ornamental, California Sycamore trees. Of these, 26 are considered to more than 3 inches in trunk diameter. All 29 trees would remain under the Project. The Project would add an additional four California Sycamores along W. 1<sup>st</sup> Street to create a double row near the corner of W. 1<sup>st</sup> Street and S. Broadway. In addition, the Project would add 10 California Sycamores along S. Broadway Street to fill in the existing trees on S. Broadway and create a continuous line of California Sycamores along the street edge. The Project would also add three additional California Sycamores along S. Spring Street and four California Sycamores along W. 2<sup>nd</sup> Street. The Project would not remove any existing trees and would add trees and shrubs at the entrances to the Paseo and within the Paseo, which would increase ornamental plants and trees over existing conditions. Thus, the Project would not disturb any native or protected trees as defined by the Los Angeles Municipal Code (LAMC) Section 17.02 and impacts to street trees would be less than significant. In addition, the Project vicinity is highly urbanized and does not support habitat for candidate, sensitive, or special status plant species. Therefore, no impacts to candidate, sensitive, or special status plant species would occur. However, the potential exists for protected bird species to be nesting in the street trees during Project construction. In order to avoid disturbance of nesting birds a mitigation measure shall be implemented to reduce impacts to nesting birds to a less than significant level. With the implementation of Mitigation Measure BIO-MM-1, impacts to sensitive plant and animal species would be less than significant.

Furthermore, as set forth in March 2020 Responses, a search of the eBird databases indicates that there are not special-status bird species in the Project vicinity that would be likely to experience window collisions. The likelihood of encountering such special-status bird species in the highly urbanized Project area is low, as very few if any migrant passerine species are known to use the Project area as a migration corridor, and none of these species are considered candidate, sensitive, or special status species. U.S. Fish and Wildlife Service data further shows that less than one percent of bird window collisions occur at high-rises such as the Project. Impacts related to the potential fatal collisions of special-status birds with Project exteriors would be less than significant, and no mitigation measures would be required.

### (B) Project Design Features

No specific project design features are proposed with regard to biological resources.

### (C) Mitigation Measures

**BIO-MM-1:** Prior to issuance of a grading permit, the Project Applicant shall demonstrate that the following requirements have been included in the Project construction plan:

1. Any construction activities that occur during the nesting season (February 15 to August 31) shall require that all suitable habitat (i.e., street trees and shrubs) be surveyed for the presence of nesting birds by a qualified biologist, retained by the Applicant as approved by the City of Los Angeles Building and Safety, before commencement of clearing and prior to grading permit issuance. The survey shall be conducted within 72 hours prior to

the start of construction. A copy of the preconstruction survey shall be submitted to the City of Los Angeles Building and Safety.

2. If the required pre-construction survey detects any active nests, an appropriate buffer as determined by the biological monitor, shall be delineated, flagged, and avoided until the qualified biological monitor has verified that the young have fledged or the nest has otherwise become inactive.

(D) Finding: Pursuant to Public Resources Code Section 21081, the City finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid each of the applicable significant effects on the environment.

(E) Rationale for finding

In order to avoid disturbance of nesting birds a mitigation measure shall be implemented to reduce impacts to nesting birds to a less than significant level. With the implementation of Mitigation Measure BIO-MM-1, impacts to sensitive plant and animal species would be less than significant.

(F) References

Appendix A, Initial Study, of the Draft EIR.

## **VIII. ENVIRONMENTAL IMPACTS FOUND TO BE SIGNIFICANT EVEN AFTER MITIGATION**

The following impact areas were concluded by the Draft EIR to remain significant and unavoidable following implementation of all feasible mitigation measures described in the Final EIR. Consequently, in accordance with CEQA Guidelines Section 15093, a Statement of Overriding Considerations has been prepared (see Section XI of these Findings).

### 1. Air Quality

#### (A) Analysis of Project Impacts

##### (i) Consistency with Air Quality Management Plan

###### a. Construction

As described on pages IV.B-42 through IV.B-57 of the DEIR, the Project would not conflict with or obstruct the implementation of the Air Quality Management Plan (AQMP), and impacts would be less than significant. The analysis in the Draft EIR, as briefly summarized below, is organized by discussing the Project's construction and operational consistency with control strategies and growth projections.

As described on page IV.B-43 of the Draft EIR, the Project would result in a short-term and temporary significant impact with respect to regional nitrogen oxide (NO<sub>x</sub>) emissions during construction. However, the short-term and temporary impact would not conflict with the SCAQMD's long-term plans to achieve the ambient air quality standards. Compliance with the measures and requirements described on page IV.B-43 of the Draft EIR would be consistent with and meets or exceeds the AQMP requirements for control strategies intended to reduce

emissions from construction equipment and activities.

As described on pages IV.B-43 through IV.B-44 of the Draft EIR, being relatively small in number and temporary in nature, construction jobs under the Project would not conflict with the long-term employment projections upon which the AQMP is based.

b. Operations

As described on pages IV.B-44 through IV.B-49 of the Draft EIR, the Project has been designed to incorporate features to attract pedestrians and to promote non-motorized transportation modes such as walking and biking. Further, its land use characteristics (including increased density, location efficiency, increased land use diversity and mixed-uses, etc.), many of which overlap the strategies in the AQMP, have also been shown by the California Air Pollution Control Officers Association to reduce vehicle trips and vehicle miles traveled (VMT), and corresponding vehicle emissions; the Project's incorporation of these features further demonstrates its consistency with the AQMP by reducing vehicle trips, VMT and other associated emissions.

As described on pages IV.B-49 through IV.B-50 of the Draft EIR, the Project's increase in population, housing, and employment are consistent with SCAG's RTP/SCS goals and would be consistent with the growth projections for the period between 2023 and 2040 for the City as a whole (refer to Section IV.J, *Population and Housing*, of the Draft EIR). The Project would be consistent with the growth projections as contained in SCAG's RTP/SCS, which form the basis of the growth projections in the 2016 AQMP.

As described on pages IV.B-50 through IV.B-57 of the Draft EIR, and as shown in Table IV.B-5, of the Draft EIR, which evaluates the consistency of the Project with the applicable air quality goals, objectives, and policies in the Air Quality Element of the General Plan, the Project would not conflict with or be inconsistent with applicable air quality policies of the General Plan.

(ii) Consistency with Air Quality Standards

a. Construction Emissions

As described on pages IV.B-57 through IV.B-59 of the Draft EIR, the results of the criteria pollutant emissions calculations for VOC, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are presented in Table IV.B-6 of the DEIR. These calculations assume compliance with applicable dust control measures required to be implemented during each phase of construction, as required by SCAQMD Rule 403 (Control of Fugitive Dust). As shown in Table IV.B-6 of the DEIR, construction-related daily emissions would potentially exceed the SCAQMD significance threshold for NO<sub>x</sub> only. Emissions levels of VOC, CO, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> would be below the applicable significance threshold. Therefore, with respect to regional emissions from construction activities, NO<sub>x</sub> impacts would be potentially significant.

b. Operational Emissions

As described on pages IV.B-60 through IV.B-61 of the Draft EIR, the results of the criteria pollutant emission calculations for VOC, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are presented in Table IV.B-7 of the Draft EIR. The Project's operational-related daily emissions would potentially exceed the SCAQMD significance threshold for NO<sub>x</sub>. Emissions levels of VOC, CO, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>

would be below the applicable significance threshold. Therefore, with respect to regional emissions from operational activities, NO<sub>x</sub> impacts would be potentially significant.

(iii) Criteria Pollutants

a. Construction Emissions

As described on page IV.B-62 of the Draft EIR, the Project would have the potential to result in a cumulatively considerable net increase of NO<sub>x</sub> emissions, for which the Project region is in non-attainment under an applicable federal or state ambient air quality standard, and impacts would be considered potentially significant. Furthermore, the Errata clarifies MM-AQ-1 to state that construction equipment must comply with Tier 4 Final standards, as reflected in the CalEEMod worksheets of the Draft EIR. As set forth in the Draft EIR and clarified in the Errata, the use of Tier 4 Final equipment will be a requirement in the Project bid documents, and a successful bid must include proof that the equipment will comply with MM-AQ-1.

Although a mitigation measure requiring 2010 model year or newer engines is not necessary because this is already substantially required through the CARB 2008 Truck and Bus Regulation, as set forth in the Errata, the following subparagraph d. has been added to MM-AQ-1 to ensure the maximum use of 2010 model or newer engines during the concrete pouring foundation phases:

- d. All concrete trucks used during the Project's concrete pouring foundation shall have 2010 model or newer engines. Prior to issuance of a building permit, the applicant shall provide evidence (such as copies of contracts with concrete subcontractors with specifications or engine certifications) satisfactory to the Department of City Planning demonstrating compliance with this measure.

As detailed in the Errata, even with the implementation of these added measures to MM-AQ-1, Project-level and cumulative impacts related to regional NO<sub>x</sub> construction emissions would remain significant and unavoidable during the two continuous concrete pouring foundations phases, which are expected to last up to approximately two days each.

b. Operational Emissions

As described on pages IV.B-62 through IV.B-63 of the Draft EIR, as shown in Table IV.B-7, maximum daily regional NO<sub>x</sub> emissions from operation of the Project would exceed the applicable significance threshold. Therefore, operational impacts would be considered potentially significant prior to the implementation of feasible mitigation. As discussed below, impacts related to regional NO<sub>x</sub> operational emissions would be mitigated to a less than significant level.

(iv) Sensitive Receptors

a. Construction

As described on pages IV.B-63 through IV.B-68 of the Draft EIR, maximum localized construction emissions for sensitive receptors within 25 meters of the Project Site would exceed the localized significance thresholds (LSTs) for NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> based on the assumptions described in subsection IV.B.3.a(4) of the Draft EIR. Therefore, with respect to localized construction emissions, impacts to existing and future receptors would be considered potentially significant.

As described on page IV.B-69 of the Draft EIR, impacts from toxic air contaminants (TACs) during construction would be less than significant.

b. Localized Operations Impacts

As described on pages IV.B-68 through IV.B-69 of the Draft EIR, the Project's maximum localized operational emissions would not exceed the LSTs for NO<sub>x</sub> and CO, but would exceed the LSTs for PM<sub>10</sub> and PM<sub>2.5</sub>. Therefore, with respect to localized operational emissions from operational activities, PM<sub>10</sub> and PM<sub>2.5</sub> impacts would be potentially significant.

As described on pages IV.B-70 through IV.B-71 of the Draft EIR, based on the uses expected on the Project Site, potential long-term operational impacts associated with the release of TACs would be minimal, regulated, and controlled, and would not be expected to exceed the SCAQMD significance threshold. Therefore, impacts would be less than significant.

Furthermore, as set forth in March 2020 Responses, neither the SCAQMD nor the OEHHA guidance require preparation of a quantitative HRA for the Project. Nonetheless, a refined quantitative HRA was prepared to assess the Project's potential health risks due to TAC emissions during construction and operation. This refined HRA, which is attached as Appendix A to the March 2020 Responses, further demonstrates that such impacts would be less than significant, consistent with the conclusions in the Draft EIR.

As described on pages IV.B-71 through IV.B-73 of the Draft EIR, the Project would not contribute to the formation of CO hotspots, and no further CO analysis is required. The Project would result in less than significant impacts with respect to CO hotspots.

Furthermore, as set forth in March 2020 Responses, compliance with applicable regulations will limit the use of building materials with formaldehyde. With compliance with existing regulations, the Project would not result in cancer risk exposure from formaldehyde in Project building materials that would exceed the SCAQMD's significance threshold, and such impacts would be less than significant.

(B) Cumulative Impacts

(i) Project-Specific Impacts

As described on pages IV.B-73 through IV.B-75 of the Draft EIR, the Project would result in the emission of criteria pollutants for which the region is in non-attainment during both construction and operation. Based on the Project-specific level of emissions, the Project's cumulative impacts would be potentially significant for construction for regional NO<sub>x</sub> emissions even with implementation of the mitigation measures listed below. Therefore, cumulative impacts related to regional NO<sub>x</sub> construction emissions would be significant and unavoidable during the two continuous concrete pouring foundations phases, which are expected to last up to approximately two days each.

The Project's exceedance of the mass regional NO<sub>x</sub> emissions threshold from temporary construction activities (in this case just for two days during concrete pours) does not necessarily indicate that the Project will cause or contribute to the exposure of sensitive receptors to ground-level concentrations in excess of health-protective levels, and it is not reasonably feasible to correlate the Project's exceedance of the NO<sub>x</sub> significance threshold during two days of concrete

pours to ozone-related health impact.

With implementation of the mitigation measures listed below, localized emissions from construction would be reduced to below the applicable LSTs, and cumulative impacts related to localized NOx, PM10 and PM2.5 construction emissions would be mitigated to less than significant.

(ii) Consistency with Air Quality Management Plan

As described on pages IV.B-75 through IV.B-77 of the Draft EIR, as the Project would not conflict with or obstruct implementation of the 2016 AQMP and is would be consistent with the AQMP, the Project's cumulative operational impacts with respect to AQMP consistency would be less than significant.

(C) Project Design Features

**PDF-AQ-1: Green Building Features:** The Project will be designed to achieve the equivalent of the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Silver Certification level for new buildings. The Project will demonstrate compliance with the LEED Silver Certification or equivalent by providing architectural and engineering documentation, building energy modeling simulations, and other supporting evidence consistent with USGBC accepted documentation standards. Pre-construction documentation that indicates the Project is designed to achieve the number of points required for LEED Silver Certification will be provided to the City prior to building permit issuance. Post-construction documentation that indicates the Project operates within the expected parameters to achieve the number of points required for LEED Silver Certification will be provided to the City after completion of LEED Silver Certification commissioning activities.

**PDF-AQ-2: Electric Vehicle Parking Features:** The Project will designate a minimum of ten (10) percent of the Code-required on-site nonresidential parking for carpool and/or alternative-fueled vehicles. The Project will ensure that at least twenty (20) percent of the total code-required parking spaces provided for all types of parking facilities are capable of supporting future electric vehicle supply equipment (EVSE), with 5 percent of the Code-required spaces further improved with electric vehicle charging stations. Plans will indicate the proposed type and location(s) of EVSE and also include raceway method(s), wiring schematics and electrical calculations to verify that the electrical system has sufficient capacity to simultaneously charge all electric vehicles at all designated EV charging locations at their full rated amperage. Plan design will be based upon Level 2 or greater EVSE at its maximum operating capacity. Only raceways and related components are required to be installed at the time of construction. When the application of the 20 percent results in a fractional space, the Applicant will round up to the next whole number. A label stating "EV CAPABLE" will be posted in a conspicuous place at the service panel or subpanel and next to the raceway termination point.

(D) Mitigation Measures

**MM-AQ-1:** The Applicant shall implement construction equipment features for equipment operating at the Project Site. These features shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment prior

to the commencement of any construction activities. Construction features will include the following:

- a. During plan check, the Project representative shall make available to the lead agency and SCAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used during any of the construction phases. The inventory shall include the horsepower rating, engine production year, and certification of the specified Tier standard. A copy of each such unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided on-site at the time of mobilization of each applicable unit of equipment to allow the Construction Monitor to compare the on-site equipment with the inventory and certified Tier specification and operating permit. Off-road diesel-powered equipment equal to or greater than 50 horsepower that will be used during any portion of the construction activities shall meet or exceed the Tier 4 Final standards. Construction contractors supplying heavy duty diesel equipment greater than 50 horsepower shall be encouraged to apply for SCAQMD SOON funds. Information including the SCAQMD website shall be provided to each contractor which uses heavy duty diesel for on-site construction activities.
- b. Equipment such as tower cranes and signal boards shall be electric or alternative fueled (i.e., non-diesel). Pole power shall be made available for use for electric tools, equipment, lighting, etc. Construction equipment such as tower cranes and signal boards shall utilize electricity from power poles or alternative fuels (i.e., non-diesel), rather than diesel power generators and/or gasoline power generators. If stationary construction equipment, such as diesel- or gasoline-powered generators, must be operated continuously, such equipment shall be located at least 100 feet from sensitive land uses (e.g., residences, schools, childcare centers, hospitals, parks, or similar uses), whenever possible.
- c. Alternative-fueled generators shall be used when commercial models that have the power supply requirements to meet the construction needs of the Project are commercially available from local suppliers/vendors. The determination of commercial availability of such equipment will be made by the City prior to issuance of grading or building permits based on applicant-provided evidence of the availability or unavailability of alternative-fueled generators and/or evidence obtained by the City from expert sources such as construction contractors in the region.
- d. All concrete trucks used during the Project's concrete pouring foundation shall have 2010 model or newer engines. Prior to issuance of a building permit, the applicant shall provide evidence (such as copies of contracts with concrete subcontractors with specifications or engine certifications) satisfactory to the Department of City Planning demonstrating compliance with this measure.

**MM-AQ-2:** The Applicant shall implement the following measures to reduce the emissions of air pollutants generated by heavy-duty diesel-powered equipment operating at the Project Site:

- a. Contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues shall have their engines turned off after 5 minutes when not in use, to reduce vehicle emissions.

- b. All construction equipment shall be properly tuned and maintained in accordance with the manufacturer's specifications. The contractor shall keep documentation on-site demonstrating that the equipment has been maintained in accordance with the manufacturer's specifications. Tampering with construction equipment to increase horsepower or to defeat emission control devices shall be prohibited.
- c. Construction activities shall be discontinued during second-stage smog alerts. A record of any second-stage smog alerts and of discontinued construction activities as applicable shall be maintained by the Contractor on-site.

**MM-AQ-3: Landscaping Equipment:** The Project representative will require that landscaping equipment used on the Project Site be electric- or battery-powered, rather than liquid fossil-fueled or use equipment that do not require a power or fuel source. Prior to occupancy of the residential towers, the Project representative shall provide documentation to the City of the use of landscaping contractors, service providers, or maintenance crews that will use equipment that meet the specified requirements. Documentation shall be maintained for the duration of landscaping services and made available to the City upon request.

**MM-AQ-4: Restaurant Charbroiling:** The Project representative will limit the number of restaurants permitted to utilize under-fired charbroiling equipment to two restaurants or less. Restaurants with under-fired charbroiling equipment will meet applicable SCAQMD emission control requirements. Prior to occupancy of the designated commercial spaces by restaurant tenants, the Project representative shall provide documentation to the City of the number of Project Site restaurants with under-fired charbroiling equipment. Documentation shall be maintained and made available to the City upon request.

**MM-AQ-5: Emergency Generators:** The Project representative will schedule routine maintenance and testing of the emergency generators installed on the Project Site on different days. Prior to the installation of emergency generators, the Project representative shall supply documentation to the City that emergency generator testing by contractors, service providers, or maintenance crews will be conducted in accordance with the specified requirements. The Project representative shall maintain records of emergency generator testing, including testing dates, which shall be made available to the City upon request.

(E) Finding

(i) Construction

Regarding regional emissions from construction, Project-level and cumulative impacts related to regional NO<sub>x</sub> construction emissions will be significant and unavoidable following implementation of MM AQ-1 and MM AQ-2. The City finds, pursuant to Public Resources Code Section 21081(a)(3), that specific economic, legal, social, technological, or other considerations, including considerations identified in Section XI of these findings (Statement of Overriding Considerations), make infeasible additional mitigation measures or Project alternatives identified in the EIR to reduce the Project's regional NO<sub>x</sub> construction emissions to be less than significant.

Regarding localized emissions from construction, with implementation of MM AQ-1 and MM AQ-2, impacts related to localized NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> construction emissions would be mitigated

to less than significant, and, pursuant to Public Resources Code Section 21081(a)(1), the City finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the potential significant effects as identified in the EIR.

(ii) Operation

Regarding regional emissions from operations, with implementation of MM AQ-3, MM AQ-4, and MM AQ-5, impacts related to regional NO<sub>x</sub> operational emissions would be mitigated to less than significant, and, pursuant to Public Resources Code Section 21081(a)(1), the City finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the potential significant effects as identified in the EIR.

Regarding localized emissions from operations, with implementation of MM AQ-3, MM AQ-4 and MM AQ-5, impacts related to localized PM<sub>10</sub> and PM<sub>2.5</sub> operational emissions would be mitigated to less than significant, and, pursuant to Public Resources Code Section 21081(a)(1), the City finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the potential significant effects as identified in the EIR.

All other construction and operational air quality impacts would be less than significant without mitigation.

(F) Rationale for Finding

(i) Construction

Implementation of MM AQ-1 and MM AQ-2 would minimize localized NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions from all construction phases to below the localized numeric indicators. Therefore, impacts related to localized NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> construction emissions would be mitigated to less than significant.

The Project's mitigated regional and localized construction emissions are summarized in Table IV.B-11, Table IV.B-12, and Table IV.B-13 of the Draft EIR, and in Appendix A to the Errata. Implementation of MM AQ-1 and MM AQ-2 would minimize regional NO<sub>x</sub> emissions to below the SCAQMD regional significance thresholds for all phases of Project construction except for regional NO<sub>x</sub> emissions during the two continuous concrete pouring foundations phases. Because concrete trucks from a variety of area concrete suppliers would be required to deliver the volume of concrete necessary for the continuous concrete pouring foundations phases, there are no feasible mitigation measures that would reduce the NO<sub>x</sub> emissions from the concrete trucks to below the regional numeric indicator. It is not possible to reduce the number of concrete trucks needed to complete the continuous concrete pouring phase without compromising the integrity of the building foundations. Therefore, even after implementation of all feasible mitigation, including the use of Tier 4 final standards and 2010 model or newer truck engines as set for the in the Errata, impacts related to regional NO<sub>x</sub> construction emissions would remain temporarily significant during the two continuous concrete pouring foundations phases, which are expected to last up to approximately two days each. Regional construction impacts would be significant and unavoidable for NO<sub>x</sub>.

The Project's contribution to cumulatively significant construction impacts to air quality would be potentially significant for regional NO<sub>x</sub> during the approximately two continuous concrete pouring construction activities lasting up to two days each. While the Project would result in regionally significant and unavoidable NO<sub>x</sub> and ozone precursor impacts during the two continuous concrete

pouring activities lasting up to two days each, the short-term duration and limited magnitude of the impact limits the potential for exposure and health impacts to sensitive receptors and would not jeopardize long-term air quality plans to attain the health-based ambient air quality standards in the Air Basin. Ozone formation occurs through a complex photo-chemical reaction between NO<sub>x</sub> and VOCs in the atmosphere with the presence of sunlight and the impacts of ozone are typically considered on a basin-wide or regional basis. Because the concrete trucks would come from various facilities in the area and would be distributed along the roadway network, the total NO<sub>x</sub> emissions from the concrete trucks would not be concentrated at a single site. Through atmospheric and geographical dispersion, NO<sub>x</sub>-related health impacts from the short-term concrete pouring activities would not be expected to occur to a measurable degree.

With implementation of MM AQ-1 and MM AQ-2, the localized NO<sub>x</sub>, PM10 and PM2.5 emissions from construction would be reduced to below the localized numeric indicators and impacts related to localized NO<sub>x</sub>, PM10 and PM2.5 construction emissions would be mitigated to less than significant.

(ii) Operation

The Project would result in potentially significant operational impacts due to regional emissions of NO<sub>x</sub> above the regional significance threshold. In addition, the Project would result in potentially significant operational impacts due to localized emissions of PM10 and PM2.5 above the LSTs. Therefore, mitigation measures MM AQ-3, MM AQ-4 and MM AQ-5 would be required to reduce operations-related emissions. The Project's mitigated regional and localized operational emissions are summarized in Table IV.B-14 and Table IV.B-15 of the Draft EIR.

Implementation of MM AQ-3, MM AQ-4 and MM AQ-5 would reduce regional NO<sub>x</sub> emissions from operations by scheduling routine maintenance of emergency generators so that only one emergency generator is maintained on any given day. With implementation of MM AQ-3, MM AQ-4 and MM AQ-5, the regional NO<sub>x</sub> emissions from operations would be reduced to below the regional threshold, and impacts related to regional NO<sub>x</sub> operational emissions would be mitigated to less than significant.

Implementation of MM AQ-3, MM AQ-4 and MM AQ-5 would also reduce localized PM10 and PM2.5 emissions from operations of the Project by limiting the number of restaurants permitted to utilize under-fired charbroiling equipment to two restaurants or less. With implementation of MM AQ-3, MM AQ-4 and MM AQ-5, the localized PM10 and PM2.5 emissions from operations would be reduced to below the LSTs, and impacts related to localized PM10 and PM2.5 operational emissions would be mitigated to less than significant.

(G) Reference

Section IV.B, *Air Quality*, and the *Air Quality Technical Report* contained in Appendix C of the Draft EIR.

2. Cultural Resources

(A) Analysis of Project Impacts

(i) Historical Resources

As described on pages IV.C-40 through IV.C-46 of the Draft EIR, with the demolition of the

Executive Building and parking structure, the Project would cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5, as the Executive Building and the Times Mirror Square historic district would no longer be eligible for listing as historical resources in the National Register, California Register, and as a HPOZ. Therefore, this impact would be significant.

(ii) Archeological Resources

As described on pages IV.C-46 through IV.C-47 of the Draft EIR, pockets of undisturbed soil containing archaeological resources that qualify as historical resources or unique archaeological resources under CEQA could be encountered; therefore, impacts are conservatively considered to be potentially significant.

(iii) Paleontological Resources

As described on page IV.C-48 of the Draft EIR, Project implementation may impact unique paleontological resources and/or unique paleontological units. Impacts to paleontological resources are conservatively considered to be potentially significant.

(iv) Human Remains

As described on pages IV.C-48 through IV.C-49 of the Draft EIR, should human remains be encountered during Project construction, implementation of PRC Section 5097.98 and Health and Safety Code Section 7050.5 would reduce potential impact to less than significant. Therefore, the Project would have a less than significant impact with regard to disturbance of any human remains, including those interred outside of formal cemeteries.

(B) Cumulative Impacts

(i) Historical Resources

As described on pages IV.C-49 through IV.C-51 of the Draft EIR, there would be no potential for cumulative impact to historical resources in the immediate vicinity, and there are no cumulative impacts on historical resources that are examples of the same property type as those within the Project Site.

(ii) Archeological Resources

As described on page IV.C-51 of the Draft EIR, to the extent impacts on archaeological resources from related projects may occur, the Project's contribution would not be cumulatively considerable, and the cumulative impacts to archaeological resources associated with the Project would be less than significant.

(iii) Paleontological Resources

As described on pages IV.C-51 through IV.C-52 of the Draft EIR, to the extent impacts on paleontological resources from related projects may occur, the Project's contribution would not be cumulatively considerable, and cumulative impacts on paleontological resources would be less than significant.

(iv) Human Remains

As described on page IV.C-52 of the Draft EIR, because the Project is required to comply with regulatory provisions addressing the handling of human remains inadvertently uncovered during excavation activities, cumulative impacts on human remains would be less than significant.

(C) Project Design Features

**PDF-CUL-1:** The Project will prepare a Historic Structure Report (HSR) that will further document the history of the Times, Plant, and Mirror Buildings and guide their rehabilitation in compliance with the Secretary of the Interior's Standards for Rehabilitation (Standards). The HSR will be completed prior to the development of architectural or engineering plans for the rehabilitation. The HSR will be prepared based upon the National Park Service's Preservation Brief #43: The Preparation and Use of Historic Structure Reports. The HSR will provide documentary, graphic, and physical information about the existing conditions of the character-defining features and make recommendations for both changes to the buildings to suit new uses and modern amenities as well as their on-going maintenance after Project completion. The HSR will specifically address the treatment of the west elevations with regard to the demolition of the Executive Building and parking structure as well as a new design that combines the rehabilitation of the lower stories and reconstruction of the upper stories.

(D) Mitigation Measures

(i) Historical Resources

**MM-CUL-1: Historic American Building Survey (HABS):** Prior to the issuance of a demolition permit, the Applicant shall have prepared HABS Level II documentation for the Executive Building and parking structure according to the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation. The HABS report shall:

1. Be prepared by historic preservation professionals meeting the Secretary of the Interior's Professional Qualifications Standards with demonstrated experience in creating HABS Level II documentation.
2. Include photographs taken with large format (4 X 5), black and white film.
  - a. Photographs shall include a minimum of 40 views of the following:
    - i. setting of Times Mirror Square from various oblique and cardinal angles,
    - ii. exterior views of each elevation of the Executive Building and parking structure as well as an assortment of significant architectural features and details, and
    - iii. interior views of significant spaces and details.
  - b. Photographs or a high-resolution digital scan of original drawings, if available
3. Include written historical descriptive data, index to photographs, and photo key plan.

4. Include copies of historic photographs, if available.
5. Be distributed to the following repositories for use by future researchers and educators. Before submitting any documents, each repository must be contacted to ensure that they are willing and able to accept the items:
  - a. Library of Congress - One unbound archival copy including all of the above and one set of negatives.
  - b. Los Angeles Public Library - One bound archival copy including all of the above and one set of negatives.
  - c. Office of Historic Resources (OHR) - One high-quality bound copy with digitally printed photographs per HABS guidelines.

**MM-CUL-2: Secretary of the Interior's Standards for Rehabilitation:** The Times, Plant, and Mirror Buildings shall be rehabilitated in accordance with the Historic Structure Report and Secretary of the Interior's Standards for Rehabilitation. The rehabilitation plans shall be:

1. Created by a licensed architect meeting the Secretary of the Interior's Professional Qualifications Standards for historic architecture with at least five years of demonstrated experience in the rehabilitation of historic buildings.
2. Reviewed for compliance with the Standards by a historic preservation professional meeting the Secretary of the Interior's Professional Qualifications Standards for historic architecture with at least five years of demonstrated experience in applying the Standards to such projects.
  - a. Reviewer shall create a technical memorandum at each phase (schematic, design and development, and construction documents) of the architectural design process. In the event, the plans do not comply with the Standards, the memorandum shall make recommendations for changes to bring them into compliance.
  - b. Reviewer shall submit the memoranda to OHR for concurrence. Building permits may be issued after OHR has concurred the plans comply with the Standards.

Compliance with the Standards shall be disclosed in the lease agreements, agreed upon in writing, and mutually enforced by the Applicant and the City. The tenants shall not be permitted to conduct work that does not comply with the Standards.

**MM-CUL-3: Construction Monitoring (Structural):** The Project as it relates to the demolition of the Executive Building and parking structure and construction of the North and South Towers shall be monitored to minimize damage to the Times, Plant, and Mirror Buildings. The construction monitoring shall:

1. Be performed by a licensed structural engineer with at least five years of demonstrated experience in rehabilitating historic buildings of similar size.

2. Include a survey the existing foundations and other structural aspects of the Times, Plant, and Mirror Buildings to establish baseline conditions and provide a shoring design to protect the historical resources from potential damage.
  - a. Survey shall take place prior to any construction activities.
  - b. Pot holing or other destructive testing of the below grade conditions on the Project Site and immediately adjacent to the Times, Plant, and Mirror Buildings may be necessary to establish baseline conditions and prepare the shoring design.
  - c. Monitor shall submit to OHR a pre-construction survey that establishes baseline conditions to be monitored during construction, prior to issuance of any building permit for the Project.
3. Include a meeting with the Project contractor prior to the demolition of the Executive Building and parking structure to discuss minimizing collateral damage to the Times, Plant, and Mirror Buildings.

**MM-CUL-4: Construction Monitoring (Historic Architectural):** The construction of the Project as it relates to the rehabilitation of the Times, Plant, and Mirror Buildings shall be monitored for compliance with the Standards. The construction monitoring shall:

1. Be performed by a professional meeting the Secretary of the Interior's Professional Qualifications Standards for historic architecture with at least five years of demonstrated experience in rehabilitating historic buildings of similar size.
2. Be performed by the professional at regular intervals during the rehabilitation of the Times, Plant, and Mirror Buildings. The intervals shall include, but not necessarily limited to 50%, 90%, and 100% construction.
  - a. Monitor shall create a technical memorandum at each interval summarizing the findings, making recommendations as necessary to ensure compliance with the Standards, and documenting construction with digital photographs. Compliance with the Standards shall include the review specifications, tests, and mock-ups for the treatment of historic building materials.
  - b. Monitor shall submit the memoranda to OHR for concurrence. In the event OHR does not concur, all activities shall cease until compliance with the Standards is resolved and concurrence is obtained.

(ii) Archeological Resources

**MM-CUL-5: Retention of a Qualified Archaeologist:** Prior to the start of ground-disturbing activities, the Applicant shall retain a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (U.S. Department of the Interior 2008) to carry out the following measures.

**MM-CUL-6: Construction Worker Cultural Resources Sensitivity Training:** Prior to earth moving activities, the qualified archaeologist shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. The Applicant shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.

**MM-CUL-7: Inadvertent Discoveries of Archaeological Resources:** In the event of the unanticipated discovery of archaeological materials, the contractor shall immediately cease all work activities in the area (within approximately 100 feet) of the discovery until it can be evaluated by a qualified archaeologist. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone or concrete footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Construction shall not resume until the qualified archaeologist has conferred with the City on the significance of the resource.

If it is determined that the discovered archaeological resource constitutes a historical resource under CEQA, avoidance and preservation in place is the preferred manner of mitigation. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, a Cultural Resources Treatment Plan shall be prepared and implemented by a qualified archaeologist in consultation with the Applicant and the City that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource.

(iii) Paleontological Resources

**MM-CUL-8:** A Qualified Paleontologist meeting the Society of Vertebrate Paleontology (SVP) Standards<sup>5</sup> shall be retained prior to the approval of demolition or grading permits. The Qualified Paleontologist shall provide technical and compliance oversight of all work as it relates to paleontological resources, shall attend the Project kick-off meeting and Project progress meetings on a regular basis, and shall report to the site in the event potential paleontological resources are encountered.

**MM-CUL-9:** The Qualified Paleontologist shall conduct construction worker paleontological resources sensitivity training prior to the start of ground disturbing activities (including vegetation removal, pavement removal, etc.). In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the Project Site and the procedures to be followed if they are found. Documentation shall be retained demonstrating that all construction personnel attended the training.

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<sup>5</sup> Society of Vertebrate Paleontology, 2010.

**MM-CUL-10:** Full-time paleontological resources monitoring shall be conducted for all ground disturbing activities occurring in previously undisturbed sediments of older alluvium, the Fernando Formation, and the Puente Formation. The surficial alluvium, as well as any artificial fill present, has low paleontological sensitivity and so work in the upper 15 feet of the Project Site does not need to be monitored. The depth of 15 feet is derived from the records search of the Natural History Museum of Los Angeles County (LACM), which reports fossils recovered in older alluvium from depths of 20 feet in the vicinity of the Project Site.<sup>6</sup> The Qualified Paleontologist shall spot check the excavation on an intermittent basis and recommend whether the depth of required monitoring should be revised based on his/her observations. Paleontological resources monitoring shall be performed by a qualified paleontological monitor (meeting the standards of the SVP) under the supervision of the Qualified Paleontologist. Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to recover the fossil specimens. Any significant fossils collected during Project-related excavations shall be prepared to the point of identification and curated into an accredited repository with retrievable storage, such as the LACM. Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The Qualified Paleontologist shall prepare a final monitoring and mitigation report to document the results of the monitoring effort.

**MM-CUL-11:** If construction or other Project personnel discover any potential fossils during construction, regardless of the depth of work or location, work at the discovery location shall cease in a 50-foot radius of the discovery until the Project Paleontologist has assessed the discovery, conferred with the City, and made recommendations as to the appropriate treatment. If the find is deemed significant, it shall be salvaged following the standards of the SVP and curated with a certified repository.

(E) Finding

(i) Historic Resources

Regarding historic resources, impacts will be significant and unavoidable following implementation of MM-CUL-1 through MM-CUL-4. The City finds, pursuant to Public Resources Code Section 21081(a)(3), that specific economic, legal, social, technological, or other considerations, including considerations identified in Section XI of these findings (Statement of Overriding Considerations), make infeasible additional mitigation measures or Project alternatives identified in the EIR to reduce the Project's impacts to historic resources to be less than significant.

(ii) Archeological Resources

Regarding impacts to archeological resources, with implementation of Mitigation Measures MM-CUL-5 through MM-CUL-7, impacts will be less than significant, and, pursuant to Public Resources Code Section 21081(a)(1), the City finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the potential significant effects as identified in the EIR.

(iii) Paleontological Resources

Regarding impacts to paleontological resources, with implementation of Mitigation Measures MM-

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<sup>6</sup> McLeod, 2015.

CUL-8 through MM-CUL-11, impacts will be less than significant, and, pursuant to Public Resources Code Section 21081(a)(1), the City finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the potential significant effects as identified in the EIR.

(iv) Human Remains

Impacts to human remains will be less than significant with implementation of regulatory requirements, and no mitigation measures are required.

(F) Rationale for Finding

(i) Historic Resources

The Project as proposed involves three activities: demolition; rehabilitation; and new construction. The demolition of the Executive Building and parking structure would have a significant impact on the Executive Building as well as the Times Mirror Square historic district. These resources would be materially impaired by the demolition component of the Project. These resources would no longer be able to convey their significance that justified their eligibility for listing in the National and California Registers or for designation a Historic Cultural Monument (HCM) or Historic Preservation Overlay Zone (HPOZ). While Mitigation Measures MM-CUL-1 through MM-CUL-4 would be implemented, they would not reduce the impact to a level of less than significant. Therefore, demolition of these structures would result in a significant and unavoidable impact to historic resources. The Draft EIR considered both a full and a partial preservation alternative. These alternatives are rejected as infeasible for the reasons set forth below.

The demolition, rehabilitation, and new construction activities would have a less than significant impact on the Times, Plant, and Mirror Buildings because they would not be materially impaired. While the demolition and rehabilitation components of the Project would require alterations to the Times, Plant, and Mirror Buildings, they would retain sufficient integrity to convey their significance. Indeed, it is more likely that their integrity would be improved rather than diminished by the alterations. Thus, they would remain eligible for listing in the National Register, listed in the California Register, and for designation as HCMs. Nevertheless, Mitigation Measures MM-CUL-1 through MM-CUL-4, and MM-NOISE-5 and MM-NOISE-6 would be implemented to reduce potential impacts on these buildings and promote the highest level of preservation standards. In addition, the Project would incorporate PDF-CUL-1, which requires the preparation of a Historic Structure Report. With implementation of these mitigation measures, the potential impacts on the Times, Plant, and Mirror buildings from excavation and grading and the use of vibratory equipment during the construction of the new buildings would be reduced to less than significant.

The historic resources in this area include the LACCHD (which includes 18 contributors), Los Angeles City Hall, and the Higgins Building. The physical characteristics of the buildings and their settings that convey their significance would not be altered in any way by the Project. Thus, there would be no significant indirect impact on the County Law Library or the Higgins Building. There would be no significant impact on the contributing buildings or features in the LACCHD and, therefore, there would be no significant impact on the LACCHD as a whole. Given these less-than-significant impacts, no mitigation measures were recommended.

The analysis also concluded that the current undertaking would not result in a cumulatively considerable impact to historical resources that are examples of the same property type.

(ii) Archeological Resources

With implementation of Mitigation Measures MM-CUL-5 through MM-CUL-7 above, the Project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the State *CEQA Guidelines*. Implementation of the above mitigation measures provide for appropriate treatment and/or preservation of resources if encountered. Potentially significant impacts to archaeological resources would be reduced to a less-than-significant level.

(iii) Paleontological Resources

With implementation of Mitigation Measures MM-CUL-8 through MM-CUL-11 above, the Project would not cause a substantial adverse change in the significance of a paleontological resource or unique geologic features. The implementation of the above mitigation measures provides for appropriate treatment and impacts to paleontological resources would be reduced to a less-than-significant level.

(iv) Human Remains

With implementation of PRC Section 5097.98 and Health and Safety Code Section 7050.5, the Project would not cause a significant impact to human remains. No mitigation measures are required.

(G) Reference

Section IV.C, *Cultural Resources*, and Appendix D of the Draft EIR, which includes a *Historical Resources Technical Report* (Appendix D-1), an *Archaeological Resources Assessment Report* (Appendix D-2), and a *Paleontological Resources Assessment Report* (Appendix D-3) prepared for the Project.

3. Noise

(A) Analysis of Project Impacts

(i) Construction Noise

a. On-Site Construction Noise

As described on pages IV.I-31 through IV.I-36 of the Draft EIR, as shown in Table IV.I-7 of the Draft EIR, construction noise levels are estimated to reach a maximum of 90 dBA  $L_{eq}$  at the nearest sensitive receptor (at measurement location R1, The Federal Courthouse). This would exceed the 70.4 dBA  $L_{eq}$  significance threshold at R1 (lowest hourly  $L_{eq}$  daytime ambient noise level of 65.4 dBA  $L_{eq}$  at R1 in Table IV.I-4 plus 5 dBA). Sensitive receptor locations R3, R4, R5, and R6 would be exposed to construction noise levels which would exceed the daytime significance thresholds of 77.8 dBA  $L_{eq}$  at R3, 73.5 dBA  $L_{eq}$  at R4, 70.0 dBA  $L_{eq}$  at R5, and 71.3 dBA  $L_{eq}$  at R6.

Construction noise during the foundation/continuous concrete phase is included in the construction noise levels shown in Table IV.I-7 of the Draft EIR and detailed in Appendix I to the Draft EIR. The concrete pour activities on-site would last up to two days each for the two continuous concrete pouring foundation phases, which would need to extend beyond daytime

hours (one nighttime and early morning period each) due to the need for concrete pours to be continuous (for example, up to 18 hours). For the construction calculations used in Table IV.I-7 and detailed in Appendix I, nighttime construction noise levels during the on-site foundation concrete pours would be 78 dBA  $L_{eq}$  at R1, 74 dBA  $L_{eq}$  at R3, 68 dBA  $L_{eq}$  at R4, 64 dBA  $L_{eq}$  at R5, and 62 dBA  $L_{eq}$  at R6. These noise levels would exceed the respective significance threshold of 65.4 dBA at R1, 67.7 dBA  $L_{eq}$  at R4, and 59.1 dBA  $L_{eq}$  at R6; however, they would not exceed the 68.4 dBA  $L_{eq}$  threshold at R5.

As such, the Project would have a potentially significant construction noise impact on the nearby sensitive receptors. Impacts at all other sensitive receptor locations would be less than significant.

In addition, as described on pages IV.I-35 through IV.I-36 of the Draft EIR, with respect to Related Project No. 110, this future mixed-use residential development would not be occupied by residents during construction of the Project, and as such, there would no impacts to these future residents from construction-related noise from the Project.

#### b. Off-Site Construction Noise

As described on pages IV.I-36 through IV.I-37 of the Draft EIR, as shown in Table IV.I-8 of the Draft EIR, the Project's truck trips and worker trips would generate maximum noise levels of approximately 68.8 dBA  $L_{eq}$  along W. 2<sup>nd</sup> Street.

As shown in Table IV.I-8 of the Draft EIR, off-site construction traffic noise levels generated by construction worker and truck trips would not exceed the daytime significance thresholds along the truck routes, but would exceed the applicable nighttime significance thresholds along the truck route on S. Broadway, Los Angeles Street, and W. 2<sup>nd</sup> Street. Therefore, off-site construction traffic noise impacts would be significant during nighttime hours.

#### (ii) Operational Noise

##### a. Impacts Under Existing Traffic Baseline Conditions

As described on pages IV.I-37 through IV.I-41 of the Draft EIR, operation of the Project would not result in off-site traffic-related noise impacts in excess of City standards and impacts would be less than significant.

##### b. Impacts Under Future (2023) Traffic Conditions

As described on pages IV.I-41 through IV.I-44 of the Draft EIR, the Project-related noise increases would be less than the threshold established by the City; therefore, impacts would be less than significant.

##### c. Open Space

As described on pages IV.I-45 through IV.I-47 of the Draft EIR, open space noise impacts would be less than significant.

##### d. Fixed Mechanical Equipment

As described on pages IV.I-47 through IV.I-48 of the Draft EIR, impacts from fixed mechanical

equipment noise would be less than significant.

e. Refuse Collection Areas

As described on page IV.I-48 of the Draft EIR, impacts from refuse collection area noise would be less than significant.

f. Loading Dock Areas

As described on pages IV.I-48 through IV.I-49 of the Draft EIR, because the loading area noise would not increase ambient noise levels at the nearest noise sensitive receptor location (R1) by 5 dBA, impacts would be less than significant.

g. Emergency Generator

As described on pages IV.I-49 through IV.I-50 of the Draft EIR, impacts from the emergency generator noise would be less than significant.

h. Parking Structure

As described on pages IV.I-50 through IV.I-51 of the Draft EIR, impacts from parking structure noise would be less than significant.

i. Composite Noise Level Impacts from Project Operations

As described on pages IV.I-51 through IV.I-53 of the Draft EIR, as shown in Table IV.I-11 of the Draft EIR, the Project's operational composite noise would be less than significant.

j. Conclusion Regarding Operational Noise

Operational off-site traffic noise and on-site composite operational noise would be less than significant.

(iii) Site Compatibility (Proposed On-Site Noise-Sensitive Uses)

As described on pages IV.I-53 through IV.I-54 of the Draft EIR, the Project would locate new noise-sensitive uses on the Project Site in an existing urban setting, which may subject future residents of the Project to typical types of urban noise sources, such as traffic noise. In accordance with the City's Building Code, the Project would be required to include noise insulation features for multi-family buildings in the design of the residential buildings, such as insulated windows and doors, in order to achieve the interior noise limits of 45 dBA CNEL. The Project would be required to comply with these regulations; therefore, impacts would be less than significant.

(iv) Construction Vibration

a. Structural Damage

As described on pages IV.I-54 through IV.I-57 of the Draft EIR, Table IV.I-13 of the Draft EIR provides the estimated vibration levels at the Times, Plant, and Mirror Buildings, and the Federal Courthouse.

As shown in Table IV.I-13, structural damage vibration impacts to the Times, Plant, and Mirror Buildings would be potentially significant. The potential vibration impacts for structural damage at offsite buildings would be less than significant. The potential vibration impacts for building damage due to off-site haul trucks would be less than significant.

b. Human Annoyance

As described on pages IV.I-57 through IV.I-59 of the Draft EIR, vibration impacts related to human annoyance due to on-site construction would be less than significant.

In addition, even though haul trucks would pass vibration sensitive receptors along the haul routes for only a few seconds, groundborne noise impacts on sensitive receptors for human annoyance along the haul routes could be conservatively considered to be significant.

In addition, as discussed previously, based on available information, the Future Mixed-Use Residential Development planned for future construction over the future Metro Station at the corner of 2<sup>nd</sup> Street and Broadway, approximately 50 feet southwest of the Project Site, is not expected to be in operation and occupied during construction of the Project. As such, there would be no impacts to these future residents from construction-related vibration from the Project.

c. Conclusion Regarding Construction Vibration

Therefore, as described on pages IV.I-59 through IV.I-60 of the Draft EIR, and as summarized above, the Project would result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels with respect to construction-related potential structural damage impacts to the on-site Times, Plant, and Mirror Buildings and human annoyance impacts from off-site truck traffic.

(v) Operational Vibration

As described on pages IV.I-59 through IV.I-60 of the Draft EIR, vibration impacts associated with operation of the Project would be below the significance threshold and impacts would be less than significant.

Project operation would not generate excessive vibration levels at sensitive receptor locations. Thus, operational impacts would be less than significant.

(vi) Substantial Increase in Ambient Noise

As described on page IV.I-60 of the Draft EIR, operational off-site traffic noise and on-site composite operational noise would be less than significant.

As described on pages IV.I-60 through IV.I-61 of the Draft EIR, Project construction would result in substantial temporary or periodic increase in ambient noise levels in the Project vicinity above existing levels existing without the incorporate of mitigation.

(vii) Airport Use

As described on pages IV.I-61 through IV.I-62 of the Draft EIR, the Project would not expose people in the Project vicinity to excessive noise levels from airport use. No impact would occur, and no mitigation measures are required.

(B) Cumulative Impacts

(i) Construction

As described on pages IV.I-62 through IV.I-63 of the Draft EIR, cumulative construction noise impacts from on-site construction activities are conservatively considered to be significant.

As described on pages IV.I-63 through IV.I-66 of the Draft EIR, should Related Project No. 110 be constructed concurrently with the Project, cumulative noise due to construction truck traffic from the Project and other nearby related projects noted in this section has the potential to exceed the ambient noise levels along S. Los Angeles Street by 5 dBA. As such, cumulative daytime noise impacts from off-site construction are conservatively considered to be significant.

As described on page IV.I-66 of the Draft EIR, off-site construction noise impacts during the nighttime would be cumulatively considerable and cumulative off-site construction nighttime noise impacts would be cumulatively significant.

(ii) Operations

As described on pages IV.I-66 through IV.I-70 of the Draft EIR, the Project's contribution to off-site traffic-related noise would not be cumulatively considerable and impacts would be less than significant.

In addition, as described on page IV.I-70 of the Draft EIR, cumulative stationary source noise impacts would be less than cumulatively significant.

(iii) Groundborne Vibration

As described on pages IV.I-70 through IV.I-71 of the Draft EIR, during construction potential cumulative groundborne noise impacts for human annoyance would be cumulatively significant.

As described on page IV.I-71 of the Draft EIR, cumulative vibration impacts for structural damage would not occur.

(C) Project Design Features

**PDF NOISE-1:** The Project will not require or allow blasting, involving the use of explosives, during construction activities.

**PDF NOISE-2:** Where power poles are available, electricity from power poles and/or solar-powered generators rather than temporary diesel or gasoline generators shall be used during construction.

**PDF NOISE-3:** The Project will not require or allow operation of any amplified sound system in the outdoor plaza areas, including the residential and office terraces, outdoor dining areas, and paseo.

**PDF NOISE-4:** The Project will limit the maximum occupancy of the Office Terrace to 150 people and the Residential Terrace to 200 people at any one time. A sign will be posted at the main entrances to these areas of the occupancy limit.

**PDF NOISE-5:** Emergency generators would be designed to meet the requirements of LAMC Chapter XI, Section 112.02. Section 112.02 of the LAMC requires that any mechanical system within any zone of the City not cause an increase in ambient noise levels on any other occupied property or if a condominium, apartment house, duplex, or attached business, within any adjoining unit to exceed the ambient noise level by more than 5 dBA.

(D) Mitigation Measures

(i) Construction

**MM-NOISE-1:** The Project shall provide a temporary 10-foot-tall construction fence equipped with noise reduction materials such as noise blankets rated to achieve sound level reductions of at least 5 dBA between the Project Site and the sensitive receptor locations R1 and R3 through R6.<sup>7</sup> Temporary noise barriers shall be used to block the line-of-sight between the construction equipment and the noise-sensitive receptor during early Project construction phases (up to the start of framing) when the use of heavy equipment is prevalent. The noise barrier shall have a minimum sound transmission class (STC) of 25 and noise reduction coefficient (NRC) of 0.75.<sup>8, 9</sup> At Plan Check, building plans shall include documentation prepared by a noise consultant verifying compliance with this measure.

**MM-NOISE-2:** Contractors shall ensure that all construction equipment, fixed or mobile, are equipped with properly operating and maintained noise shielding and muffling devices, consistent with manufacturers' standards. Construction contractor shall keep documentation on-site demonstrating that the equipment has been maintained in accordance with the manufacturers' specifications. Contractor shall also keep documentation on-site prepared by a noise consultant verifying compliance with this measure.

**MM-NOISE-3:** In order to reduce high noise levels at the Federal Courthouse located at 350 W. 1<sup>st</sup> St, Los Angeles, across S. Broadway from the Project Site, construction activities shall be scheduled to avoid operating several pieces of Heavy-Duty Equipment simultaneously. Heavy-Duty Equipment subject to the restrictions provided herein applies to all equipment generating noise levels of greater than 75 dBA  $L_{eq}$  as measured at 50 feet from the source. The restrictions for Heavy-Duty Equipment on the Project Site during construction include:

- A maximum of two (2) pieces of Heavy-Duty Equipment within 100 feet from the Courthouse;
- A maximum of four (4) pieces of Heavy-Duty Equipment between 100 feet and 150 feet from the Courthouse; and,

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<sup>7</sup> R1: Federal Courthouse, R3: First and Broadway Civic Center Park and Los Angeles County Law Library, R4: City Hall Park, R5: One-acre park south of the LAPD Headquarters Building and Higgins Building Lofts apartment complex, R6: Kawada Hotel.

<sup>8</sup> Sound Transmission Class (STC) is an integer rating of how well a wall attenuates airborne sound and Noise Reduction Coefficient (NRC) is a scalar representation of the amount of sound energy absorbed upon striking a wall.

<sup>9</sup> M. David Egan, Architectural Acoustics, Chapter 2 and Chapter 4.

- A maximum of six (6) pieces of Heavy-Duty Equipment 150 feet or more from the Courthouse.

**MM-NOISE-4:** In order to reduce high noise levels at the Federal Courthouse across S. Broadway from the operation of a vibratory pile driver, the Project shall provide a temporary pile driver enclosure equipped with noise blankets rated to achieve sound level reductions of at least 10 dBA between the Project Site and the Federal Courthouse. The temporary noise barrier shall be used to block the line-of-sight between the construction equipment and the Federal Courthouse during the operation of vibratory pile driver. The noise barrier shall have a minimum sound transmission class (STC) of 25 and noise reduction coefficient (NRC) of 0.75.<sup>10</sup> Contractor shall keep documentation on-site prepared by a noise consultant verifying compliance with this measure.

**MM-NOISE-5:** The operation of a vibratory pile driver shall be prohibited within 60 feet of the Times Building, the Plant Building, and the Mirror Building and within 160 feet of the Federal Courthouse building. Instead, a drill rig shall be used within these areas.

**MM-NOISE-6:** To avoid or minimize potential construction vibration damage to structures and finish materials on the Times Building, the Plant Building, and the Mirror Building, the condition of structures and finish materials shall be documented by a qualified preservation consultant, prior to initiation of construction. Prior to construction, the Applicant shall retain the services of a qualified acoustical engineer to review the proposed construction equipment and develop and implement a vibration monitoring program capable of documenting the construction-related ground vibration levels at the Times, Plant, and Mirror Buildings. During construction, the contractor shall install and maintain at least one continuously operational automated vibrational monitor on the Times Building, the Plant Building, and the Mirror Building. The monitor(s) shall be capable of being programmed with two predetermined vibratory velocities levels: a first-level alarm equivalent to a 0.45 inches per second PPV at the face of the building and a regulatory alarm level equivalent to 0.5 inches per second at the face of the building. The monitoring system shall produce real-time specific alarms (for example, via text message and/or email to on-site personnel) when velocities exceed either of the predetermined levels.

In the event of a first-level alarm, feasible steps to reduce vibratory levels shall be undertaken, including but not limited to halting/staggering concurrent activities and utilizing lower-vibratory techniques. In the event of an exceedance of the regulatory level, work in the vicinity shall be halted and the Times Building, the Plant Building, and the Mirror Building visually inspected for damage. Results of the inspection shall be logged. In the event damage occurs to finish materials due to construction vibration, such materials shall be repaired in consultation with a qualified preservation consultant, and if warranted, in a manner that meets the Secretary of the Interior's Standards.

(ii) Operation

As discussed above, the Project would result in less-than-significant impacts associated with operational noise. Therefore, no operational noise mitigation measure would be required.

As discussed above, the Project would not result in significant impacts associated with operational

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<sup>10</sup> M. David Egan, Architectural Acoustics, Chapter 2 and Chapter 4.

vibration. Therefore, no operational vibration mitigation measures would be required.

(E) Finding

(i) Construction Noise

Regarding Project-level and cumulative on-site construction noise, impacts will be significant and unavoidable following implementation of MM-NOISE-1 through MM-NOISE-4. The City finds, pursuant to Public Resources Code Section 21081(a)(3), that specific economic, legal, social, technological, or other considerations, including considerations identified in Section XI of these findings (Statement of Overriding Considerations), make infeasible additional mitigation measures or Project alternatives identified in the EIR to reduce the Project's on-site construction noise impacts to be less than significant.

Regarding Project-level and cumulative off-site construction noise, impacts will be significant and unavoidable. The City finds, pursuant to Public Resources Code Section 21081(a)(3), that specific economic, legal, social, technological, or other considerations, including considerations identified in Section XI of these findings (Statement of Overriding Considerations), make infeasible additional mitigation measures or Project alternatives identified in the EIR to reduce the Project's off-site construction noise impacts to be less than significant.

(ii) Construction Vibration

Regarding Project-level and cumulative on-site construction vibration impacts with respect to structural damage, with implementation of MM-NOISE-6, impacts will be less than significant, and, pursuant to Public Resources Code Section 21081(a)(1), the City finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the potential significant effects as identified in the EIR.

Regarding Project-level and cumulative off-site construction vibration impacts with respect to structural damage, impacts would be less than significant without mitigation.

Regarding Project-level and cumulative on-site construction vibration impacts with respect to human annoyance, impacts would be less than significant without mitigation. Implementation of MM-NOISE 5 would further reduce the already less-than-significant impacts.

Regarding Project-level and cumulative off-site construction vibration impacts with respect to human annoyance, impacts would be significant and unavoidable. The City finds, pursuant to Public Resources Code Section 21081(a)(3), that specific economic, legal, social, technological, or other considerations, including considerations identified in Section XI of these findings (Statement of Overriding Considerations), make infeasible additional mitigation measures or Project alternatives identified in the EIR to reduce the Project-level and cumulative off-site construction vibration impacts with respect to human annoyance to be less than significant.

(iii) Operational Noise and Vibration

Regarding Project-level and cumulative on- and off-site operational noise and vibration impacts, impacts would be less than significant without mitigation.

(F) Rationale for Finding

(i) Construction Noise

As shown in Table IV.I-17 of the Draft EIR, implementation of MM-NOISE-1 would reduce daytime construction and nighttime off-hours concrete pour noise levels at least 5 dBA at the nearby noise sensitive receptor locations at R1 and R3 through R6. However, the Federal Courthouse located at 350 W 1<sup>st</sup> St, Los Angeles is taller than the prescribed noise barrier. Therefore, upper levels of the Federal Courthouse building would not have any noise reduction by MM-NOISE-1. In order to be effective, the temporary noise barrier would need to be as high as the Courthouse, which would not be feasible. Implementation of MM-NOISE-2 requires that construction equipment be equipped with noise mufflers. Absorptive mufflers are generally considered commercially available, state-of-the-art noise reduction for heavy-duty equipment. Implementation of MM-NOISE-3 would reduce construction noise levels at least 5 dBA at the Federal Courthouse (see Appendix I, Noise and Vibration Technical Report). Implementation of MM-NOISE-4 would reduce the operation of vibratory pile driver noise levels at least 10 dBA at the Federal Courthouse (location R1) and R3 through R6. However, the noise levels during construction would exceed the applicable noise standards. Therefore, construction of the Project would result in the on-site generation of construction noise levels in excess of standards established by the City, and these impacts would be significant with mitigation incorporated. Implementation of MM-NOISE-1, MM-NOISE-2, MM-NOISE-3, and MM-NOISE-4 would not reduce temporary or periodic increases in ambient noise levels in the Project vicinity above levels existing without the Project to below the significance thresholds established by the City and these temporary impacts would be significant and unavoidable.

A commenter to the Draft EIR proposed to delay construction of the Project until after completion of the 222 W. 2<sup>nd</sup> Street project, Related Project No. 110, to avoid cumulative impacts from on-site construction noise. As set forth in Response to Comment No. 9-5 of the Final EIR, this measure is rejected as infeasible in that (a) the City does not have the ability or legal authority to require a project applicant to wait a potentially indefinite period of time before applying for ministerial permits, (b) the suggested measure may not be legally feasible under the provisions of the Housing Accountability Act, which precludes the City from placing artificial barriers to the construction of housing, (c) it would conflict with the Project objective to rehabilitate and modernize the Times, Mirror, and Plant Buildings to reduce vacant office space through the rehabilitation of existing offices and creation of employee amenities to generate jobs, (d) delaying construction on the Project to avoid a temporary cumulative construction impacts with the 222 W. 2<sup>nd</sup> Street project could result in cumulative impacts with other projects in the vicinity, (e) delaying the Project could result in greater construction and operational traffic and mobile noise impacts as traffic conditions are expected to worsen over time due to traffic from the related projects and ambient growth, and (f) delaying the project could result in expiration of the approvals and prevent development of the Project.

Further, Public Resources Code Section 21081(a)(3) provides that the City can find that specific economic, legal, social, technological, or other considerations make certain mitigation measures infeasible. CEQA Guidelines Section 15021(d) provides that when considering how a project is approved, the City "has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian." Delaying the Project would delay the provision

of needed housing, which is a specific economic and social factor that justifies the City's rejection of the suggested measure.

There are no feasible mitigation measures to reduce the Project's noise impacts due to off-site truck trips during the nighttime along the truck routes. There are no feasible mitigation measures to reduce the Project's cumulative noise impacts due to off-site truck trips during the daytime or nighttime along the truck routes in the event of concurrent construction and use of the same streets as haul routes. Therefore, temporary off-site Project construction noise impacts during the nighttime would be significant and unavoidable. Temporary off-site cumulative construction noise impacts during the daytime and nighttime would be significant and unavoidable.

(ii) Construction Vibration

With respect to vibration, implementation of MM-NOISE-5 would reduce vibration velocities at the Federal Courthouse to 69 VdB at 100 feet with the use of a drill rig instead of a vibratory pile driver, which would be below the threshold levels for human annoyance. With the implementation of MM-NOISE-6 for structural damage on the on-site buildings, vibration velocities in excess of the threshold would transmit an alarm to on-site personnel with authorization to halt work in the vicinity. Furthermore, in the event damage occurs to structures and finish materials of the on-site buildings due to construction vibration, such materials would be repaired in consultation with a qualified preservation consultant in a manner that meets the Secretary of the Interior's Standards. Thus, vibration impacts on human annoyance at the Federal Courthouse and on structural damage to the on-site buildings would be mitigated to less than significant.

There are no feasible mitigation measures for groundborne noise impacts due to off-site truck trips along the truck routes when trucks travel rough roads or uneven road surfaces. Conventional mitigation measures, such as construction of noise barrier walls to reduce the off-site construction noise impacts, would not be feasible as the barriers would obstruct access to the properties. Therefore, temporary groundborne noise impacts on human annoyance would be significant and unavoidable.

(iii) Operational Noise

Project-level and cumulative impacts with regard to on-site and off-site operational noise and vibration would be less than significant without mitigation.

(G) Reference

Section IV.I, *Noise*, of the Draft EIR, and the *Times Mirror Square Project Noise and Vibration Technical Report* contained in Appendix I of the Draft EIR.

4. Transportation and Traffic

(A) Analysis of Project Impacts

(i) Construction

As described on pages IV.P-37 through IV.P-48 of the Draft EIR, Project construction would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system,

including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

(ii) Operations Intersections Levels of Service

As described on pages IV.P-48 through IV.P-56 of the Draft EIR, the Project would result in less than significant impacts with respect to highways and freeways, pedestrian and bicycle paths, and mass transit. However, Project operation would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. Impacts would be significant.

The City has established and historically utilized the Critical Movement Analysis (CMA) methodology, which assesses traffic impacts based on changes in volume to capacity ratios and levels of service (LOS). The Project traffic analysis appropriately used this established methodology. The Draft EIR found that the Project would have significant impacts at six intersections. This finding was based on LADOT's impact criteria for level of service. Level of service is a measure of the operating condition of an intersection and also inherently reflects queuing in that there are greater levels of queuing at worse levels of service.

a. Existing with Project Intersection Service Levels

As described on pages IV.P-50 through IV.P-52 of the Draft EIR, after applying the applicable LADOT significant impact criteria, the Project would result in a significant impact under Existing with Project conditions at one study intersection, when compared to Existing Conditions:

11. S. Broadway & W. 2<sup>nd</sup> Street (AM & PM peak hours)

b. Future with Project Traffic Conditions

As described on pages IV.P-53 through IV.P-55 of the Draft EIR, After applying the LADOT significant impact criteria, the Project would result in a significant intersection capacity impact under Future with Project conditions at six study intersections, when compared to Future Base conditions:

- 1. S. Figueroa Street & W. 2<sup>nd</sup> Street (PM peak hour)
- 5. Hill Street & W. 1<sup>st</sup> Street (AM peak hour)
- 10. Broadway & W. 1<sup>st</sup> Street (both peak hours)
- 11. S. Broadway & W. 2<sup>nd</sup> Street (both peak hours)
- 12. S. Broadway & W. 3<sup>rd</sup> Street (AM peak hour)
- 17. S. Spring Street & W. 2<sup>nd</sup> Street (AM peak hour)

(iii) Vehicle and Bicycle Parking

As described on page IV.P-56 of the Draft EIR, the Project would provide 1,744 vehicle and 1,274 bicycle parking spaces, which exceeds LAMC requirements and would not result in significant environmental effects related to parking. Therefore, parking impacts would be less than significant. In addition, pursuant to PRC Section 21099 and ZI File No. 2452, parking impacts would not be considered significant.

(iv) Congestion Management Program

a. Arterial Monitoring Stations

As described on pages IV.P-56 through IV.P-57 of the Draft EIR, the Project would result in a less-than-significant impact to CMP arterial monitoring stations.

b. Freeway Monitoring Stations

As described on page IV.P-57 of the Draft EIR, the Project would result in a less-than-significant impact to CMP freeway monitoring stations.

c. Caltrans Freeways and Ramp Queues

As described on page IV.P-57 of the Draft EIR, the Project would result in a less-than-significant impact to Caltrans freeway operations and ramp queues, and would not conflict with applicable congestion management program, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

(v) Air Traffic Patterns (Threshold c))

As described on page IV.P-58 of the Draft EIR, the Project would have no impact with respect to Threshold c).

(vi) Hazards / Access and Circulation

As described on pages IV.P-58 through IV.P-60 of the Draft EIR, the Project would result in a less-than-significant impact with respect to access and circulation, and would not substantially increase hazards due to a design feature or incompatible uses.

(vii) Emergency Access

As described on page IV.P-60 of the Draft EIR, emergency access impacts during construction would be less than significant.

As described on page IV.P-61 of the Draft EIR, emergency access impacts during operation would be less than significant.

(viii) Public Transit, Bicycle, or Pedestrian Facilities

As described on pages IV.P-61 through IV.P-63 of the Draft EIR, the Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities, and impacts would be less than significant.

(B) Cumulative Impacts

(i) Construction

As described on pages IV.P-63 through IV.P-64 of the Draft EIR, Project-related contributions to

cumulative construction traffic impacts would be less than cumulatively considerable.

(ii) Operation

As described on page IV.P-64 of the Draft EIR, as indicated in the discussion of Threshold a), under Future with Project Conditions, the Project would result in a potentially significant intersection capacity impacts at six study intersections (Intersection Nos. 1, 5, 10, 11, 12, and 17) during the AM and/or PM peak hours.

As described on page IV.P-64 of the Draft EIR, as detailed in the approved MOU provided in Appendix L-1 to the Draft EIR, the Project-related traffic increases on the freeway segments and off-ramps do not meet the screening criteria, and cumulative impacts would be less than significant.

As described on page IV.P-65 of the Draft EIR, cumulative impacts on public transit would be less than significant; the Project would not contribute to a significant cumulative impact with regard to access; and given that parking impacts are not considered significant under SB 743 and ZI File No. 2452, there would not be a cumulatively considerable impact from the Project and related projects regarding parking impacts.

(C) Project Design Features

**PDF-TRAF-1: Construction Traffic Management Plan:** Prior to the issuance of a building permit for the Project, a detailed Construction Management Plan including street closure information, a detour plan, haul routes, and a staging plan, will be prepared and submitted to the City for review and approval. The Construction Management Plan will formalize how construction would be carried out and identify specific actions that will be required to reduce effects on the surrounding community. The Construction Management Plan will be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site. Construction management meetings with City Staff and other surrounding construction related project representatives (i.e., construction contractors) whose projects will potentially be under construction at around the same time as the Project will be conducted bimonthly, or as otherwise determined appropriate by City Staff. This coordination will ensure construction activities of the concurrent related projects and associated hauling activities are managed in collaboration with one another and the Project. The Construction Management Plan will include, but not be limited to, the following elements as appropriate:

- Provide off-site truck staging in a legal area furnished by the construction truck contractor. Anticipated truck access to the Project Site will be off Broadway and 2<sup>nd</sup> Street.
- Schedule deliveries and pick-ups of construction materials during non-peak travel periods to the extent possible and coordinate to reduce the potential of trucks waiting to load or unload for protracted periods.
- As parking lane and/or sidewalk closures are anticipated, worksite traffic control plan(s), approved by the City of Los Angeles, will be implemented to route vehicular traffic, bicyclists, and pedestrians around any such closures.

- Provide for safety precautions for pedestrians and bicyclists through such measures as alternative routing and protection barriers, as required.
- Establish requirements for loading/unloading and storage of materials on the Project Site, where parking spaces would be encumbered, length of time traffic travel lanes can be encumbered, sidewalk closings or pedestrian diversions to ensure the safety of the pedestrian and access to local businesses and residences.
- Ensure that access will remain unobstructed for land uses in proximity to the Project Site during project construction.
- Coordinate with the City and emergency service providers to ensure adequate access is maintained to the Project Site and neighboring businesses and residences.
- Coordinate with affected transit providers (Metro, LADOT Dash, Montebello) to temporarily relocate bus stops as necessary.
- Participate in regular coordination meetings with Metro and LADOT regarding construction activities in the area, to address such issues as temporary lane closures and potential concurrent construction activities associated with the 2<sup>nd</sup> and Broadway Station of Metro's Regional Connector.

**PDF-TRAF-2: Construction Worker Parking Plan:** The Project Applicant will prepare a Construction Worker Parking Plan prior to commencement of construction to identify and enforce parking location requirements for construction workers. The Construction Worker Parking Plan will include, but not be limited to, the following elements as appropriate:

- During construction activities when construction worker parking cannot be accommodated on the Project Site, the Plan will identify alternate parking location(s) for construction workers and the method of transportation to and from the Project Site (if beyond walking distance) for approval by the City 30 days prior to commencement of construction.
- Provide all construction contractors with written information on where their workers and their subcontractors are permitted to park, and provide clear consequences to violators for failure to follow these regulations.

**PDF-TRAF-3:** The Applicant will coordinate with the Metro Bike Share program for a potential Bike Share station on the Project Site.

(D) Mitigation Measures

**MM-TRAF-1:** The Project Applicant shall implement a comprehensive Transportation Demand Management (TDM) Program to promote non-auto travel and reduce single-occupant vehicle trips. A draft of the TDM Program shall be prepared by a registered traffic engineer and submitted to LADOT for review prior to the issuance of the first building permit for the Project. The TDM Program must be approved by LADOT prior to the issuance of the first Certificate of Occupancy for the Project. The TDM Program should include, but would not be limited to, the following strategies:

- Promote Commute Trip Reduction (CTR) through information sharing and marketing for new employee orientations of trip reduction, event promotions, and publications;
- Provide unbundled parking that separates the cost of obtaining assigned parking spaces from the cost of purchasing or renting residential units;
- Provide a program to discount transit passes for residents/employees possibly through negotiated bulk purchasing of passes with transit providers;
- Facilitate a Car-Share Program by allowing a care share [sic] service within the project parking facilities. A care share [sic] program is a model of car rental where people rent cars for short periods of time, often by the hour.
- Facilitate rideshare programs with provision to include on-site transit and rideshare information center.
- Provide priority locations for carpools and vanpools within the parking garages;
- Accommodate flexible/alternative work schedules and telecommuting programs;
- Project design elements to ensure a bicycle, transit, and pedestrian friendly environment;
- Provide bicycle parking in conformance with Section 12.21 A.16 of the LAMC with safe and convenient access to bicycle facilities;
- A Covenant and Agreement to ensure that the TDM program will be maintained;
- Make a one-time financial contribution of \$100,000 to the City of Los Angeles Department of Transportation to be used in the implementation of the Mobility Hub in the general area of the Project;
- Make a one-time fixed-fee financial contribution of \$100,000 to the City's Bicycle Plan Trust Fund to implement bicycle improvements in the general Downtown Los Angeles area of the Project.

(E) Finding

Regarding construction-period traffic impacts, with the incorporation of PDF-TRAF-1, Construction Traffic Management Plan, and PDF-TRAF-2, Construction Worker Parking Plan, impacts would be less than significant. No mitigation is necessary or required.

Regarding intersection levels of service for the Existing with Project scenario, impacts at one intersection would be significant and unavoidable. The City finds, pursuant to Public Resources Code Section 21081(a)(3), that specific economic, legal, social, technological, or other considerations, including considerations identified in Section XI of these findings (Statement of Overriding Considerations), make infeasible additional mitigation measures or Project alternatives identified in the EIR to reduce the Project's operational traffic impacts to signalized intersections under the Existing with Project scenario to be less than significant.

Regarding intersection levels of service for the Future with Project scenario, impacts at six

intersections would be significant and unavoidable. The City finds, pursuant to Public Resources Code Section 21081(a)(3), that specific economic, legal, social, technological, or other considerations, including considerations identified in Section XI of these findings (Statement of Overriding Considerations), make infeasible additional mitigation measures or Project alternatives identified in the EIR to reduce the Project's operational traffic impacts to signalized intersections under the Existing with Project scenario to be less than significant.

All other impacts with regards to traffic and transportation would be less than significant. No mitigation measures are required.

#### (F) Rationale for Finding

The LOS analysis for the Existing with Project scenario determined that the Project would result in a significant intersection capacity impact during both the AM and PM peak hours at Intersection No. 11, S. Broadway & W. 2<sup>nd</sup> Street. The LOS analysis for the Future with Project scenario determined that the Project would result in significant intersection capacity impacts at the following six study area intersections:

1. S. Figueroa Street & W. 2<sup>nd</sup> Street (PM peak hour)
5. Hill Street & W. 1<sup>st</sup> Street (AM peak hour)
10. Broadway & W. 1<sup>st</sup> Street (both peak hours)
11. S. Broadway & W. 2<sup>nd</sup> Street (both peak hours)
12. S. Broadway & W. 3<sup>rd</sup> Street (AM peak hour)
17. S. Spring Street & W. 2<sup>nd</sup> Street (AM peak hour)

Physical mitigation measures were considered and analyzed, but cannot be implemented due to roadway width and on-street facility constraints. As such, LADOT deemed these potential mitigation measures infeasible. Further detail regarding mitigation measures considered for these six intersections, and the rationale behind the determination of infeasibility, is included on pages IV.P-68 through IV.P-69 of the Draft EIR, and in Appendices L-1 and L-2 to the Draft EIR. Furthermore, potential traffic volume reductions that would result from the implementation of the TDM Program (MM TRAF-1) were not applied to maintain a conservative analysis and, thus, impacts would remain significant. As such, significant and unavoidable intersection capacity impacts would remain at one intersection under the Existing with Project scenario and six intersections under the Future with Project Scenario.

#### (G) Reference

Section IV.P, *Transportation and Traffic*, of the Draft EIR, and the *Traffic Study* and LADOT impact analysis contained in Appendix L-1 and Appendix L-2 of the Draft EIR.

### **IX. ALTERNATIVES TO THE PROJECT**

CEQA requires that an EIR evaluate a reasonable range of feasible alternatives that could substantially reduce or avoid the significant impacts of a project while also meeting the project's basic objectives. An EIR must identify ways to substantially reduce or avoid the significant effects that a project may have on the environment (PRC 21002.1). Accordingly, the discussion of alternatives shall focus on alternatives to a project or its location which are capable of avoiding or substantially reducing any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. In addition to the project, the Draft EIR evaluated a reasonable range of five alternatives to the

project focused on avoiding or substantially reducing the project's significant effects. These alternatives are: 1) No Project/No Build Alternative; 2) 20 Percent Reduced Density Alternative; 3) All Office and Residential Alternative; 4) Partial Preservation Alternative; and 5) Full Preservation Alternative. In accordance with CEQA requirements, the alternatives to the Project include a "No Project/No Build" alternative and alternatives capable of avoiding or substantially lessening the significant adverse impacts of the project. These alternatives and their impacts, which are summarized below, are more fully described in Section V of the Draft EIR.

#### 1. Summary of Findings

Based upon the following analysis, the City finds, pursuant to Public Resources Code Section 21081, that specific economic, legal, social, technological, or other considerations, including considerations identified in Section XI of these findings (Statement of Overriding Considerations), make infeasible the Project alternatives identified in the EIR.

Additionally, based upon the following analysis, the City finds, pursuant to CEQA Guidelines Section 15096(g)(2), that no feasible alternative or mitigation measure will substantially lessen any significant effect of the Project, reduce the significant and unavoidable impacts of the Project to a level that is less than significant, or avoid any significant effect the Project would have on the environment.

#### 2. Project Objectives

An important consideration in the analysis of alternatives to the Project is the degree to which such alternatives would achieve the objectives of the Project. As more thoroughly described in Section II, Project Description, of the Draft EIR, the EIR establishes specific objectives concerning the Project, which are incorporated by reference herein and discussed further below.

#### 3. Project Alternatives Analyzed

##### (A) Alternative 1 – No Project/No Build Alternative

The No Project/No Build Alternative assumes that no new development would occur within the Project Site. The Project Site would continue to house the Times, Plant, Mirror, and Executive Buildings, as well as the parking structure. However, whereas the existing offices are only 60 percent occupied (324,668 square feet), the No Project/No Build Alternative assumes that existing buildings would be fully occupied. Under the No Project/No Build Alternative, the proposed rehabilitation of Times, Mirror, and Plant Buildings would not occur. No new streetscape, sidewalk, or other improvements in public space, including the Paseo, would be constructed under the No Project/ No Build Alternative.

##### (i) Impact Summary

The No Project/No Build Alternative would avoid the Project's significant and unavoidable historical resources impacts associated with the demolition of the Executive Building and parking structure. The No Project/No Build Alternative would avoid the Project's significant and unavoidable impacts associated with violation of air quality standards. The No Project/No Build Alternative would also avoid the Project's significant and unavoidable impacts related to construction noise, including exceedance of established noise standards, groundborne vibration and noise, and substantial increase in temporary or periodic ambient noise levels. In addition,

the No Project/No Build Alternative would avoid the Project's significant and unavoidable traffic operation service level impact at one area intersection (Intersection No. 11) under the Existing with Project scenario and would reduce the Project's significant and unavoidable service level impacts from six area intersections (Intersections No. 1, 5, 10, 11, 12, and 17) under Future (2023) with Project scenario to two intersections (Intersections No. 10 and 11).

Impacts associated with the remaining environmental issues would be similar to or less than those of the Project, except for hydrology, stormwater drainage and water quality during operations and energy consumption, and water supply during construction, all of which would be greater.

(ii) Finding

The City finds, pursuant to Public Resources Code Section 21081(a)(3), that specific economic, legal, social, technological, or other considerations, including considerations identified in Section XI of these findings (Statement of Overriding Considerations), make infeasible the No Project/No Build Alternative (Alternative 1) described in the Draft EIR.

(iii) Rationale for Findings

Although Alternative 1 would generally reduce the Project's environmental impacts, and is environmentally superior to the Project, it would not entirely eliminate its significant and unavoidable impacts pertaining to operational traffic. Moreover, Alternative 1 would not meet the Project's underlying purpose or primary objectives.

Because the No Project/No Build Alternative would not result in any new development at the Project Site, it would not meet the underlying purpose and primary objective of the Project to develop the Project Site with a transit-oriented development that includes residential uses, Project- and community-serving commercial uses, and publicly accessible and private open space and amenities. In addition, the No Project/No Build Alternative would not meet any of the Project Objectives described in the Project Description.

(iv) Reference

Section V, *Alternatives*, of the Draft EIR.

(B) Alternative 2 – 20 Percent Reduced Density Alternative

The 20 Percent Reduced Density Alternative (Alternative 2), would provide for the rehabilitation of Times, Mirror, and Plant Buildings as under the Project. Whereas the existing offices are only 60 percent occupied, Alternative 2 assumes that existing buildings that would remain would be fully occupied. As with the Project, Alternative 2 would require the demolition of the existing Executive Building and the 6-level Parking Structure. New development would be designed in the same configuration and location as the proposed North and South Towers and podium structure. However, density and overall floor area for the restaurant and grocery store uses, as well as the number of residential units, would be reduced by 20 percent.

The North Tower would be reduced from 37 stories to 30 stories and the South Tower would be reduced from 53 stories to 42 stories. Residential units would be reduced from 1,127 units under the Project to 902 units under Alternative 2. Restaurant floor area located within the new mixed-

use development would also be reduced by 20 percent from 34,572 square feet under the Project to 27,658 square feet under Alternative 2. The grocery store floor area would also be decreased by 20 percent. However, the office and proposed restaurant floor area that are part of the Times and Mirror Buildings would be the same as under the Project. Total new construction would be reduced by approximately 227,161 square feet from 1,135,803 square feet under the Project to 908,642 square feet under Alternative 2. The public Paseo would also be the same in floor area as under the Project.

(i) Impact Summary

The Reduced Density Alternative (Alternative 2) would require the demolition of the Executive Building and parking structure and, as such, would result in similar significant and unavoidable historical resources impacts as under the Project. Because of an incrementally shorter construction phase, Alternative 2 would reduce but not avoid the Project's significant and unavoidable impacts associated with the violation of an air quality standard during construction and with the significant and unavoidable cumulative considerable increase of a criteria pollutant (NOx) in a nonattainment area. As with the Project, Alternative 2 would result in significant and unavoidable impacts related to construction noise, including exceedance of established noise standards, groundborne vibration and noise, and substantial increase in temporary or periodic ambient noise levels. However, because of the reduced scale of development, the duration of construction-related impacts would be less than under the Project. Alternative 2 would also result in significant and unavoidable service level impacts at the same intersections as under the Project (Intersection No. 11) under the Existing with Project scenario and intersections (Intersections No. 1, 5, 10, 11, 12, and 17) under Future (2023) with Project scenario. Although transportation and traffic impacts would continue to be significant and unavoidable, Alternative 2 would incrementally reduce daily and peak hour trips compared to the Project and would reduce the Intersection 11 impacts under existing conditions from both AM/PM peak hours to only one peak hour.

Overall, because of reduced building size, occupancy, and vehicle trips, Alternative 2 would incrementally reduce or be similar to the Project's less than significant impacts related to views, scenic resources, visual character and quality, shade/shadow, operational air emissions, archeological resources, paleontological resources, geology and soils, GHGs, hazards and hazardous materials, hydrology and water quality, land use and planning, population, housing and employment, public services, transportation/traffic, tribal cultural resources, public utilities, and energy.

(ii) Finding

The City finds, pursuant to Public Resources Code Section 21081(a)(3), that specific economic, legal, social, technological, or other considerations, including considerations identified in Section XI of these findings (Statement of Overriding Considerations), make infeasible Alternative 2 described in the Draft EIR.

(iii) Rationale for Finding

Although Alternative 2 would reduce certain of the Project's impacts, it would not eliminate its significant and unavoidable impacts pertaining to historical resources, air quality, construction noise, construction vibration, and operational traffic. Moreover, Alternative 2 would not meet several of the Project objectives.

Alternative 2 would meet the Project's underlying purpose and primary objective to develop the Project Site with a transit-oriented development that includes residential uses, Project- and community-serving commercial uses, and publicly accessible and private open space and amenities.

Alternative 2 would meet the Project Objective to create publicly accessible pedestrian connections through the Project Site with views toward visual resources such as the proposed First and Broadway Civic Center Park to enhance circulation and promote walkability.

Alternative 2 would meet the Project Objectives to develop architecturally distinct new buildings that contribute to the visual character of Downtown's high-rise skyline and provide for a mix of commercial and residential uses to promote pedestrian activity, reduce vehicle trips and vehicle miles traveled, and enliven the Downtown area with 24/7 activity.

Alternative 2 would meet the Project Objective to activate the Broadway Street frontage by providing active street-oriented uses, such as retail or restaurants, and a landscaping and streetscape program that further enhances the pedestrian experience.

Alternative 2 would meet the Project Objective to provide a full-service grocery store to serve existing and new residents and visitors in the Downtown and further activate pedestrian activity in an area that is underserved by full-service grocery stores.

Alternative 2 would also meet the Project Objective related to rehabilitating and modernizing the Times, Mirror, and Plant Buildings to distinguish the character of the Downtown and attract visitor interest, and to reduce vacant office space.

However, because of the 20 percent reduction in building heights, residential density, and grocery store and restaurant floor areas, Alternative 2 would not meet the following objectives to the same extent as the Project:

- Maximize high-density residential uses in proximity to public transit, including Metro's Red Line and Purple Line Station in Grand Park, and Metro's Regional Connector Station at W. 2<sup>nd</sup> Street and Broadway.
- Maximize and increase high-density residential uses in Downtown Los Angeles within walking distance of jobs-rich centers, such as the Financial District and Civic Center, and a short transit ride to popular destinations such as Little Tokyo, the Arts District, Union Station, Olvera Street, Chinatown, the Downtown Markets, and the Los Angeles Convention Center, and Downtown amenities, such as Grand Park and the Los Angeles Music Center.
- Furthermore, as discussed above, Alternative 2 would not eliminate the Project's significant and unavoidable impacts pertaining to historical resources, air quality, construction noise, construction vibration, and operational traffic.

(iv) Reference

Section V, *Alternatives*, of the Draft EIR.

(C) Alternative 3 – All Office and Residential Alternative

The All Office and Residential Alternative (Alternative 3) would change the Project's mix of uses. As with the Project, Alternative 3 would rehabilitate and activate the historic Times, Mirror, and Plant Buildings. However, it would eliminate the use of the rehabilitated buildings for restaurant or grocery store uses. The Times, Mirror, and Plant Buildings would be used exclusively as offices. Alternative 3 would continue to provide 1,127 residential units in respective 37-and 53-story towers. Therefore, the total office floor area would be 410,677 square feet. Alternative 3 would have the same building configuration, height, setbacks, landscaping, street trees, garden level (6th floor) open space, and other amenities of the Project. As with the Project, Alternative 3 would include a landscaped, open-to-the-sky Paseo. Driveway access would be the same as under the Project. Parking would be 1,660 spaces.

(i) Impact Summary

The All Office and Residential Alternative (Alternative 3) would require the demolition of the Executive Building and parking structure and, as such, would result in similar significant and unavoidable historical resources impacts as under the Project. Because of a slightly shorter construction phase, Alternative 3 would minimally reduce but not avoid the Project's significant and unavoidable impacts associated with the violation of an air quality standard during construction and a significant and unavoidable cumulatively considerable increase of a criteria pollutant (NOx) in a nonattainment area. As with the Project, Alternative 3 would result in significant and unavoidable impacts related to construction noise, including exceedance of established noise standards, groundborne vibration and noise, and substantial increase in temporary or periodic ambient noise levels. However, because of the slightly reduced scale of construction, the duration of construction-related impacts would be slightly less than under the Project. Alternative 3 would reduce the Project's daily traffic but would increase peak hour traffic; as with the Project, service level impacts would be significant and unavoidable. Impacts would occur at the same intersections as under the Project (Intersection No. 11) under the Existing with Project scenario and intersections (Intersections No. 1, 5, 10, 11, 12, and 17) under Future (2023) with Project scenario.

Other impacts under Alternative 3 would be similar as the Project regarding scenic resources, visual character and quality, building heights, views, and shade/shadow. However, because of the increased office occupancy and reduced restaurant and grocery store floor area, Alternative 3 would reduce the Project's vehicle trips and, thus, incrementally reduce the Project's less than significant operation emissions, mobile GHGs, and energy impacts.

(ii) Finding

The City finds, pursuant to Public Resources Code Section 21081(a)(3), that specific economic, legal, social, technological, or other considerations, including considerations identified in Section XI of these findings (Statement of Overriding Considerations), make infeasible Alternative 3 described in the Draft EIR.

(iii) Rationale for Findings

Although Alternative 3 would incrementally reduce certain of the Project's impacts, it would not eliminate its significant and unavoidable impacts pertaining to historical resources, air quality, construction noise, construction vibration, and operational traffic. Moreover, Alternative 3 would not meet several of the Project objectives.

Alternative 3 would not meet the Project's underlying purpose and primary objective to develop the Project Site with a transit-oriented development that includes residential uses, Project- and community-serving commercial uses and publicly accessible and private open space and amenities to the same extent as the Project because it would not include restaurants or a grocery store.

Alternative 3 would meet the Project Objective to publicly accessible pedestrian connections through the Project Site with views toward visual resources such as the proposed First and Broadway Civic Center Park to enhance circulation and promote walkability.

Alternative 3 would also meet the Project Objective to rehabilitate and modernize the Times, Mirror, and Plant Buildings to distinguish the character of the Downtown and attract visitor interest, and to reduce vacant office space.

Alternative 3 would also meet the following Objectives:

- Develop architecturally distinct new buildings that contribute to the visual character of Downtown's high-rise skyline.
- Provide for a mix of commercial office and residential uses to promote pedestrian activity, reduce vehicle trips and vehicle miles traveled, and enliven the Downtown area with 24/7 activity; however, this objective would not be as fully met as by the Project.
- Maximize high-density residential uses in proximity to public transit, including Metro's Red Line and Purple Line Station in Grand Park, and Metro's Regional Connector Station at W. 2<sup>nd</sup> Street and Broadway.
- Maximize and increase high-density residential uses in Downtown Los Angeles within walking distance of jobs-rich centers, such as the Financial District and Civic Center, and a short transit ride to popular destinations such as Little Tokyo, the Arts District, Union Station, Olvera Street, Chinatown, the Downtown Markets, and the Los Angeles Convention Center, and Downtown amenities, such as Grand Park and the Los Angeles Music Center.

However, Alternative 3 would not meet the following objectives:

- Provide a full-service grocery store to serve existing and new residents and visitors in the Downtown and further activate pedestrian activity in an area that is underserved by full-service grocery stores.
- Activate the Broadway Street frontage by providing active street-oriented uses, such as retail or restaurants, and a landscaping and streetscape program that further enhances the pedestrian experience.
- Furthermore, Alternative 3 would not eliminate the Project's significant and unavoidable impacts pertaining to historical resources, air quality, construction noise, construction vibration, and operational traffic.

Section V, *Alternatives*, of the Draft EIR.

(D) Alternative 4 – Partial Preservation Alternative

The Partial Preservation Alternative (Alternative 4), would provide for the rehabilitation of Times, Mirror, and Plant Buildings as under the Project. In addition, the Executive Building would be retained and rehabilitated. However, the parking structure would be demolished and only the South Tower, as under the proposed Project would be constructed in place. Whereas the existing offices are currently only 60 percent occupied, Alternative 4 assumes that these buildings would be fully occupied. The Times, Mirror, and Plant Buildings would be the same uses as under the Project. The Executive Building would be used for offices. New development would be restricted to the site of the existing parking structure and would include development of a 53-story South Tower and podium structure, similar to the proposed Project. Alternative 4 would develop 677 residential units, and restaurant floor area located within the new mixed-use development would also be reduced to 17,283 square feet. The office, grocery, and proposed restaurant floor area that are part of the Times and Plant Buildings would be the same as under the Project. The public Paseo would be removed as part of the project and the west facing elevation of the Times North Building would also no longer be restored. Required parking would be 1,256 spaces.

(i) Impact Summary

The Partial Preservation Alternative (Alternative 4) would preserve the Executive Building, but require the demolition of the parking structure. As under the Project, Alternative 4 would result in significant and unavoidable historical resources impacts. Because of an incrementally shorter construction phase, Alternative 4 would reduce but not avoid the Project's significant and unavoidable impacts associated with the violation of an air quality standard during construction and significant and unavoidable cumulative considerable increase of a criteria pollutant (NOx) in a nonattainment area. As with the Project, Alternative 4 would result in significant and unavoidable impacts related to construction noise, including exceedance of established noise standards, groundborne vibration and noise, and substantial increase in temporary or periodic ambient noise levels. However, because of the reduced scale of development, the duration of construction-related impacts would be less than under the Project. Alternative 4 would reduce the Project's daily traffic; however, it would increase peak hour traffic. As with the Project, service level impacts would be significant and unavoidable. Operation Impacts would occur at the same intersections as under the Project under the Existing with Project scenario and under Future (2023) with Project scenario. Under the 2023 scenario, Alternative 4 would reduce the Project's significant impact at Intersection No. 5 to a less-than-significant level.

Because of the elimination of one tower and 40 percent reduction in residential uses, Alternative 4 would incrementally reduce or be similar to the Project's less than significant impacts related to views, scenic resources, visual character and quality, shade/shadow, archeological resources, paleontological resources, geology and soils, GHGs, hazards and hazardous materials, hydrology and water quality, land use and planning, population, housing and employment, public services, transportation/traffic, tribal cultural resources, public utilities, and energy.

(ii) Finding

The City finds, pursuant to Public Resources Code Section 21081(a)(3), that specific economic, legal, social, technological, or other considerations, including considerations identified in Section XI of these findings (Statement of Overriding Considerations), make infeasible Alternative 4 described in the Draft EIR.

(iii) Rationale for Findings

Although Alternative 4 would incrementally reduce certain of the Project's impacts, it would not eliminate its significant and unavoidable impacts pertaining to historical resources, air quality, construction noise, construction vibration, and operational traffic. Moreover, Alternative 4 would not meet several of the Project objectives.

Alternative 4 would meet the Project's underlying purpose and primary objective to develop the Project Site with a transit-oriented development that includes residential uses, Project- and community-serving commercial uses, and private open space and amenities. However, it would not fully meet the Objective's intent to provide publicly accessible open space and amenities to the same extent as the Project due to the removal of the pedestrian paseo.

Alternative 4 would fully meet the Project Objective to rehabilitate and modernize the Times, Mirror, and Plant Buildings to distinguish the character of the Downtown and attract visitor interest and to reduce vacant office space.

Additionally, Alternative 4 would meet the Project Objectives to provide for a mix of commercial and residential uses to promote pedestrian activity, reduce vehicle trips and vehicle miles traveled, and enliven the Downtown area with 24/7 activity, and to provide a full-service grocery store to serve existing and new residents and visitors in the Downtown and further activate pedestrian activity in an area that is underserved by full-service grocery stores.

Alternative 4 would not meet the Project Objective to create publicly accessible pedestrian connections through the Project Site with views toward visual resources such as the proposed First and Broadway Civic Center Park to enhance circulation and promote walkability.

In addition, with the elimination of one tower and 40 percent reduction in residential uses, and reduction in ground-level restaurant and grocery store floor area and elimination of the Paseo, Alternative 4 would not meet the following Project Objectives to the same extent as the Project:

- Develop architecturally distinct new buildings that contribute to the visual character of Downtown's high-rise skyline.
- Maximize high-density residential uses in proximity to public transit, including Metro's Red Line and Purple Line Station in Grand Park, and Metro's Regional Connector Station at W. 2<sup>nd</sup> Street and Broadway.
- Maximize and increase high-density residential uses in Downtown Los Angeles within walking distance of jobs-rich centers, such as the Financial District and Civic Center, and a short transit ride to popular destinations such as Little Tokyo, the Arts District, Union Station, Olvera Street, Chinatown, the Downtown Markets, and the Los Angeles Convention Center, and Downtown amenities, such as Grand Park and the Los Angeles Music Center.
- Activate the Broadway Street frontage by providing active street-oriented uses, such as retail or restaurants, and a landscaping and streetscape program that further enhances the pedestrian experience.

- Furthermore, Alternative 4 would not eliminate the Project's significant and unavoidable impacts pertaining to historical resources, air quality, construction noise, construction vibration, and operational traffic.

(iv) Reference

Section V, *Alternatives*, of the Draft EIR.

(E) Alternative 5 – Full Preservation Alternative

The Full Preservation Alternative (Alternative 5) would retain and rehabilitate all the buildings on the Project Site to the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. The Times, Mirror, and Plant Buildings would be developed with office uses, a grocery store, and restaurant uses, and the Executive Building would retain its office and bank uses. The office floor area would increase to 499,863 square feet, the proposed restaurant floor area would decrease to 10,000 square feet, and the proposed grocery store would remain the same (50,000 square feet) as the proposed Project. The North and South Towers and public Paseo would be removed under Alternative 5.

(i) Impact Summary

The Full Preservation Alternative (Alternative 5) would not require the demolition of the Executive Building and parking structure and, as such, it would avoid the Project's significant and unavoidable impacts to historical resources. Because of a reduced construction phase and scale of construction, Alternative 5 would avoid the Project's significant and unavoidable impacts associated with the violation of an air quality standard during construction and the Project's significant and unavoidable cumulative considerable increase of a criteria pollutant (NOx) in a nonattainment area.

Alternative 5 would also avoid the Project's significant and unavoidable impacts related to construction noise, including exceedance of established noise standards, groundborne vibration and noise, and substantial increase in temporary or periodic ambient noise levels. Although Alternative 5 would not avoid the Project's significant and unavoidable operation service level impacts at one area intersection (Intersection No. 11) under the Existing with Project scenario, it would reduce this impact from both peak periods to one peak period. In addition, Alternative 5 would reduce the Project's significant and unavoidable impacts from six area intersections (Intersections No. 1, 5, 10, 11, 12, and 17) under Future (2023) with Project scenario to two intersections (Intersections No. 10 and 11).

Alternative 5 would reduce or be similar to the Project's less than significant impacts related to building heights, views, scenic resources, visual character and quality, shade/shadow, archeological resources, paleontological resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, population, housing and employment, public services, transportation/traffic, tribal cultural resources, public utilities, and energy impacts. Also, because of the increased office occupancy and reduced residential uses, Alternative 5 would reduce the Project's vehicle trips and, thus, incrementally reduce the Project's less than significant operation emissions, GHGs, and energy impacts.

(ii) Finding

The City finds, pursuant to Public Resources Code Section 21081(a)(3), that specific economic, legal, social, technological, or other considerations, including considerations identified in Section XI of these findings (Statement of Overriding Considerations), make infeasible Alternative 5 described in the Draft EIR.

(iii) Rationale for Findings

Although Alternative 5 would incrementally reduce certain of the Project's impacts, and would eliminate the Project's significant and unavoidable impacts pertaining to historical resources, air quality, construction noise, and construction vibration, it would not eliminate its significant and unavoidable impacts pertaining to operational traffic. Moreover, Alternative 5 would not meet several of the Project objectives.

Because it would not include any residential uses or the Paseo, Alternative 5 would not meet the Project's underlying purpose and primary objective to develop the Project Site with a transit-oriented development that includes residential uses, community-serving commercial uses, and publicly accessible and private open space and amenities.

Alternative 5 would be consistent with the Project Objective to rehabilitate and modernize the Times, Mirror, and Plant Buildings distinguish the character of the Downtown and attract visitor interest, and to reduce vacant office space through the rehabilitation of existing offices and creation of employee amenities to generate jobs. However, as it would not restore the west wall of the Times, Plant, and Mirror Buildings Alternative 5 would not meet this Objective to the same extent as under the Project.

In addition, Alternative 5 would be consistent with the Project Objective to provide a full-service grocery store to serve existing and new residents and visitors in the Downtown and further activate pedestrian activity in an area that is underserved by full-service grocery stores.

In the absence of the Paseo, retail, and restaurant uses, Alternative 5 would not meet the Project Objective to activate the Broadway Street frontage by providing active street-oriented uses, such as retail or restaurants, and a landscaping and streetscape program that further enhances the pedestrian experience to the same extent as under the Project.

Alternative 5 would not meet the following Objectives:

- Develop architecturally distinct new buildings that contribute to the visual character of Downtown's high-rise skyline.
- Create publicly accessible pedestrian connections through the Project Site with views toward visual resources such as the proposed First and Broadway Civic Center Park to enhance circulation and promote walkability.
- Provide for a mix of commercial and residential uses to promote pedestrian activity, reduce vehicle trips and vehicle miles traveled, and enliven the Downtown area with 24/7 activity.
- Maximize high-density residential uses in proximity to public transit, including Metro's Red Line and Purple Line Station in Grand Park, and Metro's Regional Connector Station at W. 2<sup>nd</sup> Street and Broadway.

- Maximize and increase high-density residential uses in Downtown Los Angeles within walking distance of jobs-rich centers, such as the Financial District and Civic Center, and a short transit ride to popular destinations such as Little Tokyo, the Arts District, Union Station, Olvera Street, Chinatown, the Downtown Markets, and the Los Angeles Convention Center, and Downtown amenities, such as Grand Park and the Los Angeles Music Center.
- Activate the Broadway Street frontage by providing active street-oriented uses, such as retail or restaurants, and a landscaping and streetscape program that further enhances the pedestrian experience.
- Furthermore, Alternative 5 would not eliminate the Project's significant and unavoidable impacts pertaining to operational traffic.

(iv) Reference

Section V, *Alternatives*, of the Draft EIR.

4. Project Alternatives Considered and Rejected

As set forth in CEQA Guidelines Section 15126.6(c), an EIR should identify any alternatives that were considered for analysis but rejected as infeasible and briefly explain the reasons for their rejection. According to the CEQA Guidelines, among the factors that may be used to eliminate an alternative from detailed consideration are the alternative's failure to meet most of the basic project objectives, the alternative's infeasibility, or the alternative's inability to avoid significant environmental impacts. Alternatives to the Project that were considered and rejected as infeasible include the following:

(A) Off-Site Location Alternative

The Project Site is located within a city block that incorporates the historic Los Angeles Times, Plant, and Mirror Buildings. An objective of the Project is to transform this unique block through the rehabilitation of the Times, Mirror, and Plant buildings to their original appearances, and through the development within the block of distinct high-rise buildings and an open-to-the-sky public Paseo that has direct views to Grand Park and the future Civic Park. The Off-Site Location Alternative would not meet a primary objective of the Project to rehabilitate and modernize the Times, Mirror, and Plant Buildings to distinguish the character of the Downtown and attract visitor interest, or to reduce vacant office space through the rehabilitation of existing offices and creation of employee amenities to generate jobs. The rehabilitation of the Times, Mirror, and Plant Buildings is intrinsic to the purpose of the Project and could not be achieved in another location. In addition, the development of the same residential towers, mix of uses, and Paseo in another location would further defeat the purpose of the Project to enhance the Times, Mirror, and Plant Buildings. In addition, the applicant does not have ownership or control of a similar site or, with the current investment in the Times-Mirror property, the flexibility to develop a similar project on the same scale in another location within similar proximity to multiple Downtown transit lines and jobs, and that would meet the primary objectives of the Project. For these reasons, the Off-Site Location Alternative is not considered a feasible alternative to the Project and is rejected from further analysis.

(B) Reduced Intensity Alternative – 50 Percent Reduction

A Reduced Intensity Alternative, in which residential units and commercial space would be reduced by 50 percent, was also considered and rejected. This Alternative would not achieve the Project Objective to maximize high-density residential uses in Downtown Los Angeles within walking distance of jobs-rich centers. The intent of the Central City Community Plan is to expand the Downtown residential community as a major component of Downtown's revitalization. Under the Transfer of Floor Area Rights (TFAR) process set forth in the Community Plan and the LAMC, the Project Site is located within the Central City TFAR area, and as such, the opportunity exists at the Project Site to maximize residential density. Because of the proximity of the Project Site to multiple fixed rail transit lines and employment centers, the Project Site is ideal for maximum development. The 50 Percent Reduction Alternative would substantially reduce the proposed residential density and, as such, would not maximize the high-density use of the Project Site. In addition, because the 50 Percent Reduction Alternative would still require the demolition of the Executive Building and the parking structure, it would not reduce the Project's impacts related to historic resources. For these reasons, the 50 Percent Reduction Alternative is not considered a feasible alternative to the Project.

#### 5. Environmentally Superior Alternative

Section 15126.6(e)(2) of the CEQA Guidelines indicates that an analysis of alternatives to a project shall identify an Environmentally Superior Alternative among the alternatives evaluated in an EIR. The CEQA Guidelines also state that should it be determined that the No Project Alternative is the Environmentally Superior Alternative, the EIR shall identify another Environmentally Superior Alternative among the remaining alternatives. Pursuant to Section 15126.6(c) of the CEQA Guidelines, the analysis below addresses the ability of the alternatives to "avoid or substantially lessen one or more of the significant effects" of the Project.

Of the alternatives analyzed in the Draft EIR, Alternative 1, the No Project/No Build Alternative, would be considered the environmentally superior alternative, because it would avoid the Project's significant and unavoidable impacts to historical resources, construction noise and vibration, and construction emissions, and reduce, but not avoid, the significant and unavoidable operational traffic intersection impacts. However, no new development would occur and the No Project/No Build Alternative would not meet any of the Project Objectives. Therefore, the identification of another environmentally superior alternative is required.

Overall, Alternative 5, the Full Preservation Alternative, would reduce physical environmental impacts associated with the Project to a greater degree than Alternatives 2, 3, and 4. Therefore, Alternative 5 would be considered the Environmentally Superior Alternative. As discussed above, Alternative 5 would eliminate the Project's significant and unavoidable impacts pertaining to historical resources, air quality, construction noise, and construction vibration; however, Alternative 5 would not eliminate the Project's significant and unavoidable impacts pertaining to operational traffic. Moreover, Alternative 5 would not meet the Project's underlying purpose and primary objective and would not meet the Project Objectives to the same extent as the Project.

### X. OTHER CEQA CONSIDERATIONS

#### (A) Growth Inducing Impacts

Section 15126.2(d) of the State *CEQA Guidelines* requires an EIR to discuss the ways a proposed project could foster economic or population growth or the construction of additional housing, directly or indirectly, in the surrounding environment. Growth-inducing impacts include the removal of obstacles to population growth (e.g., the expansion of a wastewater treatment plant

allowing more development in a service area) and the development and construction of new service facilities that could significantly affect the environment individually or cumulatively. In addition, pursuant to CEQA, growth must not be assumed as beneficial, detrimental, or of little significance to the environment.

(i) Direct Growth (Housing and Economic Growth)

The Project would replace the existing Executive Building and parking structure with the North and South Towers, which would include up to 1,127 residential units, 34,572 square feet of ground-level restaurant uses, and would increase residential population in the area. Under the Project, the Times, Plant, and Mirror Buildings would be adaptively reused and would include up to 307,288 square feet of commercial office uses,<sup>11</sup> up to 18,817 square feet of commercial restaurant uses, and a 50,000 square-foot grocery store, all of which would also generate new employment in the area. The Project Site is currently developed with office uses, a bank, and a cafeteria. Development of the Project would add residents and would create new employment at the Project Site.

The mixed-use Project would provide new housing and employment within the Central City Community Plan Area and within a HQTAs. The Project would provide housing for 2,739 new residents and would generate approximately 186 net new employees on the Project Site. The Project itself would contribute to bringing the jobs/housing ratio closer to the balance by providing more housing units than employees onto the Project Site, which would support the attainment of SCAG policies by providing increased population density within a HQTAs. A maximum of 792 construction workers would be on-site at one time during the most intensive overlapped construction phases. Construction jobs are anticipated to be filled by residents in the local area, or by commuters within the larger Los Angeles Metropolitan Area. The Project would include a mix of uses that would be compatible with adjacent uses and representative of the type of high-density and mixed-use development anticipated in the City of Los Angeles. As discussed in detail and concluded in Section IV.J, *Population and Housing*, of the Draft EIR, the Project's new development is consistent with the established SCAG regional forecast for the City of Los Angeles, and contributes to an infill growth pattern that is encouraged locally in the City by the General Plan Framework and the Central City Community Plan. Accordingly, the Project would not induce unanticipated direct growth.

(ii) Indirect Growth (Utility and Infrastructure Growth)

The Project Site is located in an urbanized area that is served by current infrastructure (e.g., roads and utilities), and community service facilities. The Project would not have indirect effects on growth through such mechanisms as the extension of roads and infrastructure, since the infill Project would link with and tie into existing infrastructure in the Project area. New infrastructure that would be required, such as service connections to local water and sewer network and electricity and natural gas utilities for the North and South Towers, would be sized to serve only the Project's needs. Thus, other than connections between the Project Site and existing nearby infrastructure, no new infrastructure would be added in the area. No new roadways would be

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<sup>11</sup> This office square footage accounts for the existing office uses (213,856 sf) that would continue to exist after the rehabilitation of the Times, Plant, and Mirror Buildings. The Project also proposes 93,432 sf of new office development for the Project Site. After implementation of the Project, a total of 307,288 square feet of office space would be available on the Project Site.

created as part of the Project. The Project would not open any new areas not already served by infrastructure.

Therefore, the Project would not spur additional growth other than that already anticipated and would not eliminate impediments to growth. Consequently, the Project would not foster indirect growth-inducing impacts.

(B) Significant Irreversible Environmental Changes

According to Sections 15126(c) and 15126.2(c) of the State *CEQA Guidelines*, an EIR is required to address any significant irreversible environmental changes that would occur should a proposed project be implemented. As stated in *CEQA Guidelines* Section 15126.2(c) indicates:

*Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter likely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the Project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

The Project would consume a limited amount of slowly renewable and non-renewable resources. This consumption would occur during the construction phase of the Project and would continue throughout its operational lifetime. Project development would require a commitment of resources that would include: (1) building materials, (2) water, and (3) energy resources, including those associated with the transportation of goods and people to and from the Project Site. Project construction would require the consumption of resources that are non-replenishable or may renew so slowly as to be considered non-renewable. These resources would include the following construction supplies: certain types of lumber and other forest products; aggregate materials used in concrete and asphalt such as sand, gravel and stone; metals such as steel, copper, and lead; petrochemical construction materials such as plastics; and water. Furthermore, nonrenewable fossil fuels such as gasoline and oil would also be consumed in the use of construction vehicles and equipment, as well as the transportation of goods and people to and from the Project Site.

Project operation would continue to expend nonrenewable resources that are currently consumed within the City. These include energy resources such as electricity and natural gas, petroleum-based fuels required for vehicle-trips, fossil fuels, and water. Fossil fuels would represent the primary energy source associated with both construction and ongoing operation of the Project, and the existing, finite supplies of these natural resources would be incrementally reduced.

At the same time, the Project would contribute to a land use pattern that would reduce reliance on private automobiles and vehicle miles traveled (VMT), and, therefore reduce the consumption of non-renewable resources when considered in a larger context. Most notably, the Project would represent an urban infill development that would provide residential and commercial uses in the Downtown Los Angeles area in close proximity to existing off-site commercial, residential, and retail destinations and existing public transit stops. The Project Site is located within a Transportation Priority Area, which is identified as an area within one-half mile of a major transit stop. The Project Site is also located within a High Quality Transit Area (HQTA), an area identified as preferred for high-density development to reduce VMT and related consumption of renewable resources, among other goals. Given its location, the Project would support pedestrian access to

a considerable range of entertainment, employment, and commercial activities. The Project also provides nearby access to the regional transportation system as the Project Site is located within 750 feet of Metro's Los Angeles Civic Center/Grand Park Station and directly across W. 2<sup>nd</sup> Street from Metro's 2<sup>nd</sup> Street and Broadway Station (currently under construction). These factors would contribute to a land use pattern that is considered to reduce the consumption of non-renewable resources.

Furthermore, the Project would comply with the 2016 Los Angeles Green Building Code, which would reduce GHG emissions through compliance with energy-efficiency requirements, such as reducing indoor and outdoor water demand, installing energy-efficient appliances and equipment, and complying with 2016 California Title 24 Building Energy Efficiency Standards, as amended by the City. The Project would also meet the mandatory measures of the CALGreen Code as amended by the City by incorporating strategies such as high efficiency toilets, low-flow faucets, low-flow showers, and other energy and resource conservation measures. The heating, ventilation, and air conditioning (HVAC) system would be sized and designed in compliance with the CALGreen Code to maximize energy efficiency. The Project would achieve several objectives of the City of Los Angeles General Plan Framework Element, SCAG's 2016 RTP/SCS, and South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP) for establishing a regional land use pattern that promotes sustainability.

The Project's continued use of non-renewable resources would be on a relatively small scale and consistent with regional and local growth forecasts in the area, as well as State and local goals for reductions in the consumption of such resources. The Project Site contains no energy resources that would be precluded from future use through Project implementation. Thus, the Project's irreversible changes to the environment related to the consumption of nonrenewable resources would not be significant, and the limited use of nonrenewable resources is justified.

## **XI. STATEMENT OF OVERRIDING CONSIDERATIONS**

The EIR identified the following unavoidable significant impacts: 1) Air Quality – Project-level impacts with regards to regional construction emissions; 2) Cultural Resources – Project-level impacts with regards to historic resources; 3) Noise – Project-level and cumulative on-site and off-site construction noise impacts and Project-level and cumulative off-site construction vibration impacts; and 4) Traffic and Transportation – Project-level and cumulative operational level of service impacts.

Section 21081 of the California Public Resources Code and Section 15093(b) of the CEQA Guidelines provide that when the decisions of the public agency allow the occurrence of significant impacts identified in the EIR that are not substantially lessened or avoided, the lead agency must state in writing the reasons to support its action based on the Final EIR and/or other information in the record. The State CEQA Guidelines require, pursuant to CEQA Guidelines Section 15093(b), that the decision-maker adopt a Statement of Overriding Considerations at the time of approval of a Project if it finds that significant adverse environmental effects identified in the EIR cannot be substantially mitigated to a less than significant level or be eliminated. These findings and the Statement of Overriding Considerations are based on substantial evidence in the record, including but not limited to the EIR, the source references in the EIR, and other documents and material that constitute the record of proceedings.

Accordingly, based on the analysis provided in the EIR, the City adopts the following Statement of Overriding Considerations. The City recognizes that significant and unavoidable impacts will result from implementation of the Project. Having (i) adopted all feasible mitigation measures, (ii)

rejected as infeasible alternatives to the project, (iii) recognized all significant, unavoidable impacts, and (iv) balanced the benefits of the Project against the Project's significant and unavoidable impacts, the City hereby finds that the each of the Project's benefits, as listed below, outweighs and overrides the significant unavoidable impacts of the Project.

The below stated reasons summarize the benefits, goals and objectives of the Project, and provide the detailed rationale for the benefits of the Project. These overriding considerations of economic, social, aesthetic, and environmental benefits for the Project justify adoption of the Project and certification of the completed EIR. Each of the listed project benefits set forth in this Statement of Overriding Considerations provides a separate and independent ground for the City's decision to approve the project despite the project's identified significant and unavoidable environmental impacts. Each of the following overriding consideration separately and independently (i) outweighs the adverse environmental impacts of the Project, and (ii) justifies adoption of the Project and certification of the completed EIR. In particular, achieving the underlying purpose for the Project would be sufficient to override the significant environmental impacts of the Project.

- The Project will develop up to 1,127 needed new residential units that will directly meet existing housing demand in Downtown and the City as a whole and help address the current Citywide housing shortage.
- The Project would locate high-density residential development at an urban infill location that is in close proximity to jobs-rich centers, and add jobs in close proximity to housing. Both the Project residents and employees would be located within walking distance to public transit, retail and restaurants, and entertainment venues. The Project would thereby contribute to a land use pattern that would reduce reliance on private automobiles and vehicle miles traveled (VMT) and associated traffic congestion and pollutant and GHG emissions.
- Under the Project, the Times Building, Plant Building, and Mirror Building would be preserved and rehabilitated in conformance with the Secretary of the Interior's Standards for Rehabilitation (Standards). After the Executive Building and parking structure are removed, the lower floors of the western facades of the Times, Plant, and Mirror Buildings would be compatible with the historic character of the three existing buildings, but distinguishable as new. The Project will therefore benefit the community and the City by preserving and rehabilitating a significant historical landmark in Downtown Los Angeles.
- The rehabilitation and modernization of the Times, Plant, and Mirror Buildings would serve to reduce vacant office space Downtown and create employee amenities (including rehabilitated lobbies in the Times and Mirror Buildings and new conference/presentation areas and eating/break areas in the Plant Building), which would serve to generate jobs.
- The Project will develop an open-to-the-sky Paseo with landscaping, benches, and pavement treatment that is lined with an outdoor café, food court, and retail uses. The Paseo, with clearly defined landscaped entrances at 1<sup>st</sup> and 2<sup>nd</sup> Streets, would promote walkability by providing an activated pedestrian corridor connecting the Project Site with adjacent areas.
- The Project would also enhance the pedestrian experience and promote walkability by providing a full retail and service base at street level along all four edges of the Podium, including 1<sup>st</sup> Street, Broadway, 2<sup>nd</sup> Street, and the Paseo. The design includes pedestrian-

friendly features, such as articulated retail facades, the use of cantilevered canopies to define retail entries, and landscaping that buffers the scale and height of the new building.

- The Project would include 53,389 square feet of restaurant uses that will further promote pedestrian activity and enliven the Downtown area with 24/7 activity.
- The Project would provide an approximately 50,000 square-foot grocery store within walking distance for existing and future residents, employees, and visitors, to further activate pedestrian activity at the Project Site and reduce vehicle trips.
- The new development associated with the Project will promote the City's sustainability goals by achieving the equivalent of the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Silver Certification level.
- The Project will generate 186 net new long-term jobs onsite and a peak of 792 construction jobs.
- The Project will provide direct fiscal benefits to the City in the form of sales tax revenues from the Project's restaurant, retail, and grocery store uses.

## **XII. GENERAL FINDINGS**

1. The City, acting through the Department of City Planning, is the "Lead Agency" for the Project that is evaluated in the EIR. The City finds that the EIR was prepared in compliance with CEQA and the CEQA Guidelines. The City finds that it has independently reviewed and analyzed the EIR for the Project, that the Draft EIR which was circulated for public review reflected its independent judgment, and that the Final EIR reflects the independent judgment of the City.
2. The EIR evaluated the following potential project and cumulative environmental impacts: Aesthetics; Air Quality; Cultural Resources; Geology and Soils; Greenhouse Gas Emissions; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use and Planning; Noise; Population and Housing; Police Protection; Fire Protection; Schools; Parks and Recreation; Libraries; Transportation and Traffic; Tribal Cultural Resources; Water Supply; Wastewater; Solid Waste; and Energy. Additionally, the EIR considered Growth Inducing Impacts and Significant Irreversible Environmental Changes. The significant environmental impacts of the Project and the alternatives were identified in the EIR.
3. The City finds that the EIR provides objective information to assist the decision-makers and the public at large in their consideration of the environmental consequences of the Project. The public review period provided all interested jurisdictions, agencies, private organizations, and individuals the opportunity to submit comments regarding the Draft EIR. The Final EIR was prepared after the review period and responds to comments made during the public review period.
4. The Department of City Planning evaluated comments on environmental issues received from persons who reviewed the Draft EIR. In accordance with CEQA, the Department of City Planning prepared written responses describing the disposition of significant environmental issues raised. The Final EIR provides adequate, good faith and reasoned response to the comments. The Department of City Planning reviewed

the comments received and responses thereto and has determined that neither the comments received nor the responses to such comments add significant new information regarding environmental impacts to the Draft EIR. The Lead Agency has based its actions on full appraisal of all viewpoints, including all comments received up to the date of adoption of these findings, concerning the environmental impacts identified and analyzed in the EIR.

5. The Final EIR and Errata document changes to the Draft EIR. The Final EIR provides additional information that was not included in the Draft EIR. Having reviewed the information contained in the Draft EIR, the Final EIR and the Errata and in the administrative record, as well as the requirements of CEQA and the CEQA Guidelines regarding recirculation of Draft EIRs, the City finds that there are no new significant impacts, substantial increase in the severity of a previously disclosed impact, significant information in the record of proceedings, or other criteria under CEQA that would require recirculation of the Draft EIR, or preparation of a supplemental or subsequent EIR.

Specifically, the City finds that:

- a. The Responses To Comments contained in the Final EIR and the March 2020 Responses (i) fully considered and responded to comments claiming that the Project would have significant impacts or more severe impacts not disclosed in the Draft EIR, and (ii) include substantial evidence that none of these comments provided substantial evidence that the project would result in changed circumstances, significant new information, considerably different mitigation measures, or new or more severe significant impacts than were discussed in the Draft EIR.
- b. The City has thoroughly reviewed all of the public comments received regarding the Project and the Final EIR as it relates to the Project to determine whether under the requirements of CEQA, any of the public comments provide substantial evidence that would require recirculation of the EIR prior to its adoption and has determined that recirculation of the EIR is not required.
- c. None of the information submitted after publication of the Final EIR, including the Lozeau Drury Letter and testimony at and documents submitted for the public hearings on the Project, constitutes significant new information or otherwise requires preparation of a supplemental or subsequent EIR. The City does not find this information and testimony to be credible evidence of a significant impact, a substantial increase in the severity of an impact disclosed in the Final EIR, or a feasible mitigation measure or alternative not included in the Final EIR. The March 2020 Responses thoroughly address the comments in the Lozeau Drury Letter. Based on these expert Responses, the Draft and Final EIRs, the Errata, and other evidence in the record, the City finds that none of the comments in the Lozeau Drury letter constitutes significant new information or credible evidence of a new or increased Project significant impact or a feasible mitigation measure or alternative not included in the Final EIR.

6. The mitigation measures identified for the Project were included in the Draft and Final EIRs and the Errata. As revised, the final mitigation measures for the Project are described in the Mitigation Monitoring Program (MMP). Each of the mitigation measures identified in the MMP is incorporated into the Project. The City finds that, to the greatest extent possible, the impacts of the Project have been mitigated to less than significance by the feasible mitigation measures identified in the MMP.
7. CEQA requires the Lead Agency approving a project to adopt a MMP or the changes to the project which it has adopted or made a condition of project approval to ensure compliance with the mitigation measures during project implementation. The mitigation measures included in the EIR as certified by the City serve that function. The MMP includes all the mitigation measures and project design features adopted by the City in connection with the approval of the Project and has been designed to ensure compliance with such measures during implementation of the Project. In accordance with CEQA, the MMP provides the means to ensure that the mitigation measures are fully enforceable. In accordance with the requirements of Public Resources Code Section 21081.6, the City hereby adopts the MMP.
8. In accordance with the requirements of Public Resources Section 21081.6, the City hereby adopts each of the mitigation measures expressly set forth herein as conditions of approval for the Project.
9. The custodian of the documents or other material which constitute the record of proceedings upon which the City's decision is based is the City Department of City Planning, Environmental Review Section, 221 North Figueroa Street, Room 1350, Los Angeles, California 90012.
10. The City finds and declares that substantial evidence for each and every finding made herein is contained in the EIR, which is incorporated herein by this reference, or is in the record of proceedings in the matter.
11. The City is certifying an EIR for, and is approving and adopting findings for, the entirety of the actions described in these Findings and in the EIR as comprising the Project.
12. The EIR is a project EIR for purposes of environmental analysis of the Project. A project EIR examines the environmental effects of a specific project. The EIR serves as the primary environmental compliance document for entitlement decisions regarding the Project by the City and other regulatory jurisdictions.

#### **FINDINGS OF FACT (SUBDIVISION MAP ACT)**

In connection with the approval of Vesting Tentative Tract Map No. 74761, the Advisory Agency of the City of Los Angeles, pursuant to Sections 66473.1, 66474.60, .61 and .63 of the State of California Government Code (the Subdivision Map Act), makes the prescribed findings as follows:

- (a) THE PROPOSED MAP IS CONSISTENT WITH APPLICABLE GENERAL AND SPECIFIC PLANS.

The Vesting Tentative Tract Map was prepared by a Registered Professional Engineer and contains the required components, dimensions, areas, notes, legal description,

ownership, applicant, and site address information as required by the Los Angeles Municipal Code (“LAMC”).

The 3.6-acre project site is located within the adopted Central City Community Plan area, which designates the site for Regional Center Commercial land uses with a corresponding zone of C2-4D-SN. Commercial zones in height district 4 would normally allow for a maximum floor area ratio of 13:1. However, the Project Site’s “D” Limitation further limits maximum FAR on the Project Site to 6:1. Community Plan Footnote No. 3, which is applicable to the Regional Center Commercial land use designation, states that the D Limitation for Height District No. 4D limits FAR to 6:1, except with a maximum of 13:1 FAR with a Transfer of Floor Area Rights (TFAR). The Project is requesting a Transfer of Floor Area Rights for a maximum FAR of 9.42:1 in concurrent Case No. CPC-2016-4675-TDR-VCU-MCUP, and as such is consistent with the above provisions of the Community Plan. The Project Site is within the Historic Broadway Sign Supplemental Use District and would comply with all applicable signage provisions. The Project Site is not located within a specific plan area.

The Project Site is currently developed with five structurally distinct but internally connected buildings previously occupied by the Los Angeles Times offices, a bank, and other office uses. The buildings were constructed between the 1930s and 1970s, and range from four to 10 stories in height. The buildings include the eight-story Times Building, the 4-story Plant Building, the 10-story Mirror Building, the six-story parking structure, and the six-story Executive Building. The Project would demolish the Executive Building at the corner of W. 1<sup>st</sup> Street and S. Broadway and parking garage at the corner of W. 2<sup>nd</sup> Street and S. Broadway to allow for the development of the Project’s new mixed-use component. New development, consisting of the 37-story “North Tower” and 53-story “South Tower” would contain a maximum of 1,127 residential units and up to 34,572 square feet of commercial floor area, and would be constructed above a five-story parking podium. The space below the podium would contain an additional nine (9) levels of subterranean parking. The combined commercial and residential floor area would total up to 1,135,803 square feet. The existing Times, Plant, and Mirror Buildings have a combined floor area of 376,105 square feet. In total, including new construction and existing buildings to remain, the Project proposes up to 1,511,908 square feet of floor area.

In conjunction with the Vesting Tentative Tract Map, the applicant is requesting an approval of a Transfer of Floor Area Rights (TFAR), a Vesting Conditional Use for Floor Area Averaging within a unified development, and a Master Conditional Use to permit the sale and dispensing of alcoholic beverages, which, if approved, would allow the proposed development. If not approved, the subdivider shall submit a tract map modification.

Therefore, as conditioned, the proposed Vesting Tract Map is consistent with the intent and purpose of the General Plan.

- (b) THE DESIGN AND IMPROVEMENT OF THE PROPOSED SUBDIVISION ARE CONSISTENT WITH APPLICABLE GENERAL AND SPECIFIC PLANS.

For purposes of a subdivision, design and improvement is defined by Section 66418 of the Subdivision Map Act and LAMC Section 17.02. Section 66418 of the Subdivision Map Act defines the term “design” as follows: “Design” means: (1) street alignments, grades and widths; (2) drainage and sanitary facilities and utilities, including alignments and

grades thereof; (3) location and size of all required easements and rights-of-way; (4) fire roads and firebreaks; (5) lot size and configuration; (6) traffic access; (7) grading; (8) land to be dedicated for park or recreational purposes; and (9) such other specific physical requirements in the plan and configuration of the entire subdivision as may be necessary to ensure consistency with, or implementation of, the general plan or any applicable specific plan. Further, Section 66427 of the Subdivision Map Act expressly states that the "Design and location of buildings are not part of the map review process for condominium, community apartment or stock cooperative projects."

Section 17.05-C of the Los Angeles Municipal Code enumerates design standards for Subdivisions and requires that each Tentative Map be designed in conformance with the Street Design Standards and in conformance to the General Plan. Section 17.05-C, third paragraph, further establishes that density calculations include the areas for residential use and areas designated for public uses, except for land set aside for street purposes ("net area"). LAMC Section 17.06-B and 17.15 lists the map requirements for a tentative tract map and vesting tentative tract map. The map provides the required components of a tentative tract map.

The vesting tentative tract map subdivision design includes the merger and resubdivision of the project site into nine lots for condominium purposes, for a development that would consist of up to 1,127 multi-family residential units and up to 34,572 square feet of new commercial floor area. The existing Times, Plant, and Mirror Buildings have a combined floor area of 376,105 square feet. In total, including new construction and existing buildings to remain, the Project proposes up to 1,511,908 square feet of floor area. Parking would be provided within four above-grade levels, and within nine (9) levels of subterranean parking.

The Project Site is comprised of nine existing lots. These nine existing lots are proposed to retain their same configuration under the proposed new subdivision. The design and layout of the map is consistent with the design standards established by the Subdivision Map Act and Division of Land Regulations of the Los Angeles Municipal Code. Several public agencies (including the Bureau of Engineering, Department of Building and Safety, Grading Division and Zoning Division, Department of Water and Power, Bureau of Sanitation, Bureau of Street Lighting) have reviewed the map and found the subdivision design satisfactory, and have imposed improvement requirements and/or conditions of approval.

Bureau of Engineering requires dedications/easements and improvements along 1<sup>st</sup> Street, 2<sup>nd</sup> Street, and Broadway, in accordance with the City's Downtown Street Standards. Sewers are available and have been deemed adequate in accommodating the proposed project's sewerage needs, subject to conditions of approval. The subdivision will be required to comply with all regulations pertaining to grading, building permits, and street improvement permit requirements. Conditions of Approval for the design and improvement of the subdivision are required to be performed prior to the recordation of the tentative map, building permit, grading permit, or certificate of occupancy.

Further, the site is designated by the Community Plan for Regional Center Commercial land uses, corresponding to the C2-4D-SN Zone. The applicant is seeking a concurrent Transfer of Floor Area Rights, which is consistent with the provisions of the Community Plan and would allow for the development of the proposed project. Upon approval of the

entitlement requests, the design and improvement of the proposed subdivision would be consistent with the intent and purpose of the Community Plan.

(c) THE SITE IS PHYSICALLY SUITABLE FOR THE PROPOSED TYPE OF DEVELOPMENT.

The Project Site is currently developed with five structurally distinct but internally connected buildings previously occupied by the Los Angeles Times offices, a bank, and other office uses. The buildings were constructed between the 1930s and 1970s, and range from four to 10 stories in height. The buildings include the eight-story Times Building, the 4-story Plant Building, the 10-story Mirror Building, the six-story parking structure, and the six-story Executive Building. The existing on-site buildings comprise a total of 559,863 square feet of floor area. The project site is physically suitable for the proposed type of development. The topography of the Project Site and surrounding vicinity is relatively flat with a gentle slope to the south. The project site is located within an urbanized area. The project site is not located in a Methane Zone, Very High Fire Hazard Severity Zone, Alquist Priolo Zone, Fault Rupture Study Area, or landslide area.

The State of California Seismic Hazard Zone Map for the Los Angeles Quadrangle indicates that the Project Site is located in an area identified as having a potential for liquefaction. However, as discussed in the Project EIR, the foundations for the proposed tower structures and subterranean levels are anticipated to extend through the alluvial soils and into bedrock which is not susceptible to liquefaction or lateral spreading. In addition, historic drawings of the three structures to remain (Mirror Building, Plant Building, and Times Building) indicate that existing foundations appear to derive support in bedrock. Therefore, based on the anticipated depth of bedrock (20 to 25 feet below existing ground surface) and the historical perched groundwater depth of 20 to 25 feet, liquefaction and associated ground deformation, including lateral spreading, are not considered a potential hazard for the proposed structures or existing structures to remain.

The tract has been approved contingent upon the satisfaction of the Department of Building and Safety, Grading Division prior to the recordation of the map and issuance of any permits. The Department of Building and Safety, Grading Division has issued a Soils Report Approval Letter, dated January 9, 2017, stating that the referenced reports are acceptable, provided that the project complies with applicable conditions. The recommendations from the January 9, 2017 letter have been imposed as Conditions of Approval of the tract map. Therefore, based on the above, the site will be physically suitable for the proposed type of development.

(d) THE SITE IS PHYSICALLY SUITABLE FOR THE PROPOSED DENSITY OF DEVELOPMENT.

The General Plan identifies, through its Community and Specific Plans, geographic locations where planned and anticipated densities are permitted. Zoning standards for density are applied to sites throughout the city and are allocated based on the type of land use, physical suitability, and future population growth expected to occur. The adopted Central City Community Plan designates the subject site for Regional Center Commercial land uses, corresponding to the C2-4D-SN Zone. Community Plan Footnote No. 3, which is applicable to the Regional Center Commercial land use designation, states that the D Limitation for Height District No. 4D limits FAR to 6:1, except with a maximum of 13:1 FAR

with a Transfer of Floor Area Rights (TFAR). The Project is requesting a Transfer of Floor Area Rights for a maximum FAR of 9.42:1, and as such is consistent with the above provisions of the Community Plan.

The Project Site is located within the Greater Downtown Housing Incentive Area. Pursuant to LAMC 12.22 C.3(c), the Project Site is not limited as to area requirements for the maximum allowed number of dwelling units. The proposed 1,127 multi-family residential units are thus consistent with the LAMC. Therefore, the Project's proposed density and proposed Floor Area Ratio are consistent with the general provisions and area requirements of the Planning and Zoning Code.

The project vicinity is characterized by a concentration of government-related uses, high- and mid-rise office buildings, residential buildings, hotels, retail uses, museums, and cultural districts. Surrounding uses to the east and to the south are also within the C2-4D Zone. To the north of the Project Site is Grand Park and the Civic Center area of Downtown Los Angeles. The area surrounding the Project Site includes numerous governmental buildings within the Public Facilities (PF) Zone, including the Los Angeles County Law Library, the 10-story Los Angeles County Stanley Mosk Courthouse, and the 10-story Kenneth Hahn Hall of Administration to the northwest of the Project Site. The 20-story Clara Shortridge Folz Criminal Justice Center adjoins the north side of Grand Park. City Hall is located just to the northeast of the Project Site, and the 10-story Federal Courthouse is located to the west of the Project Site across Broadway. To the east of the Project Site across Spring Street is the 10-story Los Angeles Police Department (LAPD) Headquarters Building and the State of California Caltrans Building, occupying the block bounded by Main Street, 1<sup>st</sup> Street, Los Angeles Street, and 2<sup>nd</sup> Street.

The Project's floor area, density, and massing is appropriately scaled and situated given the uses in the surrounding area. The subject site is a relatively flat, infill lot in a developed urban area with adequate infrastructure. The area is easily accessible via improved streets, highways, and transit systems. The environmental review conducted by the Department of City Planning (Case No. ENV-2016-4676-EIR (SCH No. 2017061083), establishes that the physical characteristics of the site and the proposed density of development are generally consistent with existing development and urban character of the surrounding community. Therefore, the project site is physically suitable for the proposed density of development.

- (e) THE DESIGN OF THE SUBDIVISION AND THE PROPOSED IMPROVEMENTS ARE NOT LIKELY TO CAUSE SUBSTANTIAL ENVIRONMENTAL DAMAGE OR SUBSTANTIALLY AND AVOIDABLY INJURE FISH OR WILDLIFE OR THEIR HABITAT.

The EIR prepared for the project identifies no potential adverse impacts on fish or wildlife resources. The project vicinity is characterized by a concentration of government-related uses, high- and mid-rise office buildings, residential buildings, hotels, retail uses, museums, and cultural districts. The Project Site, as described in the EIR, is urbanized and built-out, and does not contain riparian or other sensitive natural community, and does not provide a natural habitat for either fish or wildlife. No water bodies or federally protected wetlands as defined by Section 404 of the Clean Water Act exist on the Project Site. The project site does not contain any natural open spaces, act as a wildlife corridor, contain riparian habitat, wetland habitat, migratory corridors, conflict with a Habitat Conservation Plan, nor possess any areas of significant biological resource value.

With regard to trees, as discussed in the Initial Study, the Project Site has been operating as an urban use for decades. At present, the adjacent street rights-of-ways (ROWs) are planted with 29 ornamental California Sycamore trees. Of these, 26 trees are considered to be more than 3 inches in trunk diameter. All 29 trees would remain under the Project. The Project would add a total of 17 additional California Sycamores along W. 1<sup>st</sup> Street, S. Broadway Street, S. Spring Street and W. 2<sup>nd</sup> Street. The Project would not remove any existing trees and would add trees and shrubs at the entrances to the Paseo and within the Paseo, which would increase ornamental plants and trees over existing conditions. Thus, the Project would not disturb any native or protected trees as defined by the Los Angeles Municipal Code (LAMC) Section 17.02 and impacts to street trees would be less than significant. In addition, the Project vicinity is highly urbanized and does not support habitat for candidate, sensitive, or special status plant species. Therefore, no impacts to candidate, sensitive, or special status plant species would occur.

However, the potential exists for protected bird species to be nesting in the street trees during Project construction. In order to avoid disturbance of nesting birds, Mitigation Measure BIO-MM-1 requires that any construction activities that occur during the nesting season (February 15 to August 31) shall require that all suitable habitat (i.e., street trees and shrubs) be surveyed for the presence of nesting birds by a qualified biologist before commencement of clearing and prior to grading permit issuance. The survey shall be conducted within 72 hours prior to the start of construction. If the required pre-construction survey detects any active nests, an appropriate buffer as determined by the biological monitor, shall be delineated, flagged, and avoided until the qualified biological monitor has verified that the young have fledged or the nest has otherwise become inactive. With implementation of these measures, which are conditions of approval on the tract map, impacts would be less than significant, and the proposed subdivision would not cause substantial environmental damage or substantially and avoidably injure tree resources.

As noted above, the project site is presently improved with existing office buildings, and does not contain any natural open spaces, act as a wildlife corridor, contain riparian habitat, wetland habitat, or migratory corridors. The EIR prepared for the project identifies no potential adverse impacts on fish or wildlife resources. The Project would not conflict with any protected tree ordinance or Habitat Conservation Plan, nor possess any areas of significant biological resource value. Therefore, the design of the subdivision would not cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

(f) THE DESIGN OF THE SUBDIVISION AND THE PROPOSED IMPROVEMENTS ARE NOT LIKELY TO CAUSE SERIOUS PUBLIC HEALTH PROBLEMS.

The proposed subdivision and subsequent improvements are subject to the provisions of the Los Angeles Municipal Code (e.g., the Fire Code, Planning and Zoning Code, Health and Safety Code) and the Building Code. Other health and safety related requirements as mandated by law would apply where applicable to ensure the public health and welfare (e.g., asbestos abatement, seismic safety, flood hazard management).

The Project is not located over a hazardous materials site or flood hazard area, and is not located on unsuitable soil conditions. The Project would not place any occupants or residents near a hazardous materials site or involve the use or transport of hazardous

materials or substances. The Phase I and Phase II Environmental Site Assessments conducted for the EIR did not encounter any Recognized Environmental Conditions on-site that would require mitigation. In addition, in the event that unforeseen suspect impacted soils are encountered during mass excavation activities for the future subterranean parking garage, such soil will be properly profiled and managed under a conventional soil management plan that will require removal, transport, and disposal of all impacted soils in accordance with all applicable regulatory requirements and under the oversight of all governmental agencies with jurisdiction.

The EIR fully analyzed the impacts of both construction and operation of the Project on the existing public utility and sewer systems, and determined that impacts are less than significant. The development is required to be connected to the City's sanitary sewer system, where the sewage will be directed to the Hyperion Treatment Plant, which has been upgraded to meet Statewide ocean discharge standards. The subdivision will be connected to the public sewer system and will have only a minor incremental increase on the effluent treated by the Hyperion Treatment Plant, which has adequate capacity to serve the project. No adverse impacts to the public health or safety would occur as a result of the design and improvement of the site. Therefore, the design of the subdivision and the proposed improvements are not likely to cause serious public health problems.

- (g) THE DESIGN OF THE SUBDIVISION AND THE PROPOSED IMPROVEMENTS WILL NOT CONFLICT WITH EASEMENTS ACQUIRED BY THE PUBLIC AT LARGE FOR ACCESS THROUGH OR USE OF PROPERTY WITHIN THE PROPOSED SUBDIVISION.

The site is surrounded by public streets and private properties that adjoin improved public streets and sidewalks designed and improved for the specific purpose of providing public access throughout the area. The project site does not adjoin or provide access to a public resource, natural habitat, Public Park, or any officially recognized public recreation area. Needed public access for roads and utilities will be acquired by the City prior to recordation of the proposed tract. Therefore, the design of the subdivision and the proposed improvements would not conflict with easements acquired by the public at large for access through or use of property within the proposed subdivision.

- (h) THE DESIGN OF THE PROPOSED SUBDIVISION WILL PROVIDE, TO THE EXTENT FEASIBLE, FOR FUTURE PASSIVE OR NATURAL HEATING OR COOLING OPPORTUNITIES IN THE SUBDIVISION. (REF. SECTION 66473.1)

In assessing the feasibility of passive or natural heating or cooling opportunities in the proposed subdivision design, the applicant has prepared and submitted materials which consider the local climate, contours, configuration of the parcel(s) to be subdivided and other design and improvement requirements.

Providing for passive or natural heating or cooling opportunities will not result in reducing allowable densities or the percentage of a lot which may be occupied by a building or structure under applicable planning and zoning in effect at the time the tentative map was filed.

The topography of the site has been considered in the maximization of passive or natural heating and cooling opportunities.

In addition, prior to obtaining a building permit, the subdivider shall consider building construction techniques, such as overhanging eaves, location of windows, insulation, exhaust fans; planting of trees for shade purposes and the height of the buildings on the site in relation to adjacent development.

These findings shall apply to both the tentative and final maps for Vesting Tentative Tract Map No. 74761.

Vincent P. Bertoni, AICP  
Advisory Agency



Alan Como, AICP  
City Planner  
Deputy Advisory Agency  
AC;LI;MZ;WL

Note: If you wish to file an appeal, it must be filed within 10 calendar days from the decision date as noted in this letter. Such appeal must be submitted on Master Appeal Form No. CP-7769.

**COVID-19 INTERIM APPEAL FILING PROCEDURES: Consistent with Mayor Eric Garcetti's "Safer At Home" directives to help slow the spread of COVID-19, the Department of City Planning is implementing new procedures for the filing of appeals for non-applicants that eliminate or minimize in-person interaction. There are two options for filing appeals, which are effective immediately and described in the Interim Appeal Filing Procedures attached to this Letter of Determination.**

For reference, the Department's Development Services Centers are located at:

Figueroa Plaza  
201 North Figueroa  
Street, 4th Floor  
Los Angeles,  
CA 90012  
(213) 482-7077

Marvin Braude  
San Fernando Valley  
Constituent Service Center  
6262 Van Nuys Boulevard,  
Room 251  
Van Nuys, CA 91401  
(818) 374-5050

West Los Angeles  
Development Services Center  
1828 Sawtelle Boulevard,  
2nd Floor  
Los Angeles, CA 90025  
(310) 231-2598

**Forms are also available on-line at <http://planning.lacity.org/>.**

If you seek judicial review of any decision of the City pursuant to California Code of Civil Procedure Section 1094.5, the petition for writ of mandate pursuant to that section must be filed no later than the 90th day following the date on which the City's decision became final pursuant to California Code of Civil Procedure Section 1094.6. There may be other time limits which also affect your ability to seek judicial review.

If you have any questions, please call Development Services Center staff at (213) 482-7077, (818) 374-5050, or (310) 231-2598.

# COVID-19 UPDATE

## Interim Appeal Filing Procedures

March 27, 2020



Consistent with Mayor Eric Garcetti's "Safer At Home" directives to help slow the spread of COVID-19, the Department of City Planning is implementing new procedures for the filing of appeals for non-applicants that eliminate or minimize in-person interaction. There are two options for filing appeals, which are effective immediately and described below.

### OPTION 1: EMAIL PLUS US MAIL

This is a two-step process including pre-clearance by email of the appeal application followed by application and payment submittal via US Mail.

#### STEP 1:

Email [planning.figcounter@lacity.org](mailto:planning.figcounter@lacity.org) with the subject line: "**Request to File Appeal.**" In the email body provide:

- The case number
- Appellant contact information (name, email, telephone number)

Include as individual attachments to the email:

- Copy of Signed Appeal Application
- Justification
- Letter of Determination

City Planning staff will contact the appellant to confirm whether the appeal is complete and meets the applicable provisions of the Los Angeles Municipal Code (LAMC). The appellant will then be instructed to move forward with Step 2.

#### STEP 2:

Send appeal application via US Mail, postmarked no later than the last day of the appeal period. The package shall include:

- Original Appeal Application (wet signatures),
- Copy of email correspondence with City Planning staff (from Step 1)
- Appeal fee, check payable to the City of Los Angeles (\$109.47 for an aggrieved party, not the Project Applicant.)

#### Mail the appeal application to:

Department City Planning - Metro DSC  
201 N. Figueroa St., 4th Floor  
Los Angeles, CA 90012

City Planning staff will email and mail the appellant with a receipt for payment. Note: only the original application, email, and check need to be sent via US Mail. This ensures a standard envelope with standard postage is sufficient, and no trip to the Post Office is necessary. Steps 1 and 2 must both be completed. An email alone is not sufficient to satisfy appeal requirements.

### OPTION 2: DROP OFF AT DSC

An appellant may continue to submit an appeal application and payment at any of the three Development Services Center (DSC) locations. City Planning established drop off areas at the DSCs with physical boxes where appellants can drop off appeal applications and payment. **Drop off areas are monitored in secure locations outside the three DSCs (Metro/Downtown, Van Nuys, and West Los Angeles) and are available during regular business hours.**

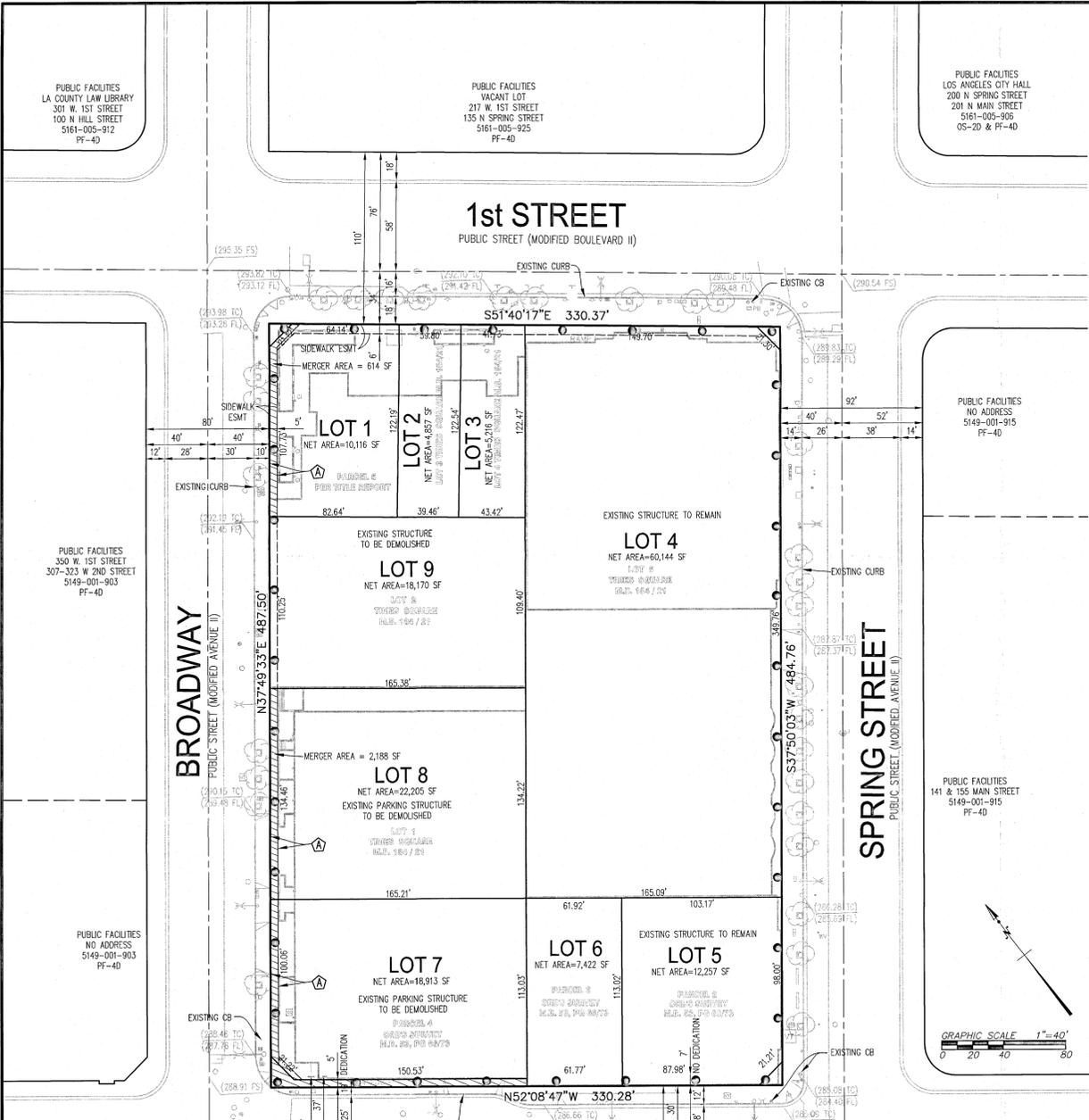
City Planning staff will follow up with the appellant via email and phone to:

- Confirm that the appeal package is complete and meets the applicable provisions of the LAMC
- Provide a receipt for payment

**VTT-74761-1A**  
**Exhibit C**

**VESTING TENTATIVE TRACT MAP NO. 74761**

**IN THE CITY OF LOS ANGELES**  
**FOR MERGER AND CONDOMINIUM PURPOSES**



- NOTES:**
- EXISTING USE: COMMERCIAL BUILDINGS
  - SITE ADDRESS: 121 SPRING STREET, 202-234 W. 1ST STREET, 100-142 BROADWAY AND 205-221 W. 2ND STREET LOS ANGELES, CA 90012
  - ASSESSOR PARCEL NUMBERS: 5149-001-003, -004, -005, -006 & -007
  - THOMAS GUIDE: PAGE 634, GRID F4
  - COMMUNITY PLAN: CENTRAL CITY
  - EXISTING AND PROPOSED GENERAL PLAN DESIGNATION: REGIONAL CENTER COMMERCIAL
  - EXISTING AND PROPOSED ZONING: C2-40--SN
  - PROPOSED DEVELOPMENT:  
1,127 NEW RESIDENTIAL CONDOMINIUMS UNITS  
25,600 SF OF NEW RETAIL  
EXISTING 224,672 SF OFFICE BLDG AND 415 STALL PARKING STRUCTURE TO BE DEMOLISHED  
331,108 OFFICE SPACE TO REMAIN  
45,000 EXISTING OFFICE SPACE TO BE CONVERTED TO RETAIL  
34,572 NEW RETAIL
  - PROPOSED PARKING: REQUIRED AND PROVIDED PARKING PROVIDED PER LOS ANGELES MUNICIPAL CODE.
  - TREES:  
ALL ONSITE TREES ARE PLOTTED ON THE TENTATIVE MAP. THERE ARE NO PROTECTED TREES ONSITE. ALL NON-PROTECTED TREES ON SITE MAY BE REMOVED. THERE ARE 31 STREET TREES THAT MAY BE REMOVED AND REPLACED.
  - EXISTING UTILITIES:  
12" SEWER MAIN IN BROADWAY  
8" AND 18" SEWER MAIN IN 1ST STREET  
8" SEWER MAIN IN 2ND STREET  
18" SEWER MAIN IN SPRING STREET  
18" LADWP WATER MAIN IN BROADWAY  
8" LADWP WATER MAIN IN 2ND STREET  
12" LADWP WATER MAIN IN SPRING STREET  
12" AND 20" LADWP WATER MAIN IN 1ST STREET  
21" RCP STORM DRAIN IN 1ST STREET  
14" VCP STORM DRAIN IN 2ND STREET
  - EXISTING DRAINAGE:  
THE SITE CURRENTLY DRAINS TO ADJACENT EXISTING STREETS.
  - DISTRICT MAP: 130-5A213.
  - FLOOD ZONE: ZONE C  
FEMA PANEL: 0601370074C
  - PROPERTY IS NOT IN A VERY HIGH FIRE HAZARD SEVERITY ZONE.
  - PROPERTY IS NOT IN A GEOLOGICALLY HAZARDOUS ZONE.
  - PROPERTY IS NOT IN A HILLSIDE GRADING AREA
  - PROPERTY IS INSIDE METHANE ZONE
  - GROSS AREA TO CENTERLINE = 225,730 (5.18205 ACRES)
  - EXISTING LOT AREA = 157,665 SF (3.61949 ACRES)  
AREA TO BE DEDICATED = 1,165 SF (0.02674 ACRES)  
AREA TO BE MERGED = 2,802 SF (0.06425 ACRES)  
NET LOT AREA = 159,302 SF (3.65707 ACRES)
  - PROPERTY IS NOT WITHIN THE VICINITY OF MULHOLLAND SCENIC PARKWAY.
  - TOTAL EXPORT AMOUNT EXCEEDS 20,000 CY; THEREFORE, HAUL ROUTE IS BEING REQUESTED. ESTIMATED CUT = 364,000 CUBIC YARDS, ESTIMATED FILL = 0 CUBIC YARDS AND ESTIMATED EXPORT = 364,000 CUBIC YARDS
  - SUBSTRUCTURE PLAN LIST:  
SUBSTRUCTURE MAP NOS. SUB-77-3 AND 77-6  
DRAINAGE MAP NO. 516  
SEWER WYE MAPS NO. 130-5A213

**LEGAL DESCRIPTION**

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

**PARCEL 1:**  
LOTS 1 TO 5 INCLUSIVE OF TIMES SQUARE, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 184 PAGE 21 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

**PARCEL 2:**  
THAT PORTION OF BLOCK 2 OF ORD'S SURVEY, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 53 PAGES 66 ET SEQ., OF MISCELLANEOUS RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:  
BEGINNING AT THE INTERSECTION OF THE WEST LINE OF SPRING STREET, 80 FEET WIDE, WITH THE NORTH LINE OF SECOND STREET, 60 FEET WIDE, AS SAID STREETS ARE SHOWN ON MAP OF TIMES SQUARE, AS PER MAP RECORDED IN BOOK 184 PAGE 21 OF MAPS; THENCE ALONG SECOND STREET, NORTH 52 DEGREES 08 MINUTES 50 SECONDS WEST 102.97 FEET TO THE WEST FACE OF THE WEST WALL OF THE BRYSON BLOCK, AS THE SAME STOOD IN MARCH 1934; THENCE ALONG SAID WEST FACE, NORTH 37 DEGREES 44 MINUTES EAST 120.07 FEET TO THE SOUTH LINE OF LOT 5 OF SAID TIMES SQUARE; THENCE ALONG SAID SOUTH LINE, SOUTH 52 DEGREES 07 MINUTES EAST 103.17 FEET TO THE WEST LINE OF SPRING STREET; THENCE SOUTH 37 DEGREES 50 MINUTES WEST 120 FEET TO THE POINT OF BEGINNING.

**PARCEL 3:**  
THAT PORTION OF BLOCK 2 OF ORD'S SURVEY, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 53 PAGES 66, ET SEQ., OF MISCELLANEOUS RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:  
BEGINNING IN THE NORTH LINE OF SECOND STREET, 60 FEET WIDE, DISTANT THEREON NORTH 52 DEGREES 08 MINUTES 50 SECONDS WEST 102.97 FEET TO THE WEST LINE OF SPRING STREET, 80 FEET WIDE, AS SAID STREETS ARE SHOWN ON MAP OF TIMES SQUARE, RECORDED IN BOOK 184 PAGE 21 OF MAPS, SAID POINT OF BEGINNING BEING THE WEST FACE OF THE BRYSON BLOCK AS IT STOOD IN 1934 AND BEING ALSO IN THE WEST LINE OF LAND DESCRIBED IN DEED RECORDED IN BOOK 194 PAGE 486 OF DEEDS; THENCE ALONG SAID WEST LINE, NORTH 37 DEGREES 44 MINUTES EAST 120.05 FEET TO THE SOUTH LINE OF SAID TIMES SQUARE; THENCE ALONG SAID SOUTH LINE, NORTH 52 DEGREES 07 MINUTES WEST 61.93 FEET TO THE NORTH PROLONGATION OF THE EAST FACE OF THE EAST WALL OF THE HELLMAN BUILDING AS IT STOOD IN 1941; THENCE ALONG SAID PROLONGATION AND EAST FACE AND PROLONGATION THEREOF, SOUTH 37 DEGREES 39 MINUTES 10 SECONDS WEST 120.09 FEET TO SAID NORTH LINE OF SECOND STREET; THENCE SOUTH 52 DEGREES 08 MINUTES 50 SECONDS EAST 61.76 FEET TO THE POINT OF BEGINNING.

**PARCEL 4:**  
THAT PORTION OF BLOCK 2 OF ORD'S SURVEY, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 53 PAGES 66 TO 73, INCLUSIVE OF MISCELLANEOUS RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY; BOUNDED NORTHEAST BY THE SOUTHWEST LINE OF TIMES SQUARE, AS PER MAP RECORDED IN BOOK 184 PAGE 21 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, AND BOUNDED SOUTHEAST BY THE NORTHWEST LINE OF LAND DESCRIBED IN DEED TO WEST COAST MOTOR PARKS INC., RECORDED IN BOOK 18757 PAGE 117, OFFICIAL RECORDS IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

**PARCEL 5:**  
THAT PORTION OF BLOCK 2 OF ORD'S SURVEY, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 53 PAGES 66 TO 73 INCLUSIVE OF MISCELLANEOUS RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:  
BEGINNING AT THE MOST NORTHERLY CORNER OF LOT 2 OF TIMES SQUARE, IN SAID CITY, COUNTY AND STATE, AS SHOWN ON THE MAP RECORDED IN BOOK 184 PAGE 21 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER; THENCE ALONG THE NORTHEASTERLY LINE OF SAID LOT 2, SOUTH 51 DEGREES 45 MINUTES 30 SECONDS EAST 82.64 FEET TO THE MOST WESTERLY CORNER OF LOT 3 OF SAID TIMES SQUARE; THENCE ALONG THE NORTHWESTERLY LINE OF SAID LOT 3, NORTH 38 DEGREES 31 MINUTES 40 SECONDS EAST 122.80 FEET TO THE MOST NORTHERLY CORNER OF SAID LOT 3; THENCE ALONG FIRST STREET, NORTH 51 DEGREES 40 MINUTES 20 SECONDS WEST 84.14 FEET TO THE SOUTHEASTERLY LINE OF BROADWAY AS SHOWN ON THE MAP OF SAID TIMES SQUARE; THENCE ALONG BROADWAY SOUTH 37 DEGREES 49 MINUTES 30 SECONDS WEST 122.73 FEET TO THE POINT OF BEGINNING.

**BASIS OF BEARING:**  
THE BEARING NORTH 52°08'47" WEST BEING THE CENTERLINE OF SECOND STREET AS SHOWN ON TRACT NO. 60578, ON FILE IN BOOK 1303, PAGE 95 AND 96 OF MAPS IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.

**BENCH MARK:**  
CITY OF LOS ANGELES BM #12-06812  
SPIKE EAST CURB BROADWAY, 4.5 FEET NORTH OF BEGIN CURB RETURN NORTH OF THIRD STREET; NORTH END OF CATCH BASIN.

**ELEVATION = 284.153 (NAVD 1988, 2000 ADJUSTMENT)**

**EXISTING EASEMENTS:**

▲ PURPOSE: IRREVOCABLE OFFER OF DEDICATION OF AN EASEMENT FOR PUBLIC STREET OR HIGHWAY PURPOSES  
IN FAVOR OF: CITY OF LOS ANGELES  
RECORDING DATA: INSTRUMENT NO. 2169 OF OFFICIAL RECORDS JUNE 5, 1970  
ACCEPTED JANUARY 20, 1971 AS INSTRUMENT NO. 1648, OF OFFICIAL RECORDS PLOTTED HEREON, TO BE MERGED ON MAP

**OWNER:**  
NAME: ONNI CAPITAL LLC  
CONTACT: MARK SPECTOR  
ADDRESS: 2200 E. CAMELBACK RD SUITE 225,  
PHOENIX, AZ 85016  
PHONE: (213) 629-2041

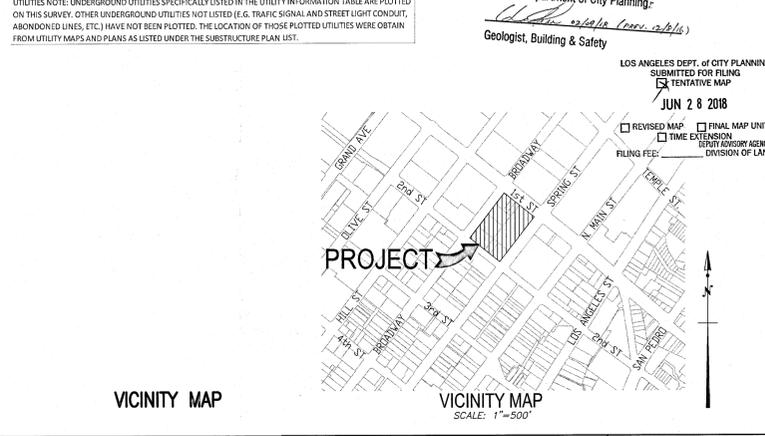
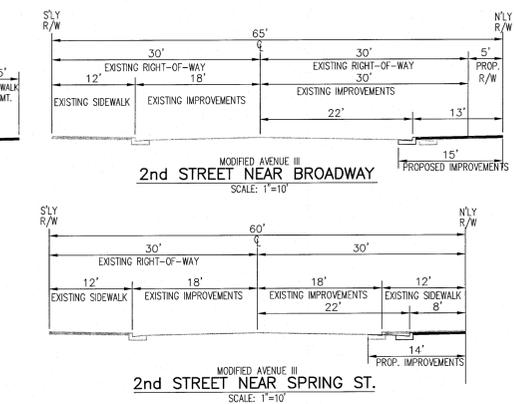
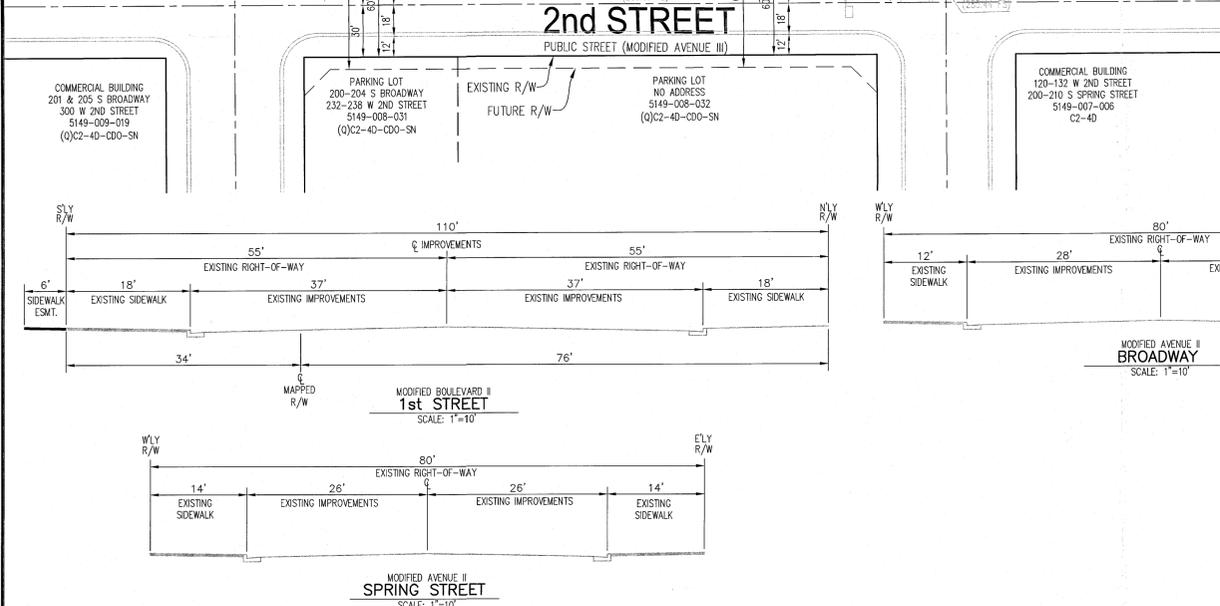
**CIVIL ENGINEER:**  
NAME: FORMA ENGINEERING INC.  
CONTACT: MIKE WHITE  
ADDRESS: 10814 RESEDA BLVD,  
NORTHridge, CA 91326  
PHONE: (818) 832-1710  
FAX: (818) 832-1740

**UTILITY INFORMATION**

UTILITY	SERVICE BY	TELEPHONE NO.	ADDRESS
POWER	CITY OF LOS ANGELES, DWP	(213) 977-6000	201 N. FIGUEROA, 4TH FLOOR, LA, CA
WATER	CITY OF LOS ANGELES, DWP	(213) 977-6001	201 N. FIGUEROA, 4TH FLOOR, LA, CA
TELEPHONE	AT&T	(925) 977-2333	2333 BROOKHURST ST. HUNTINGTON BEACH
GAS	THE GAS COMPANY	(310) 687-2099	1701 N. BULLIS RD. COMPTON, CA
STORM DRAIN	CITY OF LOS ANGELES	(213) 977-6093	201 N. FIGUEROA, 4TH FLOOR, LA, CA
SEWER	CITY OF LOS ANGELES	(213) 977-6092	201 N. FIGUEROA, 4TH FLOOR, LA, CA
CABLE TV	TIME WARNER CABLE	(888) 892-2253	3500 TOPANGA CANYON BLVD, CHATSWORTH, CA

Tentative Map VTT-74761-1A and the accompanying geological and soils engineering reports dated 4/25/16 are acceptable for the initial filing with the Department of City Planning.

*Clifford A. Wilson* (Seal)  
Geologist, Building & Safety



PREPARED FOR:  
**ONNI CAPITAL LLC**  
315 W. 9TH STREET, SUITE 801 LOS ANGELES, CA 90015  
CONTACT: MARK SPECTOR TEL - (213) 629-2041

VESTING TENTATIVE MAP  
TRACT 74761  
121 SPRING STREET  
LOS ANGELES, CA 90015

DEVELOPER'S ENGINEER:  
**FORMA ENGINEERING INC.**  
10814 Reseda Boulevard, Northridge, CA 91326  
Phone: (818) 832-1710 Fax: (818) 832-1740  
*Lawrence Wilson*  
LAWRENCE WILSON P.L.S. 6712 1/04/2018 DATE



No.	DATE	REVISION

DESIGNER: M.W.  
CHECKED BY: M.W.  
DATE: 01/04/2018  
SHEET OF

LOS ANGELES DEPT. OF CITY PLANNING  
SUBMITTED FOR FILING  
TENTATIVE MAP  
JUN 2 8 2018

## Chapter 4

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# Mitigation Monitoring Program

## 1. Introduction

This Mitigation Monitoring Program (MMP) has been prepared pursuant to Public Resources Code Section 21081.6, which requires a Lead Agency to adopt a “reporting or monitoring program for changes to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.” In addition, Section 15097(a) of the State California Environmental Quality Act (CEQA) Guidelines requires that a public agency adopt a program for monitoring or reporting mitigation measures and project revisions, which it has required to mitigate or avoid significant environmental effects. This MMP has been prepared in compliance with the requirements of CEQA, Public Resources Code Section 21081.6 and Section 15097 of the CEQA Guidelines.

The City of Los Angeles (City) is the Lead Agency for the Project and therefore is responsible for administering and implementing the MMP. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity that accepts the delegation; however, until mitigation measures have been completed, the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program.

An Environmental Impact Report (EIR) has been prepared to address the potential environmental impacts of the Project. The evaluation of the Project’s impacts in the EIR takes into consideration the project design features, which were voluntarily incorporated into the project description, and applies mitigation measures needed to avoid or reduce potentially significant environmental impacts. This MMP is designed to monitor implementation of the project design features and mitigation measures identified for the Project.

## 2. Organization

As shown on the following pages, each project design feature and mitigation measure for the Project is listed and categorized by impact area, with an accompanying identification of the following:

- Enforcement Agency: The agency with the power to enforce the project design feature or mitigation measure;

- **Monitoring Agency:** The agency to which reports involving feasibility, compliance, implementation and development are made;
- **Monitoring Phase:** The phase of the Project during which the project design feature or mitigation measure shall be monitored;
- **Monitoring Frequency:** The frequency at which the project design feature or mitigation measure shall be monitored; and
- **Action Indicating Compliance:** The action of which the Enforcement or Monitoring Agency indicates that compliance with the required project design feature or mitigation measure has been implemented.

### **3. Administrative Procedures and Enforcement**

This MMP shall be enforced throughout all phases of the Project. The Applicant shall be responsible for implementing each project design feature and mitigation measure and shall be obligated to provide verification, as identified below, to the appropriate monitoring and enforcement agencies that each project design feature and mitigation measure has been implemented. The Applicant shall maintain records demonstrating compliance with each project design feature and mitigation measure listed below. Such records shall be made available to the City upon request.

During the construction phase and prior to the issuance of building permits, the Applicant shall retain an independent Construction Monitor (either via the City or through a third-party consultant, the election of which is in the sole discretion of the Applicant), approved by the City of Los Angeles Department of City Planning which approval shall not be reasonably withheld, who shall be responsible for monitoring implementation of project design features and mitigation measures during construction activities consistent with the monitoring phase and frequency set forth in this MMP.

The Construction Monitor shall also prepare documentation of the Applicant's compliance with the project design features and mitigation measures during construction every 90 days in a form satisfactory to the Department of City Planning. The documentation must be signed by the Applicant and Construction Monitor and be included as part of the Applicant's Compliance Report. The Construction Monitor shall be obligated to immediately notify the Applicant of any non-compliance with mitigation measures and project design features. If the Applicant does not correct the non-compliance within two days from the time of notification, the Construction Monitor shall be obligated to report such non-compliance to the Enforcement Agency. Any continued non-compliance shall be appropriately addressed by the Enforcement Agency.

## 4. Program Modification

After review and approval of the final MMP by the Lead Agency, minor changes and modifications to the MMP are permitted, but can only be made by the Applicant or its successor subject to the approval by the City. The Lead Agency, in conjunction with any appropriate agencies or departments, will determine the adequacy of any proposed change or modification. The flexibility is necessary due to the nature of the MMP, the need to protect the environment in the most efficient manner, and the need to reflect changes in regulatory conditions, such as but not limited to changes to building code requirements. No changes will be permitted unless the MMP continues to satisfy the requirements of CEQA, as determined by the Lead Agency.

The Project shall be in substantial conformance with the Project design features and mitigation measures contained in this MMP. The enforcing departments or agencies may determine substantial conformance with the Project design features and mitigation measures in the MMP in their reasonable discretion. If the department or agency cannot find substantial conformance, a Project design feature or mitigation measure may be modified or deleted as follows: the enforcing department or agency, or the decision maker for a subsequent discretionary project related approval, finds that the modification or deletion complies with CEQA, including CEQA Guidelines Sections 15162 and 15164, including by preparing an addendum or subsequent environmental clearance, if necessary, to analyze the impacts from the modification to or deletion of the Project design features or mitigation measures. Any addendum or subsequent CEQA clearance that may be required in connection with the modification or deletion shall explain why the Project design feature or mitigation measure is no longer needed, not feasible, or the other basis for modifying or deleting the Project design feature or mitigation measure. Under this process, the modification or deletion of a Project design feature or mitigation measure shall not in and of itself require a modification to any Project discretionary approval unless the Director of Planning also finds that the change to the Project design features or mitigation measures results in a substantial change to the Project or the non-environmental conditions of approval.

## 5. Project Design Features, Mitigation Measures, and Implementation

### a) Aesthetics

#### (1) Project Design Features

**PDF AES-1: Construction Fencing:** Temporary construction fencing will be placed along the periphery of the Project Site to screen construction activity of new buildings and any rehabilitation of exteriors of the Times, Plant, and Mirror Buildings from view at the street level. The fence will be located along all perimeters of the Project Site with a minimum height of 8 feet. The Project

Applicant will ensure through appropriate postings and daily visual inspections that no unauthorized materials are posted on any temporary construction barriers or temporary pedestrian walkways that are accessible/visible to the public, and that such temporary barriers and walkways are maintained in a visually attractive manner (i.e., free of trash, graffiti, peeling postings and of uniform paint color or graphic treatment) throughout the construction period.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Construction

**Monitoring Frequency:** Periodic field inspections during construction

**Action Indicating Compliance:** Field inspection sign-off

**PDF AES-2: Screening of Mechanical Equipment and Utilities:** Mechanical, electrical, and roof top equipment (including Heating, Ventilation, and Air Conditioning [HVAC] systems), as well as building appurtenances, will be integrated into the Project's architectural design (e.g., placed behind parapet walls) and be screened from view from public rights-of-way.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction; Construction

**Monitoring Frequency:** Once at Project plan check; Once during field inspection

**Action Indicating Compliance:** Plan approval and issuance of applicable building permit; Issuance of Certificate of Occupancy

**PDF AES-3: Glare.** Glass used in building façades will be anti-reflective or treated with an anti-reflective coating in order to minimize glare (e.g., minimize the use of glass with mirror coatings). Consistent with applicable energy and building code requirements, including Section 140.3 of the California Energy Code as may be amended, glass with coatings required to meet the Energy Code requirements shall be permitted.

**Enforcement Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction; Construction

**Monitoring Frequency:** Once at Project plan check; Once during field inspection

**Action Indicating Compliance:** Plan approval and issuance of applicable building permit; Issuance of Certificate of Occupancy

**PDF AES-4: Lighting.** Construction and operational lighting, including vehicle headlights within the parking podium, will be shielded and/or directed downward (or on the specific on-site feature to be lit) in such a manner as to preclude light pollution or light trespass onto adjacent uses that would cause more than two foot-candles of lighting intensity or generate direct glare onto exterior glazed windows or glass doors of existing and anticipated future adjacent uses.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Construction; Pre-operation

**Monitoring Frequency:** Once at Project plan check; Once during field inspection following construction

**Action Indicating Compliance:** Plan approval and issuance of applicable building permit; Issuance of Certificate of Occupancy

**PDF AES-5: Screening of Loading Areas.** All commercial loading for the new development will be conducted interior to the buildings or screened from public view.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

<b>Monitoring Agency:</b>	City of Los Angeles Department of Building and Safety
<b>Monitoring Phase:</b>	Pre-construction; Construction
<b>Monitoring Frequency:</b>	Once at Project plan check; Once during field inspection
<b>Action Indicating Compliance:</b>	Plan approval and issuance of applicable building permit; Issuance of Certificate of Occupancy

## b) Air Quality

### (1) Project Design Features

**PDF AQ-1: Green Building Features:** The Project will be designed to achieve the equivalent of the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Silver Certification level for new buildings. The Project will demonstrate compliance with the LEED Silver Certification or equivalent by providing architectural and engineering documentation, building energy modeling simulations, and other supporting evidence consistent with USGBC accepted documentation standards. Pre-construction documentation that indicates the Project is designed to achieve the number of points required for LEED Silver Certification will be provided to the City prior to building permit issuance. Post-construction documentation that indicates the Project operates within the expected parameters to achieve the number of points required for LEED Silver Certification will be provided to the City after completion of LEED Silver Certification commissioning activities.

<b>Enforcement Agency:</b>	City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety
<b>Monitoring Agency:</b>	City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety
<b>Monitoring Phase:</b>	Pre-construction; Operation
<b>Monitoring Frequency:</b>	Once at Project plan check prior to issuance of grading permit; Once after completion of LEED Silver Certification commissioning activities

**Action Indicating Compliance:** Plan approval and issuance of applicable building permit; Post-construction documentation that indicates the Project would achieve the number of points required for LEED Silver Certification

**PDF AQ-2: Electric Vehicle Parking Features:** The Project will designate a minimum of ten (10) percent of the Code-required on-site nonresidential parking for carpool and/or alternative-fueled vehicles. The Project will ensure that at least twenty (20) percent of the total code-required parking spaces provided for all types of parking facilities are capable of supporting future electric vehicle supply equipment (EVSE), with 5 percent of the Code-required spaces further improved with electric vehicle charging stations. Plans will indicate the proposed type and location(s) of EVSE and also include raceway method(s), wiring schematics and electrical calculations to verify that the electrical system has sufficient capacity to simultaneously charge all electric vehicles at all designated EV charging locations at their full rated amperage. Plan design will be based upon Level 2 or greater EVSE at its maximum operating capacity. Only raceways and related components are required to be installed at the time of construction. When the application of the 20 percent results in a fractional space, the Applicant will round up to the next whole number. A label stating “EV CAPABLE” will be posted in a conspicuous place at the service panel or subpanel and next to the raceway termination point.

**Enforcement Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction; Construction

**Monitoring Frequency:** Once at Project plan check prior to issuance of grading permit; Once during field inspection

**Action Indicating Compliance:** Plan approval and issuance of applicable building permit; Issuance of Certificate of Occupancy

## (2) Mitigation Measures

**MM-AQ-1:** The Applicant shall implement construction equipment features for equipment operating at the Project Site. These features shall be included in applicable bid documents and successful contractor(s) must demonstrate the

ability to supply such equipment prior to the commencement of any construction activities. Construction features will include the following:

- a) During plan check, the Project representative shall make available to the lead agency and SCAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used during any of the construction phases. The inventory shall include the horsepower rating, engine production year, and certification of the specified Tier standard. A copy of each such unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided on-site at the time of mobilization of each applicable unit of equipment to allow the Construction Monitor to compare the on-site equipment with the inventory and certified Tier specification and operating permit. Off-road diesel-powered equipment equal to or greater than 50 horsepower that will be used during any portion of the construction activities shall meet or exceed the Tier 4 standards. Construction contractors supplying heavy duty diesel equipment greater than 50 horsepower shall be encouraged to apply for SCAQMD SOON funds. Information including the SCAQMD website shall be provided to each contractor which uses heavy duty diesel for on-site construction activities.
- b) Equipment such as tower cranes and signal boards shall be electric or alternative fueled (i.e., non-diesel). Pole power shall be made available for use for electric tools, equipment, lighting, etc. Construction equipment such as tower cranes and signal boards shall utilize electricity from power poles or alternative fuels (i.e., non-diesel), rather than diesel power generators and/or gasoline power generators. If stationary construction equipment, such as diesel- or gasoline-powered generators, must be operated continuously, such equipment shall be located at least 100 feet from sensitive land uses (e.g., residences, schools, childcare centers, hospitals, parks, or similar uses), whenever possible.
- c) Alternative-fueled generators shall be used when commercial models that have the power supply requirements to meet the construction needs of the Project are commercially available from local suppliers/vendors. The determination of commercial availability of such equipment will be made by the City prior to issuance of grading or building permits based on applicant-provided evidence of the availability or unavailability of alternative-fueled generators and/or evidence obtained by the City from expert sources such as construction contractors in the region.

**Enforcement Agency:**

City of Los Angeles Department of Building and Safety; South Coast Air Quality Management District

**Monitoring Agency:** City of Los Angeles Department of Building and Safety; City of Los Angeles Department of City Planning

**Monitoring Phase:** Pre-construction; Construction

**Monitoring Frequency:** Once during Project plan check; Continuous field inspections during construction, with quarterly reporting

**Action Indicating Compliance:** Issuance of applicable building permit; Field inspection sign-off;

**MM-AQ-2:** The Applicant shall implement the following measures to reduce the emissions of air pollutants generated by heavy-duty diesel-powered equipment operating at the Project Site:

- a) Contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues shall have their engines turned off after 5 minutes when not in use, to reduce vehicle emissions.
- b) All construction equipment shall be properly tuned and maintained in accordance with the manufacturer's specifications. The contractor shall keep documentation on-site demonstrating that the equipment has been maintained in accordance with the manufacturer's specifications. Tampering with construction equipment to increase horsepower or to defeat emission control devices shall be prohibited.
- c) Construction activities shall be discontinued during second-stage smog alerts. A record of any second-stage smog alerts and of discontinued construction activities as applicable shall be maintained by the Contractor on-site.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety; South Coast Air Quality Management District

**Monitoring Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Construction

**Monitoring Frequency:** Continuous field inspections during construction, with quarterly reporting

**Action Indicating Compliance:** Field inspection sign-off

**MM-AQ-3: Landscaping Equipment:** The Project representative will require that landscaping equipment used on the Project Site be electric- or battery-powered, rather than liquid fossil-fueled or use equipment that do not require a power or fuel source. Prior to occupancy of the residential towers, the Project representative shall provide documentation to the City of the use of landscaping contractors, service providers, or maintenance crews that will use equipment that meet the specified requirements. Documentation shall be maintained for the duration of landscaping services and made available to the City upon request.

**Enforcement Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction; Pre-occupancy

**Monitoring Frequency:** Once at Project plan check prior to issuance of grading permit; Once prior to issuance of Certificate of Occupancy

**Action Indicating Compliance:** Plan approval and issuance of applicable building permit; Issuance of Certificate of Occupancy

**MM-AQ-4: Restaurant Charbroiling:** The Project representative will limit the number of restaurants permitted to utilize under-fired charbroiling equipment to two restaurants or less. Restaurants with under-fired charbroiling equipment will meet applicable SCAQMD emission control requirements. Prior to occupancy of the designated commercial spaces by restaurant tenants, the Project representative shall provide documentation to the City of the number of Project Site restaurants with under-fired charbroiling equipment. Documentation shall be maintained and made available to the City upon request.

**Enforcement Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety; South Coast Air Quality Management District

**Monitoring Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction; Pre-occupancy

**Monitoring Frequency:** Once at Project plan check prior to issuance of grading permit; Once prior to issuance of Certificate of Occupancy for the commercial space by restaurant tenant

**Action Indicating Compliance:** Plan approval and issuance of applicable building permit; Issuance of Certificate of Occupancy for the commercial space by restaurant tenant

**MM-AQ-5: Emergency Generators:** The Project representative will schedule routine maintenance and testing of the emergency generators installed on the Project Site on different days. Prior to the installation of emergency generators, the Project representative shall supply documentation to the City that emergency generator testing by contractors, service providers, or maintenance crews will be conducted in accordance with the specified requirements. The Project representative shall maintain records of emergency generator testing, including testing dates, which shall be made available to the City upon request.

**Enforcement Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction

**Monitoring Frequency:** Once at Project plan check prior to issuance of grading permit;

**Action Indicating Compliance:** Plan approval and issuance of applicable building permit

## c) Biological Resources

### (1) Mitigation Measures

**MM-BIO-1:** Prior to issuance of a grading permit, the Project Applicant shall demonstrate that the following requirements have been included in the Project construction plan:

1. Any construction activities that occur during the nesting season (February 15 to August 31) shall require that all suitable habitat (i.e., street trees and shrubs) be surveyed for the presence of nesting birds by a qualified biologist, retained by the Applicant as approved by the City of Los Angeles

- Building and Safety, before commencement of clearing and prior to grading permit issuance. The survey shall be conducted within 72 hours prior to the start of construction. A copy of the pre-construction survey shall be submitted to the City of Los Angeles Building and Safety.
2. If the required pre-construction survey detects any active nests, an appropriate buffer as determined by the biological monitor, shall be delineated, flagged, and avoided until the qualified biological monitor has verified that the young have fledged or the nest has otherwise become inactive.

<b>Enforcement Agency:</b>	City of Los Angeles Department of Building and Safety
<b>Monitoring Agency:</b>	City of Los Angeles Department of Building and Safety
<b>Monitoring Phase:</b>	Pre-construction; Construction
<b>Monitoring Frequency:</b>	Once prior to issuance of building permit; Periodic field inspection during construction
<b>Action Indicating Compliance:</b>	Plan approval and issuance of applicable building permit; Field inspection sign-off

## d) Cultural Resources

### (1) Project Design Features

**PDF CUL-1:** The Project will prepare a Historic Structure Report (HSR) that will further document the history of the Times, Plant, and Mirror Buildings and guide their rehabilitation in compliance with the Secretary of the Interior's Standards for Rehabilitation (Standards). The HSR will be completed prior to the development of architectural or engineering plans for the rehabilitation. The HSR will be prepared based upon the National Park Service's Preservation Brief #43: The Preparation and Use of Historic Structure Reports. The HSR will provide documentary, graphic, and physical information about the existing conditions of the character-defining features and make recommendations for both changes to the buildings to suit new uses and modern amenities as well as their on-going maintenance after Project completion. The HSR will specifically address the treatment of the west elevations with regard to the demolition of the Executive Building and parking structure as well as a new design that combines the rehabilitation of the lower stories and reconstruction of the upper stories.

<b>Enforcement Agency:</b>	City of Los Angeles Department of City Planning, City of Los Angeles Office of Historic Resources; City of Los Angeles Department of Building and Safety
<b>Monitoring Agency:</b>	City of Los Angeles Department of City Planning, City of Los Angeles Office of Historic Resources; City of Los Angeles Department of Building and Safety
<b>Monitoring Phase:</b>	Pre-construction
<b>Monitoring Frequency:</b>	Prior to issuance of building permit
<b>Action Indicating Compliance:</b>	Plan approval and issuance of the applicable building permit

## (2) Mitigation Measures

**MM-CUL-1: Historic American Building Survey (HABS):** Prior to the issuance of a demolition permit, the Applicant shall have prepared HABS Level II documentation for the Executive Building and parking structure according to the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation. The HABS report shall:

1. Be prepared by historic preservation professionals meeting the Secretary of the Interior's Professional Qualifications Standards with demonstrated experience in creating HABS Level II documentation.
2. Include photographs taken with large format (4 X 5), black and white film.
  - a. Photographs shall include a minimum of 40 views of the following:
    - i. setting of Times Mirror Square from various oblique and cardinal angles,
    - ii. exterior views of each elevation of the Executive Building and parking structure as well as an assortment of significant architectural features and details, and
    - iii. interior views of significant spaces and details.
  - b. Photographs or a high-resolution digital scan of original drawings, if available
3. Include written historical descriptive data, index to photographs, and photo key plan.
4. Include copies of historic photographs, if available.
5. Be distributed to the following repositories for use by future researchers and educators. Before submitting any documents, each repository must be contacted to ensure that they are willing and able to accept the items:

- a. Library of Congress - One unbound archival copy including all of the above and one set of negatives.
- b. Los Angeles Public Library - One bound archival copy including all of the above and one set of negatives.
- c. Office of Historic Resources (OHR) - One high-quality bound copy with digitally printed photographs per HABS guidelines.

**Enforcement Agency:** City of Los Angeles Department of City Planning, City of Los Angeles Office of Historic Resources; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning, City of Los Angeles Office of Historic Resources; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction

**Monitoring Frequency:** Once at Project plan check

**Action Indicating Compliance:** Submittal of compliance documentation to City of Los Angeles Department of City Planning and subsequent issuance of applicable demolition or building permit

**MM-CUL-2: Secretary of the Interior’s Standards for Rehabilitation:** The Times, Plant, and Mirror Buildings shall be rehabilitated in accordance with the Historic Structure Report and Secretary of the Interior’s Standards for Rehabilitation. The rehabilitation plans shall be:

- 1. Created by a licensed architect meeting the Secretary of the Interior’s Professional Qualifications Standards for historic architecture with at least five years of demonstrated experience in the rehabilitation of historic buildings.
- 2. Reviewed for compliance with the Standards by a historic preservation professional meeting the Secretary of the Interior’s Professional Qualifications Standards for historic architecture with at least five years of demonstrated experience in applying the Standards to such projects.
  - a. Reviewer shall create a technical memorandum at each phase (schematic, design and development, and construction documents) of the architectural design process. In the event, the plans do not comply with the Standards, the memorandum shall make recommendations for changes to bring them into compliance.

- b. Reviewer shall submit the memoranda to OHR for concurrence. Building permits may be issued after OHR has concurred the plans comply with the Standards.

Compliance with the Standards shall be disclosed in the lease agreements, agreed upon in writing, and mutually enforced by the Applicant and the City. The tenants shall not be permitted to conduct work that does not comply with the Standards.

**Enforcement Agency:** City of Los Angeles Department of City Planning, City of Los Angeles Office of Historic Resources; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning, City of Los Angeles Office of Historic Resources; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction; Construction; Operation

**Monitoring Frequency:** Once at Project plan check; Once prior to issuance of Certificate of Occupancy

**Action Indicating Compliance:** Submittal of compliance documentation to City of Los Angeles Department of City Planning and subsequent issuance of applicable building permit; Issuance of Certificate of Occupancy; Execution of applicable lease agreement(s)

**MM-CUL-3: Construction Monitoring (Structural):** The Project as it relates to the demolition of the Executive Building and parking structure and construction of the North and South Towers shall be monitored to minimize damage to the Times, Plant, and Mirror Buildings. The construction monitoring shall:

1. Be performed by a licensed structural engineer with at least five years of demonstrated experience in rehabilitating historic buildings of similar size.
2. Include a survey the existing foundations and other structural aspects of the Times, Plant, and Mirror Buildings to establish baseline conditions and provide a shoring design to protect the historical resources from potential damage.
  - a. Survey shall take place prior to any construction activities.
  - b. Pot holing or other destructive testing of the below grade conditions on the Project Site and immediately adjacent to the Times, Plant, and Mirror Buildings may be necessary to establish baseline conditions and prepare the shoring design.

- c. Monitor shall submit to OHR a pre-construction survey that establishes baseline conditions to be monitored during construction, prior to issuance of any building permit for the Project.
3. Include a meeting with the Project contractor prior to the demolition of the Executive Building and parking structure to discuss minimizing collateral damage to the Times, Plant, and Mirror Buildings.

**Enforcement Agency:** City of Los Angeles Department of City Planning, City of Los Angeles Office of Historic Resources; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning, City of Los Angeles Office of Historic Resources; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction; Construction

**Monitoring Frequency:** Once prior to issuance of demolition or building permit; Periodic field inspections

**Action Indicating Compliance:** Submittal of compliance documentation to City of Los Angeles Department of City Planning and subsequent issuance of applicable demolition or building permit; Submittal of pre-construction survey to OHR; Field inspection sign offs

**MM-CUL-4: Construction Monitoring (Historic Architectural):** The construction of the Project as it relates to the rehabilitation of the Times, Plant, and Mirror Buildings shall be monitored for compliance with the Standards. The construction monitoring shall:

1. Be performed by a professional meeting the Secretary of the Interior's Professional Qualifications Standards for historic architecture with at least five years of demonstrated experience in rehabilitating historic buildings of similar size.
2. Be performed by the professional at regular intervals during the rehabilitation of the Times, Plant, and Mirror Buildings. The intervals shall include, but not necessarily limited to 50%, 90%, and 100% construction.
  - a. Monitor shall create a technical memorandum at each interval summarizing the findings, making recommendations as necessary to ensure compliance with the Standards, and documenting construction with digital photographs. Compliance with the Standards shall include the review specifications, tests, and mock-ups for the treatment of historic building materials.

- b. Monitor shall submit the memoranda to OHR for concurrence. In the event OHR does not concur, all activities shall cease until compliance with the Standards is resolved and concurrence is obtained.

**Enforcement Agency:** City of Los Angeles Department of City Planning, City of Los Angeles Office of Historic Resources; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning, City of Los Angeles Office of Historic Resources; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction; Construction

**Monitoring Frequency:** Once prior to issuance of building permit; Periodic field inspections

**Action Indicating Compliance:** Submittal of compliance documentation to City of Los Angeles Department of City Planning and subsequent issuance of applicable building permit; Field inspection sign offs

**MM-CUL-5: Retention of a Qualified Archaeologist:** Prior to the start of ground-disturbing activities, the Applicant shall retain a qualified archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards for archaeology (U.S. Department of the Interior 2008) to carry out the following measures.

**Enforcement Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction

**Monitoring Frequency:** Prior to issuance of a demolition or grading permit

**Action Indicating Compliance:** Issuance of demolition or grading permit

**Mitigation Measure CUL-6: Construction Worker Cultural Resources Sensitivity Training:** Prior to earth moving activities, the qualified archaeologist shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. The Applicant shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.

**Enforcement Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction

**Monitoring Frequency:** Prior to issuance of a demolition or grading permit

**Action Indicating Compliance:** Issuance of demolition or grading permit

**Mitigation Measure CUL-7: Inadvertent Discoveries of Archaeological Resources:**

In the event of the unanticipated discovery of archaeological materials, the contractor shall immediately cease all work activities in the area (within approximately 100 feet) of the discovery until it can be evaluated by a qualified archaeologist. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone or concrete footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Construction shall not resume until the qualified archaeologist has conferred with the City on the significance of the resource.

If it is determined that the discovered archaeological resource constitutes a historical resource under CEQA, avoidance and preservation in place is the preferred manner of mitigation. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, a Cultural Resources Treatment Plan shall be prepared and implemented by a qualified archaeologist in consultation with the

Applicant and the City that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource.

**Enforcement Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Construction

**Monitoring Frequency:** At time of resource discovery, should it occur

**Action Indicating Compliance:** Compliance report by qualified archaeologist

**Mitigation Measure CUL-8:** A Qualified Paleontologist meeting the Society of Vertebrate Paleontology (SVP) Standards<sup>1</sup> shall be retained prior to the approval of demolition or grading permits. The Qualified Paleontologist shall provide technical and compliance oversight of all work as it relates to paleontological resources, shall attend the Project kick-off meeting and Project progress meetings on a regular basis, and shall report to the site in the event potential paleontological resources are encountered.

**Enforcement Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction; Construction

**Monitoring Frequency:** Prior to issuance of demolition or grading permit; At time of resource discovery, should it occur

**Action Indicating Compliance:** Issuance of demolition or grading permit; Compliance report by qualified paleontologist

<sup>1</sup> Society of Vertebrate Paleontology, Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources, 2010, [http://vertpaleo.org/Membership/Member-Ethics/SVP\\_Impact\\_Mitigation\\_Guidelines.aspx](http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx).

**Mitigation Measure CUL-9:** The Qualified Paleontologist shall conduct construction worker paleontological resources sensitivity training prior to the start of ground disturbing activities (including vegetation removal, pavement removal, etc.). In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the Project Site and the procedures to be followed if they are found. Documentation shall be retained demonstrating that all construction personnel attended the training.

**Enforcement Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction; Construction

**Monitoring Frequency:** Prior to issuance of demolition or grading permit; At time of resource discovery, should it occur

**Action Indicating Compliance:** Issuance of demolition or grading permit; Compliance report by qualified paleontologist

**Mitigation Measure CUL-10:** Full-time paleontological resources monitoring shall be conducted for all ground disturbing activities occurring in previously undisturbed sediments of older alluvium, the Fernando Formation, and the Puente Formation. The surficial alluvium, as well as any artificial fill present, has low paleontological sensitivity and so work in the upper 15 feet of the Project Site does not need to be monitored. The depth of 15 feet is derived from the records search of the Natural History Museum of Los Angeles County (LACM), which reports fossils recovered in older alluvium from depths of 20 feet in the vicinity of the Project Site.<sup>2</sup> The Qualified Paleontologist shall spot check the excavation on an intermittent basis and recommend whether the depth of required monitoring should be revised based on his/her observations. Paleontological resources monitoring shall be performed by a qualified paleontological monitor (meeting the standards of the SVP) under the supervision of the Qualified Paleontologist. Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to recover the fossil specimens. Any significant fossils collected during Project-related excavations shall be prepared to the point of identification and curated into an accredited repository with retrievable storage, such as the LACM. Monitors shall prepare daily logs detailing the types of activities and soils observed, and any

<sup>2</sup> McLeod, 2015.

discoveries. The Qualified Paleontologist shall prepare a final monitoring and mitigation report to document the results of the monitoring effort.

**Enforcement Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Construction

**Monitoring Frequency:** At time of resource discovery, should it occur

**Action Indicating Compliance:** Compliance report by qualified paleontologist

**Mitigation Measure CUL-11:** If construction or other Project personnel discover any potential fossils during construction, regardless of the depth of work or location, work at the discovery location shall cease in a 50-foot radius of the discovery until the Project Paleontologist has assessed the discovery, conferred with the City, and made recommendations as to the appropriate treatment. If the find is deemed significant, it shall be salvaged following the standards of the SVP and curated with a certified repository.

**Enforcement Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Construction

**Monitoring Frequency:** At time of resource discovery, should it occur

**Action Indicating Compliance:** Compliance report by qualified paleontologist

See Mitigation Measures MM NOISE-5 and MM NOISE-6.

## e) Geology and Soils

### (1) Project Design Features

**PDF GEO-1:** To determine if seismic upgrades are warranted for the Times and Plant Buildings, a qualified seismic engineer will prepare a Feasibility Study (Phase 1) that identifies: (1) existing structural system limitations; (2) assessment of the existing structural systems and findings regarding what upgrades would be required and renovation concepts; (3) a narrative summary and concept sketches of the various mandatory upgrade alternatives that could be implemented; and (4) identify voluntary upgrades that could be pursued to improve seismic performance.

Following Phase 1, and once a more developed concept of the existing buildings is developed, a Seismic Evaluation (Phase 2) shall be prepared that provides: (1) a detailed assessment of the final programming concepts; (2) mandatory upgrade/evaluation requirements; (3) a detailed evaluation of the Times and Plant Buildings; and (3) a schematic design of the mandatory/voluntary upgrades. The schematic design of the mandatory/voluntary upgrades will be reviewed by a qualified historic preservation consultant to support compliance with the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings, with a letter report verifying that the upgrades would comply with the Secretary of the Interior's Standards provided by the historic preservation consultant to LADBS.

Upon completion of both phases, the Applicant and seismic engineer will coordinate with LADBS to review and approve the approach, findings, and recommendations of the reports. All the above shall occur prior to the issuance of building permits for the Project.

<b>Enforcement Agency:</b>	City of Los Angeles Department of Building and Safety
<b>Monitoring Agency:</b>	City of Los Angeles Department of Building and Safety
<b>Monitoring Phase:</b>	Pre-construction
<b>Monitoring Frequency:</b>	At Project plan check prior to issuance of building permit
<b>Action Indicating Compliance:</b>	Submittal of compliance documentation to City of Los Angeles Department of Building and Safety and subsequent issuance of applicable building permit

**PDF GEO-2:** The foundations for the proposed new buildings will extend to, and shall derive support from, the underlying competent bedrock.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction; Construction

**Monitoring Frequency:** Once at project plan check prior to issuance of building permit; Period field inspections during construction

**Action Indicating Compliance:** Plan approval and issuance of applicable building permit; Field inspection sign-off

## f) Greenhouse Gas Emissions

### (1) Project Design Features

See Project Design Features PDF-AQ-1, PDF-AQ-2, and PDF-WS-1

## g) Hazards and Hazardous Materials

### (1) Project Design Features

**PDF HAZ-1:** While the Phase I/II ESA did not encounter any RECs or conditions that may warrant mitigation, in the event that unforeseen suspect impacted soils are encountered during mass excavation activities for the future subterranean parking garage, such soil will be properly profiled and managed under a conventional soil management plan to be implemented by the Project excavation contractor and environmental consultant. The plan will require removal, transport, and disposal of all impacted soils in accordance with all applicable regulatory requirements and under the oversight of all governmental agencies with jurisdiction.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction

**Monitoring Frequency:** Once at Project plan check prior to issuance of grading permit; Ongoing with periodic field inspections during construction if impacted material is discovered

**Action Indicating Compliance:** Issuance of grading permit; Field inspection signoff

## **h) Noise**

### **(1) Project Design Features**

**PDF NOISE-1:** The Project will not require or allow blasting, involving the use of explosives, during construction activities.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Construction

**Monitoring Frequency:** Periodic field inspections

**Action Indicating Compliance:** Field inspection sign-off

**PDF NOISE-2:** Where power poles are available, electricity from power poles and/or solar-powered generators rather than temporary diesel or gasoline generators shall be used during construction.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Construction

**Monitoring Frequency:** Periodic field inspections

**Action Indicating Compliance:** Field inspection sign-off

**PDF NOISE-3:** The Project will not require or allow operation of any amplified sound system in the outdoor plaza areas, including the residential and office terraces, outdoor dining areas, and paseo.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction; Construction; Operation

**Monitoring Frequency:** Once prior to building permit; Once during field inspection; Once prior to issuance of Certificate of Occupancy

**Action Indicating Compliance:** Plan approval and issuance of applicable building permit; Issuance of Certificate of Occupancy; Field inspection signoff

**PDF NOISE-4:** The Project will limit the maximum occupancy of the Office Terrace to 150 people and the Residential Terrace to 200 people at any one time. A sign will be posted at the main entrances to these areas of the occupancy limit.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction; Construction; Operation

**Monitoring Frequency:** Once prior to building permit; Once during field inspection; Once prior to issuance of Certificate of Occupancy

**Action Indicating Compliance:** Plan approval and issuance of applicable building permit; Issuance of Certificate of Occupancy; Field inspection signoff

**PDF NOISE-5:** Emergency generators would be designed to meet the requirements of LAMC Chapter XI, Section 112.02. Section 112.02 of the LAMC requires that any mechanical system within any zone of the City not cause an increase in ambient noise levels on any other occupied property or if a condominium, apartment house, duplex, or attached business, within any adjoining unit to exceed the ambient noise level by more than 5 dBA.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

<b>Monitoring Agency:</b>	City of Los Angeles Department of Building and Safety
<b>Monitoring Phase:</b>	Pre-construction; Construction
<b>Monitoring Frequency:</b>	Once at Project plan check prior to building permit; Once during field inspection
<b>Action Indicating Compliance:</b>	Plan approval and issuance of applicable building permit; Field inspection signoff

## (2) Mitigation Measures

**MM-NOISE-1:** The Project shall provide a temporary 10-foot-tall construction fence equipped with noise reduction materials such as noise blankets rated to achieve sound level reductions of at least 5 dBA between the Project Site and the sensitive receptor locations R1 and R3 through R6.<sup>3</sup> Temporary noise barriers shall be used to block the line-of-sight between the construction equipment and the noise-sensitive receptor during early Project construction phases (up to the start of framing) when the use of heavy equipment is prevalent. The noise barrier shall have a minimum sound transmission class (STC) of 25 and noise reduction coefficient (NRC) of 0.75.<sup>4,5</sup> At Plan Check, building plans shall include documentation prepared by a noise consultant verifying compliance with this measure.

<b>Enforcement Agency:</b>	City of Los Angeles Department of Building and Safety
<b>Monitoring Agency:</b>	City of Los Angeles Department of Building and Safety
<b>Monitoring Phase:</b>	Pre-construction; Construction
<b>Monitoring Frequency:</b>	Once at Project plan check; Periodic field inspections
<b>Action Indicating Compliance:</b>	Plan approval and issuance of applicable demolition or building permit; Field inspection sign-offs

<sup>3</sup> R1: Federal Courthouse, R3: First and Broadway Civic Center Park and Los Angeles County Law Library, R4: City Hall Park, R5: One-acre park south of the LAPD Headquarters Building and Higgins Building Lofts apartment complex, R6: Kawada Hotel.

<sup>4</sup> Sound Transmission Class (STC) is an integer rating of how well a wall attenuates airborne sound and Noise Reduction Coefficient (NRC) is a scalar representation of the amount of sound energy absorbed upon striking a wall.

<sup>5</sup> M. David Egan, Architectural Acoustics, March 1988, Chapter 2 and Chapter 4.

**MM-NOISE-2:** Contractors shall ensure that all construction equipment, fixed or mobile, are equipped with properly operating and maintained noise shielding and muffling devices, consistent with manufacturers' standards. Construction contractor shall keep documentation on-site demonstrating that the equipment has been maintained in accordance with the manufacturers' specifications. Contractor shall also keep documentation on-site prepared by a noise consultant verifying compliance with this measure.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Construction

**Monitoring Frequency:** Periodic field inspections

**Action Indicating Compliance:** Field inspection sign-offs

**MM-NOISE-3:** In order to reduce high noise levels at the Federal Courthouse located at 350 W. 1st St, Los Angeles, across S. Broadway from the Project Site, construction activities shall be scheduled to avoid operating several pieces of Heavy-Duty Equipment simultaneously. Heavy-Duty Equipment subject to the restrictions provided herein applies to all equipment generating noise levels of greater than 75 dBA  $L_{eq}$  as measured at 50 feet from the source. The restrictions for Heavy-Duty Equipment on the Project Site during construction include:

- A maximum of two (2) pieces of Heavy-Duty Equipment within 100 feet from the Courthouse;
- A maximum of four (4) pieces of Heavy-Duty Equipment between 100 feet and 150 feet from the Courthouse; and,
- A maximum of six (6) pieces of Heavy-Duty Equipment 150 feet or more from the Courthouse.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Construction

**Monitoring Frequency:** Periodic field inspections

**Action Indicating Compliance:** Field inspection sign-offs

**MM-NOISE-4:** In order to reduce high noise levels at the Federal Courthouse across S. Broadway from the operation of a vibratory pile driver, the Project shall provide a temporary pile driver enclosure equipped with noise blankets rated to achieve sound level reductions of at least 10 dBA between the Project Site and the Federal Courthouse. The temporary noise barrier shall be used to block the line-of-sight between the construction equipment and the Federal Courthouse during the operation of vibratory pile driver. The noise barrier shall have a minimum sound transmission class (STC) of 25 and noise reduction coefficient (NRC) of 0.75.<sup>6</sup> Contractor shall keep documentation on-site prepared by a noise consultant verifying compliance with this measure.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Construction

**Monitoring Frequency:** Periodic field inspections

**Action Indicating Compliance:** Field inspection sign-offs

**MM-NOISE-5:** The operation of a vibratory pile driver shall be prohibited within 60 feet of the Times Building, the Plant Building, and the Mirror Building and within 160 feet of the Federal Courthouse building. Instead, a drill rig shall be used within these areas.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Construction

**Monitoring Frequency:** Periodic field inspections

**Action Indicating Compliance:** Field inspection sign-offs

**MM-NOISE-6:** To avoid or minimize potential construction vibration damage to structures and finish materials on the Times Building, the Plant Building, and the Mirror Building, the condition of structures and finish materials shall be documented by a qualified preservation consultant, prior to initiation of construction. Prior to construction, the Applicant shall retain the services of a qualified acoustical engineer to review the proposed construction equipment and develop and

<sup>6</sup> M. David Egan, Architectural Acoustics, March 1988, Chapter 2 and Chapter 4.

implement a vibration monitoring program capable of documenting the construction-related ground vibration levels at the Times, Plant, and Mirror Buildings. During construction, the contractor shall install and maintain at least one continuously operational automated vibrational monitor on the Times Building, the Plant Building, and the Mirror Building. The monitor(s) shall be capable of being programmed with two predetermined vibratory velocities levels: a first-level alarm equivalent to a 0.45 inches per second PPV at the face of the building and a regulatory alarm level equivalent to 0.5 inches per second at the face of the building. The monitoring system shall produce real-time specific alarms (for example, via text message and/or email to on-site personnel) when velocities exceed either of the predetermined levels.

In the event of a first-level alarm, feasible steps to reduce vibratory levels shall be undertaken, including but not limited to halting/staggering concurrent activities and utilizing lower-vibratory techniques. In the event of an exceedance of the regulatory level, work in the vicinity shall be halted and the Times Building, the Plant Building, and the Mirror Building visually inspected for damage. Results of the inspection shall be logged. In the event damage occurs to finish materials due to construction vibration, such materials shall be repaired in consultation with a qualified preservation consultant, and if warranted, in a manner that meets the Secretary of the Interior's Standards.

<b>Enforcement Agency:</b>	City of Los Angeles Department of Building and Safety
<b>Monitoring Agency:</b>	City of Los Angeles Department of Building and Safety
<b>Monitoring Phase:</b>	Pre-construction; Construction
<b>Monitoring Frequency:</b>	Once at Project plan check; Periodic field inspections
<b>Action Indicating Compliance:</b>	Plan approval and issuance of applicable demolition or building permit; Field inspection sign-offs

## i) Police Protection

### (1) Project Design Features

**PDF POL-1: On-Site Construction Security Measures:** During construction, on-site security measures will include: an eight-foot tall construction security fence, with gated and locked entry, around the construction site during the construction period; the provision of 24-hour visible private security personnel that monitors vehicle and pedestrian access to, and patrols, the construction site; and a construction management plan to ensure that emergency service providers have

adequate access to the Project Site and neighboring businesses during construction and that Project construction traffic does not interfere with emergency vehicle response. During construction activities, the Contractor will document the security measures; and the documentation will be made available to the Construction Monitor.

**Enforcement Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Construction

**Monitoring Frequency:** Periodic field inspections

**Action Indicating Compliance:** Field inspection sign-offs

**PDF POL-2: Provision of Project Diagrams to LAPD:** Once prior to the issuance of a building permit and once prior to occupancy, the Applicant will provide the LAPD Central Area Commanding Officer with a diagram of the Project Site, including access routes, gate access codes, and additional information, as required, to facilitate potential LAPD responses.

**Enforcement Agency:** City of Los Angeles Department of City Planning, Los Angeles Police Department

**Monitoring Agency:** City of Los Angeles Department of City Planning, Los Angeles Police Department

**Monitoring Phase:** Pre-construction; Construction

**Monitoring Frequency:** Once prior to issuance of building permit; Once prior to issuance of Certificate of Occupancy

**Action Indicating Compliance:** Compliance documentation of diagram submittal to LAPD, and issuance of applicable demolition or building permit; Issuance of Certificate of Occupancy

**PDF POL-3: On-Site Operational Security Measures:** The Project will provide an extensive security program to ensure the safety of residents, employees, and other visitors to the Project Site. The Project will incorporate strategies in design and planning, as well as active security features. On-site security measures during Project operation will include:

- Installing and utilizing a 24-hour security camera network throughout the underground and above-grade parking structure; the elevators; the common

and amenity spaces; the lobby areas; and the rooftop and ground level outdoor open spaces.

- Maintaining all security camera footage for at least 30 days, and providing such footage to LAPD as needed.
- Controlling access to all building elevators, residences, and resident-only common areas through an electronic key fob specific to each user.
- Training employees on appropriate security policies for the Project's buildings. Duties of the staff will include, but would not be limited to, assisting residents and visitors with site access; monitoring entrances and exits of buildings; managing and monitoring fire/life/safety systems; and monitoring the property.
- Providing a 24-hour/seven-day security program for the Paseo.
- Access to commercial uses will be unrestricted during business hours, with public access discontinued after businesses have closed.
- Secure access points will be limited and located in areas of high visibilities.
- Hallways and corridors will be straight forward with no dark corners, as possible.
- Outdoor areas will be exposed to windows and allow for natural surveillance.
- Clear transitional zones will be provided between public, semi-public and private spaces.
- Access key cards and cameras will be used.
- Interior and exterior spaces will be well lit with proper signage to direct the flow of people and decrease opportunities for crime.

**Enforcement Agency:** City of Los Angeles Department of City Planning, City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning, City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction; Construction

**Monitoring Frequency:** Once at Project plan check; Once prior to issuance of Certificate of Occupancy

**Action Indicating Compliance:** Plan approval and issuance of applicable building permit; Issuance of Certificate of Occupancy

See Project Design Feature PDF TRAF-1.

## j) Fire Protection

### (1) Project Design Features

See Project Design Features PDF TRAF-1 and PDF TRAF-2.

## k) Transportation and Traffic

### (1) Project Design Features

**PDF TRAF-1: Construction Traffic Management Plan:** Prior to the issuance of a building permit for the Project, a detailed Construction Management Plan including street closure information, a detour plan, haul routes, and a staging plan, will be prepared and submitted to the City for review and approval. The Construction Management Plan will formalize how construction would be carried out and identify specific actions that will be required to reduce effects on the surrounding community. The Construction Management Plan will be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site. Construction management meetings with City Staff and other surrounding construction related project representatives (i.e., construction contractors) whose projects will potentially be under construction at around the same time as the Project will be conducted bimonthly, or as otherwise determined appropriate by City Staff. This coordination will ensure construction activities of the concurrent related projects and associated hauling activities are managed in collaboration with one another and the Project. The Construction Management Plan will include, but not be limited to, the following elements as appropriate:

- Provide off-site truck staging in a legal area furnished by the construction truck contractor. Anticipated truck access to the Project Site will be off Broadway and 2nd Street.
- Schedule deliveries and pick-ups of construction materials during non-peak travel periods to the extent possible and coordinate to reduce the potential of trucks waiting to load or unload for protracted periods.
- As parking lane and/or sidewalk closures are anticipated, worksite traffic control plan(s), approved by the City of Los Angeles, will be implemented to route vehicular traffic, bicyclists, and pedestrians around any such closures.
- Provide for safety precautions for pedestrians and bicyclists through such measures as alternative routing and protection barriers, as required.
- Establish requirements for loading/unloading and storage of materials on the Project Site, where parking spaces would be encumbered, length of time traffic travel lanes can be encumbered, sidewalk closings or pedestrian diversions to ensure the safety of the pedestrian and access to local businesses and residences.
- Ensure that access will remain unobstructed for land uses in proximity to the Project Site during project construction.

- Coordinate with the City and emergency service providers to ensure adequate access is maintained to the Project Site and neighboring businesses and residences.
- Coordinate with affected transit providers (Metro, LADOT Dash, Montebello) to temporarily relocate bus stops as necessary.
- Participate in regular coordination meetings with Metro and LADOT regarding construction activities in the area, to address such issues as temporary lane closures and potential concurrent construction activities associated with the 2nd and Broadway Station of Metro's Regional Connector.

**Enforcement Agency:** City of Los Angeles Department of Transportation

**Monitoring Agency:** City of Los Angeles Department of Transportation

**Monitoring Phase:** Pre-construction; Construction

**Monitoring Frequency:** Once prior to issuance of building permit; Periodic field inspections

**Action Indicating Compliance:** Approval of Construction Traffic Management Plan from the Los Angeles Department of Transportation prior to issuance of building permit; Field inspection sign-offs

**PDF TRAF-2: Construction Worker Parking Plan:** The Project Applicant will prepare a Construction Worker Parking Plan prior to commencement of construction to identify and enforce parking location requirements for construction workers. The Construction Worker Parking Plan will include, but not be limited to, the following elements as appropriate:

- During construction activities when construction worker parking cannot be accommodated on the Project Site, the Plan will identify alternate parking location(s) for construction workers and the method of transportation to and from the Project Site (if beyond walking distance) for approval by the City 30 days prior to commencement of construction.
- Provide all construction contractors with written information on where their workers and their subcontractors are permitted to park, and provide clear consequences to violators for failure to follow these regulations.

**Enforcement Agency:** City of Los Angeles Department of Transportation

**Monitoring Agency:** City of Los Angeles Department of Transportation

**Monitoring Phase:** Pre-construction; Construction

**Monitoring Frequency:** Once prior to issuance of building permit; Periodic field inspections

**Action Indicating Compliance:** Approval of Construction Worker Parking Plan from the Los Angeles Department of Transportation prior to issuance of building permit; Field inspection signoffs

**PDF TRAF-3:** The Applicant will coordinate with the Metro Bike Share program for a potential Bike Share station on the Project Site.

**Enforcement Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Transportation; Los Angeles County Metropolitan Transportation Authority (Metro)

**Monitoring Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Transportation; Los Angeles County Metropolitan Transportation Authority (Metro)

**Monitoring Phase:** Pre-construction; Construction

**Monitoring Frequency:** Once at Project plan check; Once prior to issuance of Certificate of Occupancy

**Action Indicating Compliance:** Compliance documentation from Metro; Approval of plans and issuance of applicable building permit; Issuance of Final Certificate of Occupancy

(2) Mitigation Measures

**MM-TRAF-1:** The Project Applicant shall implement a comprehensive Transportation Demand Management (TDM) Program to promote non-auto travel and reduce single-occupant vehicle trips. A draft of the TDM Program shall be prepared by a registered traffic engineer and submitted to LADOT for review prior to the issuance of the first building permit for the Project. The TDM Program must be approved by LADOT prior to the issuance of the first Certificate of Occupancy for the Project. The TDM Program should include, but would not be limited to, the following strategies:

- Promote Commute Trip Reduction (CTR) through information sharing and marketing for new employee orientations of trip reduction, event promotions, and publications;
- Provide unbundled parking that separates the cost of obtaining assigned parking spaces from the cost of purchasing or renting residential units;
- Provide a program to discount transit passes for residents/employees possibly through negotiated bulk purchasing of passes with transit providers;
- Facilitate a Car-Share Program by allowing a care share service within the project parking facilities. A care share program is a model of car rental where people rent cars for short periods of time, often by the hour.
- Facilitate rideshare programs with provision to include on-site transit and rideshare information center.
- Provide priority locations for carpools and vanpools within the parking garages;
- Accommodate flexible/alternative work schedules and telecommuting programs;
- Project design elements to ensure a bicycle, transit, and pedestrian friendly environment;
- Provide bicycle parking in conformance with Section 12.21 A.16 of the LAMC with safe and convenient access to bicycle facilities;
- A Covenant and Agreement to ensure that the TDM program will be maintained;
- Make a one-time financial contribution of \$100,000 to the City of Los Angeles Department of Transportation to be used in the implementation of the Mobility Hub in the general area of the Project;
- Make a one-time fixed-fee financial contribution of \$100,000 to the City's Bicycle Plan Trust Fund to implement bicycle improvements in the general Downtown Los Angeles area of the Project.

**Enforcement Agency:** City of Los Angeles Department of Transportation

**Monitoring Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Transportation

**Monitoring Phase:** Once prior to occupancy

**Monitoring Frequency:** Once prior to issuance of first Certificate of Occupancy

**Action Indicating Compliance:** Los Angeles Department of Transportation approval of TDM program and issuance of first Certificate of Occupancy

## I) Water Supply

### (1) Project Design Features

**PDF WS-1: Water Conservation Features:** The Project shall incorporate the following specific additional water conservation features:<sup>7</sup>

- High Efficiency Toilets with flush volume of 1.0 gallons per flush or less;
- ENERGY STAR Certified Residential Clothes Washers – Front-loading with an Integrated Water Factor of 3.6 or less and capacity of 4.3 cubic feet (cu ft);
- Showerheads with a flow rate of 1.5 gpm or less;
- Domestic Water Heating System located close in proximity to point(s) of use;
- Individual Metering and billing for water use for commercial space;
- Drip/Subsurface Irrigation (Micro-Irrigation);
- Proper Hydro-zoning/Zoned Irrigation (group plants with similar water requirements together); and
- Drought Tolerant Plants – 70 percent of total landscaping.

**Enforcement Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Agency:** City of Los Angeles Department of City Planning; City of Los Angeles Department of Building and Safety

**Monitoring Phase:** Pre-construction; Construction

**Monitoring Frequency:** Once at Project plan check prior to issuance of building permit; Once prior to issuance of final Certificate of Occupancy

**Action Indicating Compliance:** Approval of plans and issuance of applicable building permit; Issuance of Final Certificate of Occupancy

See Project Design Feature PDF TRAF-1.

<sup>7</sup> Los Angeles Department of Water and Power, Board Letter Approval for the Water Supply Assessment, August 18, 2017, page 4.

**m) Wastewater**

(1) Project Design Features

See Project Design Feature PDF TRAF-1.

**n) Energy**

(1) Project Design Features

See Project Design Features PDF-AQ-1, PDF-AQ-2, PDF-TRAF-1, and PDF-WS-1.

# Responses to Lozeau Drury LLP Letter

Richard Toshiyuki Drury  
Lozeau Drury LLP  
1939 Harrison Street, Ste. 150  
Oakland, CA 94612  
Dated October 16, 2019

VTT-74761-1A  
Exhibit E

## Comment No. 2-1

Dear Mr. Lamborn, Mr. Bertoni, and Ms. Wolcott:

This letter is submitted on behalf of Supporters Alliance For Environmental Responsibility (“SAFER”), a California nonprofit public benefit corporation, regarding the Draft Environmental Impact Report (“DEIR”) and Final Environmental Impact Report (“FEIR”) prepared for Times Mirror Square, Project No. ENV-2016-4676-EIR (SCH No. 2017061083) (the “Project”). After reviewing the DEIR and FEIR (collectively, “EIR”), we conclude that the EIR fails as an informational document and fails to impose all feasible mitigation measures to reduce the Project’s impacts. SAFER requests that the Hearing Officer and Advisory Agency refrain from recommending certification of the EIR at this time and instead request the City of Los Angeles (“City”) to address these shortcomings in a revised draft environmental impact report (“RDEIR”) and recirculate the RDEIR prior to considering approvals for the Project.

## Response to Comment No. 2-1

This comment is an introduction to SAFER, represented by Lozeau Drury LLP, and the remainder of the appeal letter. This comment does not specifically contain any environmental issues contained in the EIR. Therefore, no further response is warranted. Further responses are provided below.

## Comment No. 2-2

### I. PROJECT DESCRIPTION

The Project proposes to rehabilitate the Times, Plant, and Mirror Buildings and build a mixed-use development on 3.6 acres of land bounded by W. 1st Street, S. Spring Street, W. 2nd Street, and S. Broadway Street in the Central City Plan Area of the City of Los Angeles. The Project would demolish the existing Executive Building at the corner of W. 1st Street and S. Broadway and parking garage at the corner of W. 2nd Street and S. Broadway to allow for the development of the Project’s mixed-use component. The Project will contain up to 1,127 residential units, and approximately 34,572 square feet of commercial space among the 37-story “North Tower” and 53-story “South Tower” constructed above a five-story parking podium. The space below the podium would contain an additional nine levels of subterranean parking. In total, the Project proposes up to 1,511,908 square feet of floor area.

## Response to Comment No. 2-2

This comment contains a summary of the Project as described in Chapter II, *Project Description*, of the Draft EIR. This comment does not concern any environmental issue or information addressed or contained in the EIR. Therefore, no further response is warranted. However, this comment is noted, and will be presented to the decision makers for their review and consideration.

## Comment No. 2-3

### II. LEGAL BACKGROUND

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an environmental impact report (“EIR”) (except in certain limited circumstances). See, e.g., Pub. Res. Code § 21100. The EIR is the very heart of CEQA. *Dunn- Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652. “The ‘foremost principle’ in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.” *Communities for a Better Environment v. Calif. Resources Agency* (2002) 103 Cal. App. 4th 98, 109.

CEQA has two primary purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. 14 Cal. Code Regs. (“CEQA Guidelines”) § 15002(a)(1). “Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR ‘protects not only the environment but also informed self-government.’” *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 564. The EIR has been described as “an environmental ‘alarm bell’ whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return.” *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm’rs.* (2001) 91 Cal. App. 4th 1344, 1354 (“Berkeley Jets”); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.

Second, CEQA requires public agencies to avoid or reduce environmental damage when “feasible” by requiring “environmentally superior” alternatives and all feasible mitigation measures. CEQA Guidelines § 15002(a)(2) and (3); see also, *Berkeley Jets*, 91 Cal. App. 4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564. The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to “identify ways that environmental damage can be avoided or significantly reduced.” CEQA Guidelines §15002(a)(2). If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has “eliminated or substantially lessened all significant effects on the environment where feasible” and that any unavoidable significant effects on the environment are “acceptable due to overriding concerns.” Pub. Res. Code § 21081; CEQA Guidelines § 15092(b)(2)(A) & (B). The lead agency may deem a particular impact to be insignificant only if it produces rigorous analysis and concrete substantial evidence justifying the finding. *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 732 (Cal. App. 5th Dist. 1990).

The EIR is the very heart of CEQA “and the integrity of the process is dependent on the adequacy of the EIR.” *Berkeley Jets*, 91 Cal. App. 4th 1109, 1355. CEQA requires that a lead agency analyze all potentially significant environmental impacts of its proposed actions in an EIR. Pub. Res. Code § 21100(b)(1); Guidelines § 15126(a); *Berkeley Jets*, 91 Cal.App.4th 1344, 1354. The EIR must not only identify the impacts, but must also provide “information about how adverse the impacts will be.” *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 831. The lead agency may deem a particular impact to be insignificant only if it produces rigorous analysis and concrete substantial evidence justifying the finding. *Kings County Farm Bureau*, 221 Cal.App.3d 692, 732. “The ‘foremost principle’ in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.” *Communities for a Better Env’t*, 103 Cal.App.4th 98, 109.

While the courts review an EIR using an “abuse of discretion” standard, “the reviewing court is not to ‘uncritically rely on every study or analysis presented by a project proponent in support of its position. A ‘clearly inadequate or unsupported study is entitled to no judicial deference.’” *Berkeley Jets*, 91 Cal. App. 4th 1344, 1355 (emphasis added), quoting, *Laurel Heights Improvement Assn. v. Regents of University of California*, 47 Cal. 3d 376, 391 409, fn. 12 (1988). A prejudicial abuse of discretion occurs “if the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process.” *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal. App. 4th 713, 722; *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal. App. 4th 1109, 1117; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal. App. 4th 931, 946. As discussed below, and in the attached expert comment letters of expert Dr. Smallwood, expert consulting firm SWAPE, and Mr. Smith, the EIR for this Project fails to adequately analyze and mitigate the Project’s impacts.

The lead agency must evaluate comments on the draft EIR and prepare written responses in the final EIR (“FEIR”). Pub. Res. Code § 21091(d). The FEIR must include a “detailed” written response to all “significant environmental issues” raised by commenters. As the court stated in *City of Long Beach v. LA USD* (2009) 176 Cal.App.4th 889, 904:

The requirement of a detailed written response to comments helps to ensure that the lead agency will fully consider the environmental consequences of a decision before it is made, that the decision is well informed and open to public scrutiny, and that public participation in the environmental review process is meaningful.

The FEIR’s responses to comments must be detailed and must provide a reasoned, good faith analysis. CEQA Guidelines § 15088(c). Failure to provide a substantive response to comment render the EIR legally inadequate. *Rural Land Owners Assoc. v. City Council* (1983) 143 Cal.App.3d 1013, 1020.

The responses to comments on a draft EIR must state reasons for rejecting suggested mitigation measures and comments on significant environmental issues.

“Conclusory statements unsupported by factual information” are not an adequate response. CEQA Guidelines §§ 15088(b), (c); *Cleary v. County of Stanislaus* (1981) 118 Cal.App.3d 348. The need for a substantive, detailed response is particularly appropriate when comments have been raised by experts or other agencies. *Berkeley Keep Jets*, 91 Cal.App.4th at 1367; *People v. County of Kern* (1976) 62 Cal.App.3d 761. A reasoned analysis of the issue and references to supporting evidence are required for substantive comments raised. *Calif. Oak Found. v. Santa Clarita* (2005) 133 Cal.App.4th 1219.

## Response to Comment No. 2-3

The comment states several CEQA sections and case law, but does not identify a specific environmental issue or information addressed or contained in the Draft and Final EIR. As such, no further response is warranted. However, this comment is noted, and will be presented to the decision makers for their review and consideration.

## Comment No. 2-4

### III. DISCUSSION

#### A. The City Unduly Restrains the Project’s Alternatives and Their Implementation.

An overly narrow definition of project objectives renders the alternatives analysis inadequate. To narrowly define the primary "objective" of the proposed project itself constitutes a violation of CEQA since such a restrictive formulation would improperly foreclose consideration of alternatives. See, *City of Santee v. County of San Diego* (1989) 214 Cal.App.3d 1438, holding that when project objectives are defined too narrowly an EIR’s treatment of analysis may also be inadequate. As a leading treatise on CEQA compliance cautions, “[t]he case law makes clear that...overly narrow objectives may unduly circumscribe the agency’s consideration of project alternatives.” Remy, Thomas, Moose & Manley, *Guide to CEQA* (Solano Books, 2007), p. 589.

CEQA prohibits a project sponsor from limiting its ability to implement the project in a way that precludes it from implementing reasonable alternatives to the project. See *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 736 (alternatives may not be artificially limited by applicant’s prior contractual commitments that would prevent sponsor from implementing reasonable alternative). The fact that a proposed alternative does not meet all of the Project Objectives is not an appropriate basis to eliminate impact-reducing project alternatives from analysis in an EIR. (14 Cal. Code Regs § 15126.6(c), (f)).

The EIR identifies several significant environmental impacts the Project will have, as well as the project alternatives that alleviate these impacts. Yet the City failed to impose a project alternative that would reduce environmental impacts because they do not meet all of the Project’s stringent objectives. For example, Alternative 5 would avoid the Project’s significant and unavoidable impacts to historical resources, associated with air quality standards, and related to construction noise. DEIR, p. V-205. However, this alternative was not selected in part because it did not meet all of the uses identified

in the Project's objectives, and would not meet the objective to restore portions of the existing buildings "to the same extent as under the Project." DEIR, p. V-206. Additionally, Alternative 4 was not selected, although it would lessen or reduce the significant and unavoidable impacts to historical resources, air quality standards, and construction noise, because while it "would meet the Project's underlying purpose and primary objective . . . it would not *fully meet* the Objective's intent to provide publicly accessible open space and amenities *to the same extent* as the Project . . ." DEIR, p. V-166–V-167.

By refusing to select a Project alternative that mitigates or reduces the Project's significant environmental impacts simply because the alternative does not entirely meet the narrowly defined Project objectives, the City has violated CEQA.

## **Response to Comment No. 2-4**

The commenter claims that the Project objectives are overly narrow and unduly constrain the alternatives analysis as provided in Chapter V, *Alternatives*, of the Draft EIR. The commenter further states that the Draft EIR violates CEQA by not selecting an alternative that would reduce the Project's significant impacts.

Pursuant to *CEQA Guidelines* Section 15126.6(a), an EIR must describe a "range of reasonable alternatives." Furthermore, pursuant to *CEQA Guidelines* Section 15126.6(f), an EIR must consider "only those alternatives necessary to permit a reasoned choice." Every conceivable alternative need not be considered; rather, the range of alternatives should be designed to foster informed decision-making and public participation (*CEQA Guidelines* sections 15126.6(a), 15126.6(f)). The lead agency (in this case the City of Los Angeles) is responsible for selecting the range of project alternatives for examination. In the case of this Project, the Draft EIR included a reasonable range of five alternatives, including the No Project Alternative. Each of the alternatives analyzed in Chapter V, *Alternatives*, of the Draft EIR would reduce the Project's significant impacts, and two of the alternatives (Alternatives 1 and 5) would avoid the Project's significant and unavoidable impacts with respect to construction air quality and noise and cultural resources. However, only Alternative 1, the No Project Alternative, would avoid all of the Project's significant and unavoidable traffic impacts.

Along with the environmental analysis for each alternative, the Draft EIR also considered whether and to what extent the alternatives would meet the Project objectives, as detailed in Chapter II, *Project Description*, of the Draft EIR. The Draft EIR concluded that Alternative 1 would not meet any of the Project objectives. It concluded that Alternative 5, the environmentally superior alternative, would not meet the underlying purpose and primary objective of the Project to develop the Project Site with a transit-oriented development that includes residential uses, community-serving commercial uses, and publicly accessible and private open space and amenities, or the Project's objectives that primarily concern high-density residential uses in proximity to transit and jobs-rich centers, or the creation of architecturally distinctive new buildings that contribute to the visual character of the Downtown. In addition, Alternative 5 would not support local and regional land use and housing policies to the same degree as the Project or Alternatives

2, 3, and 4, relative to the concentration of development in established urban areas served by transit.

Therefore, contrary to the comment, the Draft EIR does not reject any alternative, but is consistent with CEQA as it provides the City's decision makers with the information necessary to make an informed decision regarding the Project and the alternatives.

## **Comment No. 2-5**

### **B. The EIR Fails to Adequately Analyze Historic and Cultural Aesthetic Impacts.**

The site of the proposed Project includes five historical resources, including the Times, Plant, Mirror, and Executive buildings, as well as the parking structure. Despite these resources, the City asserts Senate Bill (SB) 743 applies to the Project and therefore the Project's aesthetic impacts are not considered significant impacts on the environment. DEIR, p. II-13–14. It makes this finding despite a subsection of SB 743 that excludes impacts to historical resources from this aesthetic exemption.

Codified within CEQA section 21099 et seq., SB 743 states “[a]esthetic . . . impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment.” Pub. Res. Code § 21099(d)(1). However, the City is incorrect in concluding it is exempt from analyzing all aesthetic impacts caused by the Project because SB 743 goes on to state that for the purposes of this section, “aesthetic impacts do not include impacts on historical or cultural resources.” Pub. Res. Code § 21099(d)(2)(B). The City therefore cannot use SB 743 as an excuse to not mitigate aesthetic impacts to historical resources that are significant.

CEQA gives historic resources special recognition. See *Friends of Sierra Madre v. City of Sierra Madre* (2001) 25 C4th 165, 186; *Citizens for a Sustainable Treasure Island v. City & County of San Francisco* (2014) 227 Cal. App. 4th 1036, 1065. Objects of historical significance fall within CEQA's definition of “environment.” Pub. Res. Code § 21060.5. Therefore, if a project has significant impacts on a historical resource, it has significant environmental impacts.

A substantial adverse change of a historical resource is considered a significant impact on the environment. CEQA Guidelines § 15064.5(b). Substantial adverse changes include “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings” resulting in the significance of the resource being “materially impaired.” CEQA Guidelines §15064.5(b)(1). Material impairments of historical resources occur when the project demolishes or adversely materially alters the physical characteristics of the historical resource that either conveys its historical significance and that justify its inclusion in or eligibility for inclusion in the California Register of Historical Resources or the local register of historical resources. *Id.* §§ 15064.5(b)(2)(A)–(C). These material impairments clearly include aesthetic changes to historical resources because physical characteristics of historical resources encompass the façade and structural design of these resources.

Here, the Project proposes to demolish the Executive Building and the accompanying parking structure. Since both structures are eligible for inclusion in the California Register of Historic Resources and their physical characteristics that make them eligible for such listing will be demolished, the Project will result in a material impairment of these historical resources.

Additionally the Times, Plant, and Mirror Buildings are included in the local register of historic resources and are in the immediate surroundings of the Executive Building and parking structure. If the Project moves forward as planned, the impacts on the aesthetic quality of these buildings will be significant because the demolition of the Executive Building and parking structure will make room for two very large apartment buildings that will dwarf the Times, Plant, and Mirror Buildings and minimize the visibility of these historic resources.

Therefore, the Project will have significant adverse impacts on the aesthetics of historical resources and the City cannot use SB 743 as an excuse to not analyze these impacts. The City is required to analyze and mitigate these significant impacts.

## **Response to Comment No. 2-5**

The commenter asserts that the Project's significant impacts to historic resources due to demolition of the Executive Building and parking structure also constitute significant aesthetic impacts. As stated on page IV.A-1 of Section IV.A, *Aesthetics*, of the Draft EIR, and in Response to Comment No. 9-3 in the Final EIR, Senate Bill (SB) 743, codified within the California Environmental Quality Act (CEQA) Section 21099 et. seq., states that "Aesthetic (...) impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." (Public Resources Code [PRC] Section 21099(d)(1)). As the Project would meet these conditions, aesthetic impacts associated with the Project would not be considered significant as a matter of law. In addition, City of Los Angeles Zoning Information File No. 2452 (ZI No. 2452) states that projects meeting SB 743 criteria are exempted from a determination of significant impacts on aesthetic resources (scenic vistas, scenic resources, aesthetic character, and light and glare) as outlined in CEQA Appendix G. Therefore, the Project would not have a significant aesthetic impact because of the significant impacts to historic resources identified in the EIR.

The commenter misconstrues PRC Section 21099(d)(2)(B), which states that, "For purposes of this subdivision, aesthetic impacts **do not include** impacts on historical or cultural resources." (Emphasis added.) The language provided in PRC Section 21099(d)(2)(B) provides that impacts to historic or cultural resources are not considered to be (i.e., not included as) aesthetic impacts.

## **Comment No. 2-6**

### **C. The City Failed to Make Full and Accurate Responses to Comments Concerning Aesthetic Impacts to Historical Resources.**

While public participation is an essential part of the CEQA process, so is an agency's evaluation and response to public comments. Failure to comply with the requirement can lead to disapproval of a project. CEQA Guidelines Discussion, § 15088. An agency's responses to comments must specifically explain the reasons for rejecting suggestions received in comments and for proceeding with a project despite its environmental impacts. Such explanations must be fully supported with specific references to empirical information, scientific authority, and/or explanatory information. *Cleary v. County of Stanislaus* (1981) 118 Cal.App.3d 348, 357. The responses, moreover, must manifest a good faith, reasoned analysis; conclusory statements unsupported by factual information will not suffice. *People v. County of Kern* (1974) 39 Cal.App.3d 830, 841.

Here, the City continued to hide behind SB 743 when it responded in a cursory and inadequate way to a comment regarding the inadequacy of the EIR's analysis of aesthetic impacts on historical resources. See FEIR, p. 2-80–2-81. The City again pointed to SB 743 to assert that “the Project would result in the removal of the existing Executive Building and the parking structure, which are historic resources and, as such, may be considered to contribute to the aesthetic character under the [Los Angeles CEQA] Thresholds Guide. However, per ZI No. 2452 [which adopted SB 743], aesthetic impacts shall not be considered a significant impact for a qualifying mixed-use project in a Transit Priority Area, such as the Project.” FEIR, p. 2-81.

This response, as identified in the section above, is incorrect and erroneous because the City's reliance on SB 743 is inappropriate given the reading of the entire section, which requires agency's to still consider aesthetic impacts to historical resources.

The City's response is legally inadequate because its analysis is based on a select reading of SB 743 and ignores the rest of the statute excluding historical resources from the aesthetic impact exemption. This inadequate and conclusory response to a comment fails to meet CEQA's requirements. Responses such as this require the City to revise its EIR so that it fully evaluates and responds to public comments.

## Response to Comment No. 2-6

The commenter states that the Final EIR is incorrect and that the City cannot rely on SB 743 to dismiss an aesthetic impact on historical resources. As described above under Response to Comment 2-5, the commenter misconstrues PRC Section 21099(d)(2)(B), which states that, “For purposes of this subdivision, aesthetic impacts **do not include** impacts on historical or cultural resources.” (Emphasis added.) The language provided in PRC Section 21099(d)(2)(B) provides that impacts to historic or cultural resources are not considered to be (i.e., not included as) aesthetic impacts. The Final EIR clearly and fully responds to the comments. The commenter merely states its disagreement with the responses based on a misconception of SB 743.

## Comment No. 2-7

### D. The Project May Have Significant Impacts on Special-Status Birds as a Result of Window Collisions.

Dr. Smallwood indicates that the Project, as proposed, will result in significant impacts on birds colliding with the Project's clear glass windows. Ex. A, p. 8. Specifically, Dr. Smallwood predicts "2,310 bird deaths per year" due to the Project. *Id.* Project illustrations show extensive use of glass in the facades of the Project's buildings. "[T]he project's façades would support at least 30,000 m<sup>2</sup> of glass windows . . . ." Ex. A, p. 1. "Adding to collision hazards would be the abundant use of window recessing, over-window balconies, between-building interior spaces, and as depicted in the EIR, use of transparent glass and abundant interior lighting at night." *Id.* Making matters worse, the Project, with these potentially harmful features, is proposed to be constructed where eBird records indicate "43 special-status species of birds occur near the site . . . 14 of which were seen on property immediately adjacent to the site." Ex. A, p. 2.

Despite emerging scientific literature about window collisions as one of the largest sources of avian mortality worldwide, the City and the EIR do not assess this potential impact. Additionally, the EIR "provides no analysis of cumulative impacts on birds caused by window collisions in the City, nor any analysis of the proposed project's contribution to cumulative impacts of window collisions. An RDEIR is required to fully analyze and mitigate these impacts.

In order to mitigate these potential impacts to birds, Dr. Smallwood recommends the following mitigation measures:

- Marking windows
- Managing outdoor landscape vegetation
- Managing indoor landscape vegetation
- Managing nocturnal lighting
- Designing to minimize transparency through two parallel facades
- Designing to minimize views of interior plants
- Landscaping to increase distances between windows and trees and shrubs

Dr. Smallwood also suggests adherence to available guidelines on building design intended to minimize collision hazards to birds, such as those by the American Bird Conservancy ("ABC"). Ex., p. 13. ABC recommends: (1) minimizing use of glass; (2) placing glass behind some type of screening (grilles, shutters, exterior shades); (3) using glass with inherent properties to reduce collisions, such as patterns, window films, decals or tape; and (4) turning off lights during migration seasons. *Id.*

Here, there is ample evidence to support a fair argument that the Project will result in many collision fatalities of birds, and that this may result in a significant impact. Yet the EIR makes no attempt to analyze this potentially significant impact. An RDEIR is required to fully analyze and mitigate this impact.

## **Response to Comment No. 2-7**

The commenter claims that the Project may have a significant impact on biological resources as a result of avian window collisions and provides a memorandum to support their conclusion. However, the information provided in this memorandum is speculative and lacks any credible Project- or site-specific evidence. Refer to Response to Comments 2-16 through 2-27 for responses to the memorandum.

## **Comment No. 2-8**

### **E. The Project's Emissions Were Improperly Analyzed Because the EIR Uses Incorrect and Unsubstantiated Input Parameters.**

Environmental consulting firm SWAPE reviewed the EIR. SWAPE found that the EIR's air quality model contained incorrect and unsubstantiated input parameters. As a result, the EIR's air model may have underestimated emissions and cannot be relied upon as substantial evidence to determine that the Project's impacts will be less than significant. SWAPE's analysis can be found in Exhibit B, pages 1-10.

## **Response to Comment No. 2-8**

The Project's emissions modeling provided in the Draft EIR does not underestimate emissions associated with the Project's construction and operational activities. The Project's CalEEMod output files, provided in Appendix C to the Draft EIR, contain input values that are consistent with information disclosed in the Draft EIR and in some cases slightly more conservative in order to ensure that the Project's potential air quality impacts are disclosed. As a result, the Project's construction and operational emissions are not underestimated, and the EIR adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality. Refer to Responses to Comments 2-30 through 2-38 for responses to the specific items raised in the comments regarding the Project's CalEEMod input parameters and output files.

## **Comment No. 2-9**

### **F. The FEIR Fails to Adequately Respond to Comments Concerning Mitigation Measures for Construction Air Quality Impacts.**

The Project will have significant impacts on air quality. However, the FEIR refuses to impose feasible mitigation measures that would reduce these impacts.

Expert agency South Coast Air Quality Management District ("SCAQMD") submitted a letter requesting that the City require the use of zero-emission ("ZE") or near-zero emission ("NZE") on-road haul trucks and require that construction vendors, contractors, and/or haul truck operators commit to using 2010 model year or newer engines that meet the California Air Resources Board's ("CARB") 2010 engine

emissions standards. FEIR, p. 2-10–2-11. The FEIR refuses to require these mitigation measures, rejecting them for impracticality and unfeasibility reasons, and because it already has to comply with CARB's 2008 Truck and Bus Regulation. FEIR, p. 2-20–2-21.

First, the FEIR references a handful of reports to conclude that the use of ZE and NZE trucks is not feasible at this time. *Id.* However, the FEIR does not mention how many ZE or NZE trucks are in fact available, just that there are barriers to widespread availability of them and their required infrastructure at this time, and that a fleet wouldn't likely be available during the project. *Id.* SCAQMD also suggested the City require this mitigation measure as part of the bid or contract specification. FEIR, p. 2-18. The City fails to respond to this suggestion, despite the contractors' likely greater knowledge of the availability of these vehicles than the City. The FEIR is also quick to note that the Project would exceed NOx emissions during construction for up to four days when a continuous pour would be used for the two foundations. FEIR, p. 2-21. The FEIR cannot rely on this limited time frame in which NOx emissions will be significant. It must adopt feasible mitigation measures that will bring the impacts below a significance level no matter how short the impact will last. The City's excuses for failing to adopt this mitigation measure are conclusory and cannot be used to support a finding of infeasibility.

Second, the FEIR states that it already requires compliance with CARB's 2008 Truck and Bus Regulation, which reduces NOx, PM10, and PM2.5 emissions from existing diesel vehicles operating in California so it does not believe that a mitigation measure requiring the use of CARB's 2010 engine emission standards. FEIR, p. 2-21. Requiring this additional mitigation measure could likely assist in reducing significant air quality impacts, and just because another mitigation measure would similarly reduce significant air quality impacts, does not make the additional mitigation measure infeasible. Therefore, the City's excuse for failing to adopt this mitigation measure is also conclusory and it must adopt the mitigation measure if feasible.

The FEIR's failure to implement SCAQMD's suggested mitigation measures to reduce the significant impacts on air quality fails to meet CEQA's requirements and the City must implement them.

## **Response to Comment No. 2-9**

The Lead Agency considered mitigation measures to reduce the air quality impact associated with the temporary and short-term construction NO<sub>x</sub> emissions during the two continuous concrete pouring foundation phases of Project construction, which would last a maximum of four days, but ultimately determined they would not be feasible to reduce the significant and unavoidable air quality impact.

The emissions associated with the two continuous concrete pouring foundation phases of Project construction, which would last a maximum of four days, are overwhelmingly the result of emissions from concrete trucks required to deliver and pour the concrete at the Project Site. The Lead Agency considered the use of zero emissions (ZE) and near zero emissions (NZE) trucks as part of the Final EIR. Response to Comment 4-9 of the

Final EIR contains a detailed explanation of why ZE and NZE concrete trucks would not be commercially available for use during Project construction. The commenter provides no credible evidence to the contrary. Construction of the Project is expected to occur over approximately four years, with the air quality emissions modeling analysis assuming construction in late 2018 to late 2022, and a full operational year of 2023.<sup>1</sup> However, even when adjusting the construction dates to 2020 to 2024, according to the reports cited below, there would not be enough commercially available ZE and NZE concrete truck fleets and/or infrastructure to accommodate the use of ZE and NZE technology for the Project. According to a Feasibility Assessment for Drayage Trucks for the San Pedro Bay Ports Clean Air Action Plan, ZE and NZE on-road haul trucks availability, as of late-2018, includes one ZE and one NZE fuel-technology platform sold by Original Equipment Manufacturers (OEMs) in commercially available Class 8 trucks (which include concrete trucks) suitable for Port use.<sup>2,3</sup> With the development of ZE and NZE platforms, infrastructure has emerged as one of the most significant near-term barriers to wide-scale adoption of these technologies due to standardization difficulties and the ability to develop the full charging infrastructure over the next several years. Additionally, according to the Feasibility Assessment, one OEM plans to begin offering a ZE battery-electric Class 8 truck by 2021, the other OEMs have similar or later timeframes. None will have readily available fleets in time for Project construction use, in particular for the Project's specific need for many concrete trucks over a short duration<sup>4</sup>. Thus, while the SCAQMD suggested the City require this mitigation measure as part of the bid or contract specification, because the measure is not feasible given the lack of availability, as discussed above, it would also not be feasible to include it as a requirement for contractor bids.

The International Council on Clean Transportation (ICCT) in a November 2017 white paper titled "Transitioning to Zero-Emission Heavy-Duty Freight Vehicles"<sup>5</sup> states that there are "prevailing barriers to widespread viability" of plug-in electric heavy-duty freight vehicles, primarily limited electric range, high vehicle cost, long recharging time, and tradeoffs on cargo weight and/or volume. This report does not cite heavy-duty Class 8 trucks with a gross vehicle weight rating (GVWR) greater than 33,001 pounds, which are similar to the GVWR of the heavy-duty concrete trucks that would be used for the

<sup>1</sup> As noted in on page IV.B-31 of Section IV.B, *Air Quality*, of the Draft EIR, "If the onset of construction is delayed to a later date than assumed in the modeling analysis, construction impacts would be less than those analyzed, because a more energy-efficient and cleaner burning construction equipment and vehicle fleet mix would be expected in the future, pursuant to State regulations that require construction equipment fleet operators to phase-in less polluting heavy-duty equipment. As a result, should the Project commence construction on a later date than modeled in this air quality impact analysis, air quality impacts would be less than the impacts disclosed herein." Please refer to the Errata.

<sup>2</sup> Port of Long Beach & The Port of Los Angeles, San Pedro Bay Ports Clean Air Action Plan, 2018 Feasibility Assessment for Drayage Trucks, April 2019, <http://www.cleanairactionplan.org/documents/final-drayage-truck-feasibility-assessment.pdf/>. Accessed June 4, 2019.

<sup>3</sup> Class 8 trucks means any in-use on-road vehicle with a gross vehicle weight rating (GVWR) greater than 33,001 pounds, which includes concrete trucks. See: <https://afdc.energy.gov/data/10380>.

<sup>4</sup> Letter dated February 28, 2020 attached as Appendix D.

<sup>5</sup> Moultak, M., Lutsey, N., Hall, D., Transitioning to Zero-Emission Heavy-Duty Freight Vehicles, The International Council on Clean Transportation (ICCT), September 26, 2017, [http://www.theicct.org/sites/default/files/publications/Zero-emission-freight-trucks\\_ICCT-white-paper\\_26092017\\_vF.pdf](http://www.theicct.org/sites/default/files/publications/Zero-emission-freight-trucks_ICCT-white-paper_26092017_vF.pdf). Accessed November 19, 2019.

Project, as a promising segment for widespread commercialization. As stated in the white paper, there are “barriers to the growth of electric and hydrogen fuel cell heavy-duty commercial freight trucks include limited technology availability, limited economies of scale, long-distance travel requirements, payload mass and volume constraints, and a lack of refueling and recharging infrastructure.”<sup>6</sup> The white paper also states that technologies analyzed are all in research, exploratory, and early demonstration phases. Thus, this report further demonstrates that the ZE and NZE truck fleet would not be viable during construction of the Project.

Furthermore, a recent report by Next 10<sup>7</sup> concludes that California will meet or exceed its 1.5 million by 2025 ZEV goal, primarily through automobiles, but that the state’s charging infrastructure is not keeping pace with the growth of its electric vehicle fleet. Through October 2017, more than 337,000 ZEVs had been sold in California, and ZEV sales increased 29.1 percent in California over the previous year. Meanwhile, California has 16,549 public and nonresidential private sector charging outlets - most in the nation by far but only 0.05 public charging outlets per ZEV. Studies show that California will need 125,000 to 220,000 charging ports from private and public sources by 2020 in order to provide adequate infrastructure. The charging stations for EV, especially heavy-duty concrete trucks, are not readily available and would not support the amount of heavy-duty concrete trucks required for the Project.

As demonstrated above, the EV and NEV heavy-duty truck fleet is not readily available at this time, nor would it likely be available within the timeframe for construction of the Project. Since there is not a large percentage of the Class 8 fleet utilizing EV or NEV technology, requiring the Project to utilize EV or NEV trucks as a mitigation measure is not feasible or practicable, in particular for the Project’s specific need for many concrete trucks over a short duration for the two-day concrete pour for each tower. Additionally, as stated above, the Project would only exceed the SCAQMD numeric indicators for a short time, up to four days, during the concrete pours for the foundations. Thus, the Final EIR correctly determined the use of EV or NEV technology as a mitigation measure is not feasible, i.e., “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors”. CEQA Guidelines Section 15364.

In addition, the Lead Agency considered a mitigation measure requiring 2010 model year or newer engines. As discussed in the Response to Comment 4-9 of the Final EIR, the Lead Agency does not believe that a mitigation measure requiring 2010 model year or newer engines is necessary because this is already required through the CARB 2008 Truck and Bus Regulation. As discussed on page IV.B-5 in Section IV.B, *Air Quality*, of the Draft EIR, “In 2008, CARB approved the Truck and Bus regulation to reduce NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions from existing diesel vehicles operating in California (13 CCR, Section 2025).” The regulation requires that trucks with a gross vehicle weight

<sup>6</sup> Moultaq, M., Lutsey, N., Hall, D., Transitioning to Zero-Emission Heavy-Duty Freight Vehicles, The International Council on Clean Transportation (ICCT), September 26, 2017, [http://www.theicct.org/sites/default/files/publications/Zero-emission-freight-trucks\\_ICCT-white-paper\\_26092017\\_vF.pdf](http://www.theicct.org/sites/default/files/publications/Zero-emission-freight-trucks_ICCT-white-paper_26092017_vF.pdf). Accessed November 19, 2019.

<sup>7</sup> Next 10, The Road Ahead for Zero-Emission Vehicles in California: Market Trends & Policy Analysis, January 2018.

rating greater than 26,000 pounds, which includes heavy-duty trucks that would be used during Project construction, meet 2010 engine standards, or better. The regulation is phased over 8 years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this requirement would meet or exceed the 2010 engine emission standards for NO<sub>x</sub> and diesel particulate matter by 2023. Truck fleet operators are required to report compliance with the regulation in accordance with CARB's reporting procedures for the Truck Regulation Upload, Compliance and Reporting System (TRUCRS).<sup>8</sup>

Nonetheless, the Lead Agency has conservatively added the following subparagraph d. to MM AQ-1 to ensure the maximum use of 2010 model or newer engines during the concrete pouring foundation phases:

- d. All concrete trucks used during the Project's concrete pouring foundation shall have 2010 model or newer engines. Prior to issuance of a building permit, the applicant shall provide evidence (such as copies of contracts with concrete subcontractors with specifications or engine certifications) satisfactory to the Department of City Planning demonstrating compliance with this measure.

However, this added measure would not reduce the NO<sub>x</sub> emission levels during the concrete pouring phases to below the applicable significance threshold, and impacts would remain significant.<sup>9</sup>

There are no feasible mitigation measures that would reduce the construction NO<sub>x</sub> emissions impact associated with the two continuous concrete pouring foundation phases of Project construction, which would last a maximum of four days as a result of emissions from concrete trucks required to deliver and pour the concrete at the Project Site. Because the Project's only significant impact for air quality is related to this specific construction activity, it is appropriate to consider measures that would feasibly reduce the impact for this activity. As there are no feasible measures, the Lead Agency determined the impact for this specific portion of construction activity to be significant and unavoidable.

## **Comment No. 2-10**

### **G. Updated Air Quality Model Demonstrates That the Project Will Have Significant Air Quality Impacts From Greenhouse Gas Emissions.**

SWAPE found that there would be significant greenhouse gas emissions despite the EIR's finding that the Project's greenhouse gas emissions would be less than significant. As a result, the City must prepare a RDEIR which takes into account SWAPE's findings and analyze and mitigate this significant impact. SWAPE's analysis and mitigation measures can be found in Exhibit B, pages 23-33.

<sup>8</sup> California Air Resources Board, Welcome to the Truck Regulation Upload, Compliance and Reporting System (TRUCRS), [https://ssl.arb.ca.gov/ssltrucr/stb/trucrs\\_reporting/login.php](https://ssl.arb.ca.gov/ssltrucr/stb/trucrs_reporting/login.php). Accessed July 7, 2019.

<sup>9</sup> The Project's construction emissions during the concrete pouring foundation phases with the above measure are provided in Appendix A to the Errata.

## Response to Comment No. 2-10

The commenter asserts that the less-than-significant impact finding for GHG emissions is incorrect and unsubstantiated. State CEQA Guidelines Section 15064.4 states that a lead agency shall make a good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency has the discretion to determine, in the context of a particular project, whether to: (1) quantify greenhouse gas emissions resulting from a project; and/or; or (2) rely on a qualitative analysis or performance based standards. The City has exercised its discretion to utilize qualitative thresholds, which are stated on page IV.E-38, and fully explained on pages IV.E-36 through -38 of Section IV.E, *Greenhouse Gas Emissions*, of the Draft EIR. The statement in the comment that the Project's GHG emission impacts would be significant is incorrect and unsubstantiated.

## Comment No. 2-11

### H. The Project Will Have a Significant Construction-Related Health Risk Impact That Has Not Been Adequately Analyzed or Mitigated.

SWAPE found that the EIR failed to conduct both a construction and operational health risk assessment. Without such an analysis, the EIR fails to include substantial evidence that the Project's emissions will be less than significant. Additionally, SWAPE has suggested several mitigation measures to reduce emission impacts to less than significant levels. SWAPE's analysis and mitigation measures can be found in Exhibit B, pages 12-23.

## Response to Comment No. 2-11

The commenter maintains that the EIR should have included both a construction and operational health risk assessment of Project's toxic air contaminant (TACs) emissions. Section IV.B, *Air Quality*, pages IV.B-69 through IV.B-71 of the Draft EIR analyze and disclose the potential for the Project to cause adverse health impacts from exposure to TACs from the Project's construction and operational emissions consistent with CEQA Guidelines Section 15126.2(a). As discussed therein, with respect to Project construction, the Project would be consistent with applicable South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan strategies intended to reduce emissions from construction equipment and activities, which include the use of cleaner construction equipment. The Project would comply with regulatory mandates including the California Air Resources Board (CARB) Air Toxic Control Measure that limits idling to no more than five minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation for the use of cleaner construction equipment. Consistent with and supportive of the goals of these regulatory mandates to minimize emissions and exposure to emissions, the Project would include emissions controls agreed upon by the City and the Applicant that will be full enforceable by the City, as per MM-AQ-1.

Page IV.B-37 of Section IV.B, *Air Quality*, of the Draft EIR states that the SCAQMD has not adopted guidance that requires quantitative health risk assessments be performed for short-term exposures to TAC emissions. Specifically, the SCAQMD states that "SCAQMD currently does not have guidance on construction Health Risk

Assessments.”<sup>10</sup> As disclosed in the Draft EIR on page IV.B-37, health effects from TACs for sensitive residential receptors are described in terms of individual cancer risk based on a long-term resident exposure duration (i.e., resident lifetime or 70-year). Given the temporary and short-term construction schedule (approximately 48 months), the Project would not result in a long-term (i.e., lifetime or 70-year) exposure as a result of Project construction. Therefore, a construction HRA is neither required nor warranted.

The SCAQMD has published and adopted the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities). The Project would not include any of these uses; therefore, an operational HRA is neither required nor warranted.

Although a quantitative HRA for the Project is not required for the reasons discussed above, in order to provide information that further supports the Draft EIR’s less than significant finding with respect to TAC emissions, a quantitative health risk assessment has been prepared and is attached as Appendix A, Health Risk Assessment Calculations, of this response letter. As discussed in further detail in Responses to Comment Nos. 2-39 and 2-40, the results of the quantitative HRA demonstrate that the health risks from TAC emissions from Project construction and operations would not exceed the SCAQMD significance threshold. This HRA further confirms the Draft EIR’s less than significant impact finding with respect to TAC emissions.

## **Comment No. 2-12**

### **I. The EIR Fails to Accurately Disclose and Analyze Traffic Impacts.**

Traffic expert found multiple deficiencies in the EIR’s traffic analysis. As such, the EIR has failed to adequately disclose, discuss, and analyze the Project’s impacts on traffic. Mr. Smith’s analysis can be found in Exhibit C.

## **Response to Comment No. 2-12**

The commenter claims that the traffic analysis fails to adequately disclose, discuss, and analyze the Project’s impacts on traffic. Detailed responses to Exhibit C are provided in Responses to Comment Nos. 2-55 through 2-68 below.

<sup>10</sup> South Coast Air Quality Management District, Final Environmental Assessment for: Proposed Amended Rule 307.1 – Alternative Fees for Air Toxics Emissions Inventory; Proposed Amended Rule 1401 – New Source Review of Toxic Air Contaminants; Proposed Amended Rule 1402 – Control of Toxic Air Contaminants from Existing Sources; SCAQMD Public Notification Procedures for Facilities Under the Air Toxics “Hot Spots” Information and Assessment Act (AB 2588) and Rule 1402; and, SCAQMD Guidelines for Participating in the Rule 1402 Voluntary Risk, page 2-23, September 2016, [http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2016/final-ea\\_par-307-1\\_1401\\_1402.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2016/final-ea_par-307-1_1401_1402.pdf?sfvrsn=4). Accessed December 30, 2019. The SCAQMD only applies the revised OEHHA Guidelines for operational impacts at stationary industrial source facilities that are in the AB 2588 Air Toxics Hot Spots program, which does not apply to the proposed Project.

## Comment No. 2-13

### J. The EIR Fails to Address the Potential Significant Indoor Air Quality Impacts on the Health of Future Residents of the Project.

Formaldehyde is a known human carcinogen. Many composite wood products typically used in residential and office building construction contain formaldehyde-based glues which off-gas formaldehyde over a very long time period. The primary source of formaldehyde indoors is composite wood products manufactured with urea-formaldehyde resins, such as plywood, medium density fiberboard, and particle board. These materials are commonly used in residential and office building construction for flooring, cabinetry, baseboards, window shades, interior doors, and window and door trims. Given the prominence of materials with formaldehyde-based resins that will be used in constructing the Project and the residential buildings, there is a significant likelihood that the Project's emissions of formaldehyde to air will result in very significant cancer risks to future residents and workers in the buildings. Even if the materials used within the buildings comply with the Airborne Toxic Control Measures (ATCM) of the California Air Resources Board (CARB), significant emissions of formaldehyde may still occur.

The residential buildings will have significant impacts on air quality and health risks by emitting cancer-causing levels of formaldehyde into the air that will expose workers and residents to cancer risks well in excess of SCAQMD's threshold of significance. A 2018 study by Chan et al. (attached as Exhibit D) measured formaldehyde levels in new structures constructed after the 2009 CARB rules went into effect. Even though new buildings conforming to CARB's ATCM had a 30% lower median indoor formaldehyde concentration and cancer risk than buildings built prior to the enactment of the ATCM, the levels of formaldehyde will still pose cancer risks greater than 100 in a million, well above the 10 in one million significance threshold established by the SCAQMD.

Based on expert comments submitted on other similar projects and assuming all the Project's and the residential building materials are compliant with the California Air Resources Board's formaldehyde airborne toxics control measure, future residents and employees using the Project will be exposed to a cancer risk from formaldehyde greater than the SCAQMD's CEQA significance threshold for airborne cancer risk of 10 per million. Currently, the City does not have any idea what risk will be posed by formaldehyde emissions from the Project or the residences.

The City has a duty to investigate issues relating to a project's potential environmental impacts. See *County Sanitation Dist. No. 2 v. County of Kern*, (2005) 127 Cal.App.4th 1544, 1597–98. “[U]nder CEQA, the lead agency bears a burden to investigate potential environmental impacts.” “If the local agency has failed to study an area of possible environmental impact, a fair argument may be based on the limited facts in the record.

Deficiencies in the record may actually enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences.” *Sundstrom v. County of*

*Mendocino* (1988) 202 Cal.App.3d 296, 311. Given the lack of study conducted by the City on the health risks posed by emissions of formaldehyde from new residential projects, a fair argument exists that such emissions from the Project may pose significant health risks. As a result, the City must prepare a RDEIR which calculates the health risks that the formaldehyde emissions may have on future residents and workers and identifies appropriate mitigation measures.

## **Response to Comment No. 2-13**

The commenter maintains that the Project would have a significant impact on indoor air quality due to formaldehyde. However, the commenter provides no credible evidence that the Project will be constructed with building materials with significant amounts of formaldehyde, citing only an unsubstantiated, general article provided in Exhibit D.

There are no requirements or guidance from SCAQMD or relevant agencies to evaluate such risk. The project does not represent a unique or special development that needs addressing in CEQA, therefore no special analysis or mitigation is required. The Project will comply with the existing codes and regulations in California, which adequately address potential emissions and risks from building materials to ensure safe practices and healthy indoor air. These codes include:

a. Title 24: The Building Energy Efficiency Standards (Energy Standards) already address the “energy and water efficiency requirements (and indoor air quality requirements) for newly constructed buildings, and alterations to existing buildings”. The Standards are applicable to Mechanical Systems whose one of the primary functions is “indoor air quality for occupant comfort and health”. These Standards addresses ventilation, indoor air quality, and air filtration requirements (including the use of high efficiency filters), the checks and balances and need to be performed, and the acceptance test requirements. One of the General Envelope Requirements is that manufacturers must certify that insulating materials comply with the California Quality Standards for Insulating Materials to assure that “insulation sold or installed in the state performs according to the stated R-value and meets minimum quality, health, and safety standards.”

b. CALGreen : The California Green Building Standards Code (CALGreen Code), applicable to new commercial and industrial buildings, is designed to promote “environmentally responsible, cost-effective, healthier places to live and work”. “CALGreen includes both required measures and voluntary measures, a number of which help assure healthful indoor air quality, such as those addressing chemical emissions from composite wood products, carpets, resilient flooring materials, paints, adhesives, sealants, and insulation, and also ventilation.”

Section 4.5, Environmental Quality, of the CALGreen Code provides mandatory residential measures to reduce the quantity of air contaminants that are odorous, irritating and/or harmful to the comfort and wellbeing of a building’s installers, occupants and neighbors. It includes VOC limits for paints, coatings, adhesives, adhesive bonding primers, sealants, sealant primers, and caulk. Section 4.504.3, Carpet Systems, of the CALGreen Code establishes product requirements to meet one of the following: (1)

Carpet and Rug Institute's Green Label Plus Program; (2) California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1; (3) NSF/ANSI 140 at the Gold Level; or (4) Scientific Certifications Systems Indoor Advantage Gold. Furthermore, Section 4.504.5, Composite Wood Products, of the CALGreen Code establishes limits for formaldehyde as specified in ARBS's Air Toxics Control Measure for Composite Wood (e.g., particle board). These measures have been established through the CALGreen Code and are designed to reduce the quantity of air contaminants to acceptable levels.

c. CARB ATCM (Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products) : The purpose of this airborne toxic control measure is to "reduce formaldehyde emissions from composite wood products, and finished goods that contain composite wood products, that are sold, offered for sale, supplied, used, or manufactured for sale in California. The composite wood products covered by this regulation are hardwood plywood, particleboard, and medium density fiberboard." The measure applies to manufacturers, distributors, importers, fabricators (that use such materials to make other goods), retailers, third party certifiers who manufacture, offer for sale or supply these goods in California. The control measure assures that all building materials and furnishings manufactured, distributed, imported and used in new construction in California meet the maximum allowable concentrations that assure healthful indoor air quality.

According to CARB, from a public health standpoint, the CWP Regulation's emission standards are set at low levels intended to protect public health.<sup>11</sup> The CWP Regulation, adopted in 2007, established two phases of emissions standards: an initial Phase I, and later, a more stringent Phase 2 that requires all finished goods, such as flooring, destined for sale or use in California to be made using complying composite wood products. As of January 2014, only Phase 2 products are legal for sale in California. Thus, all new wood products installed in the Project would comply with the more stringent Phase 2 requirements. Impacts with respect to formaldehyde would be less than significant.

## **Comment No. 2-14**

### **IV. THE CITY SHOULD PREPARE AND RECIRCULATE A REVISED DEIR**

A revised draft environmental impact report ("RDEIR") should be prepared and circulated for full public review to address the impacts identified above and to propose feasible mitigation measures. CEQA requires re-circulation of an EIR when significant new information is added to the EIR following public review but before certification. (Pub. Res. Code § 21092.1.) The CEQA Guidelines clarify that new information is significant if "the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project" including, for

<sup>11</sup> California Air Resources Board, Frequently Asked Questions for Consumers, Reducing Formaldehyde Emissions from Composite Wood Products, [https://www3.arb.ca.gov/toxics/compwood/consumer\\_faq.pdf?\\_ga=2.32900281.682464648.1573169874-1026610208.1565143819](https://www3.arb.ca.gov/toxics/compwood/consumer_faq.pdf?_ga=2.32900281.682464648.1573169874-1026610208.1565143819). Accessed November 2019.

example, “a disclosure showing that . . . [a] new significant environmental impact would result from the project.” (14 CCR § 15088.5.) The above significant environmental impacts have not been analyzed in the EIR and must be addressed in an RDEIR that is re-circulated for public review.

## **Response to Comment No. 2-14**

The commenter requests that the Draft EIR be recirculated. As set forth above and throughout these responses, the commenter does not provide credible evidence that the Project would result in new or substantially increased impacts, that there is significant new information, or that any of the other criteria for recirculation under *CEQA Guidelines* Section 15088.5 has been met. Therefore, recirculation of the Draft EIR is not required.

## **Comment No. 2-15**

### **V. CONCLUSION**

For the foregoing reasons, SAFER believes that the Times Mirror Square DEIR and FEIR are wholly inadequate. SAFER urges the Hearing Officer and Advisory Agency to refrain from certifying the FEIR or recommending approval of the Times Mirror Square Project in order to allow staff additional time to address the concerns raised herein. Thank you for considering our comments and please include this letter in the record of proceedings for this project.

## **Response to Comment No. 2-15**

This comment is a conclusion to the comment letter. Detailed responses to the provided exhibits are provided below.

## **Comment No. 2-16**

### **EXHIBIT A**

Dear Mr. Lamborn,

I write to comment on the City of Los Angeles (2019a,b) DEIR and FEIR prepared for the Times Mirror Square Project, which I understand would add 1,135,803 ft<sup>2</sup> of construction floor space between a 37-story building and a 53-story building, and including 34,572 ft<sup>2</sup> of commercial floor space and 1,127 residential units on 3.6 acres of land. Assuming 25% of the buildings' façades would be composed of steel or concrete, I estimate the project's façades would support at least 30,000 m<sup>2</sup> of glass windows, which would pose collision hazards to birds. Adding to the collision hazards would be the abundant use of window recessing, over-window balconies, between-building interior space, and as depicted in the EIR, use of transparent glass and abundant interior lighting at night. I write to comment on bird-window collisions that would result from this project – a type of impact that is not addressed in the DEIR or FEIR.

## **Response to Comment No. 2-16**

The comment provides a brief description of the Project as detailed in Chapter II, *Project Description*, of the Draft EIR and makes an assumption of the amount of steel or concrete that would comprise the Project's buildings' facades. This comment serves as a summary to the remainder of the comments. Responses to these comments are provided below in Responses to Comments 2-17 through 2-27.

## **Comment No. 2-17**

My qualifications for preparing expert comments are the following. I hold a Ph.D. degree in Ecology from University of California at Davis, where I subsequently worked for four years as a post-graduate researcher in the Department of Agronomy and Range Sciences. My research has been on animal density and distribution, habitat selection, habitat restoration, interactions between wildlife and human infrastructure and activities, conservation of rare and endangered species, and on the ecology of invading species. I perform research on wildlife mortality caused by wind turbines, electric distribution lines, agricultural practices, and road traffic. I authored numerous papers on special-status species issues, including "Using the best scientific data for endangered species conservation" (Smallwood et al. 1999), and "Suggested standards for science applied to conservation issues" (Smallwood et al. 2001). I served as Chair of the Conservation Affairs Committee for The Wildlife Society – Western Section. I am a member of The Wildlife Society and the Raptor Research Foundation, and I've been a part-time lecturer at California State University, Sacramento. I was Associate Editor of wildlife biology's premier scientific journal, *The Journal of Wildlife Management*, as well as of *Biological Conservation*, and I was on the Editorial Board of *Environmental Management*. I have performed wildlife surveys in California for thirty-three years, including at many proposed project sites. My CV is attached.

## **Response to Comment No. 2-17**

This comment provides some background on the commenter. As this comment does not concern any information addressed or contained in the Draft EIR, no further response is required. However, this comment is noted and will be presented to the decision makers for their review and consideration.

## **Comment No. 2-18**

### **BIOLOGICAL IMPACTS ASSESSMENT**

Based on recent eBird records, 43 special-status species of birds occur near the site of the proposed project (Table 1), 14 of which were seen on property immediately adjacent to the site. Fifteen species have been known to collide with windows (Table 1). Many of these species are undoubtedly already experiencing annual mortality caused by window collisions in Los Angeles, but the proposed new project would substantially add window-collision hazards to birds flying over Los Angeles.

Table 1, which is provided on page 3 and 4 of Exhibit A of the letter, is not reproduced here and is provided within Appendix A of this response.

## Response to Comment No. 2-18

The commenter states that 43 special-status species of birds occur near the site of the proposed Project and that 14 of these species were seen on a property immediate adjacent to the site. However, the commenter does not identify the property that is claimed to be immediately adjacent to the Project Site where these special-status species were seen. Nor does the commenter identify a radius for the eBird record search that was conducted. Typically, a 1-mile radius is applied to searches because this radius includes the immediate vicinity of the Project Site and the surrounding area that supports the same habitat type. The Project Site and vicinity are not known to be wildlife or migratory corridors or within a special-status species critical habitat. A one-mile search conducted on December 24, 2019 for avian species for the Project Site address within the eBird database from 1900 to November 2019, and as provided in Appendix B to this response letter, provided results that are representative of the total number of observations of the course of multiple years. The only listed species (federally endangered, federally threatened, state endangered, state threatened) are the white-tailed kite, which was only observed once in 2016 at the Walk Disney Concert Hall, and the Peregrine Falcon, which was observed 69 times from 1987 to 2019, with the most recent sighting in 2010 in Grand Park and is a species that have been documented to thrive in the urbanized/skyscraper landscape.<sup>12</sup> Furthermore, based on studies conducted on the East Coast, migrant passerine species are the most likely species to experience window collisions. However, based on the eBird database search, very few if any migrant passerine species are known to use the Project area as a migration corridor, and none of these species are considered candidate, sensitive, or special status species. Thus, the commenter does not provide credible evidence to support the assertion that the special-status avian species identified in Table 1 are dying from window collisions in downtown Los Angeles or even in southern California. Moreover, an isolated death of a sensitive species would not be sufficient to “have a substantial adverse effect . . . on any species identified as a candidate, sensitive, or special-status species . . .” which is the significance threshold for biological resources under Appendix G.

## Comment No. 2-19

### WINDOW COLLISIONS

Recent advances in structural glass engineering have contributed to a proliferation of glass windows on building façades. This proliferation is readily observable in newer buildings and in recent project planning documents, and it is represented by a worldwide 20% increase in glass manufacturing for building construction since 2016. Increasing window to wall ratios and glass façades have become popular for multiple reasons, including a growing demand for ‘daylighting.’ Not only is glass a major feature of the Times Mirror Square Project, but depictions in the EIR are of buildings gleaming in transparent glass in daylight and lit from the interior at night.

<sup>12</sup> Kauffman, Matthew J., Winifred F. Frick, and Janet Linthicum. "Estimation of habitat-specific demography and population growth for peregrine falcons in California." *Ecological Applications* 13.6 (2003): 1802-1816.

The EIR has not been prepared with the benefit of survey visits by wildlife biologists, so it inadequately informs the public about avian use of the area. Surveys are needed to learn how many of each bird species fly through the area and at what times of day (and night). Nocturnal surveys can be performed using a thermal-imaging camera or radar. Such surveys would inform of collision risk, and could inform mitigation strategies involving interior light management and design modifications to facades facing the prevailing approach directions of migrating birds. Below I review the bird-window collision issue, hypothesized causal factors and recommended mitigation solutions. I also predict bird-window collision rates based on studies performed across the USA at structures ranging widely in height, window-to-wall ratio, types of glass, orientation, and structural context. My aim is to make a robust prediction from this range of study conditions, and to present the associated large confidence interval that I believe is appropriate in the face of uncertainty over how many birds fly through the project area and what proportion of the birds are more susceptible than others to window collision.

Glass-façades of buildings intercept and kill many birds, but these façades are differentially hazardous to birds based on spatial extent, contiguity, orientation, and other factors. At Washington State University, Johnson and Hudson (1976) found 266 bird fatalities of 41 species within 73 months of monitoring of a three-story glass walkway (no fatality adjustments attempted). Prior to marking the windows to warn birds of the collision hazard, the collision rate was 84.7 per year. At that rate, and not attempting to adjust the fatality estimate for the proportion of fatalities not found, 4,235 birds were likely killed over the 50 years since the start of their study, and that's at a relatively small building façade (Figure 1). Accounting for the proportion of fatalities not found, the number of birds killed by this walkway over the last 50 years would have been about 12,705. And this is just for one 3-story, glass-sided walkway between two college campus buildings.

**Figure 1.** *A walkway connecting two buildings at Washington State University where one of the earliest studies of bird collision mortality found 85 bird fatalities per year prior to marking windows (254 annual deaths adjusted for the proportion not found). Given that the window markers have long since disappeared, this walkway has likely killed at least 12,705 birds since 1968, and continues to kill birds. Notice that the transparent glass on both sides of the walkway gives the impression of unimpeded airspace that can be navigated safely by birds familiar with flying between tree branches. Also note the reflected images of trees, which can mislead birds into seeing safe perch sites. Further note the distances of ornamental trees, which allow birds taking off from those trees to reach full speed upon arrival at the windows.*



Window collisions are often characterized as either the second or third largest source or human-caused bird mortality. The numbers behind these characterizations are often attributed to Klem's (1990) and Dunn's (1993) estimates of about 100 million to 1 billion bird fatalities in the USA, or more recently Loss et al.'s (2014) estimate of 365-988 million bird fatalities in the USA or Calvert et al.'s (2013) and Machtans et al.'s (2013) estimates of 22.4 million and 25 million bird fatalities in Canada, respectively. However, these estimates and their interpretation warrant examination because they were based on opportunistic sampling, volunteer study participation, and fatality monitoring by more inexperienced than experienced searchers.

Klem's (1990) estimate was based on speculation that 1 to 10 birds are killed per building per year, and this speculated range was extended to the number of buildings estimated by the US Census Bureau in 1986. Klem's speculation was supported by fatality monitoring at only two houses, one in Illinois and the other in New York. Also, the basis of his fatality rate extension has changed greatly since 1986. Whereas his estimate served the need to alert the public of the possible magnitude of the bird-window collision issue, it was highly uncertain at the time and undoubtedly outdated more than three decades hence. Indeed, by 2010 Klem (2010) characterized the upper end of his estimated range – 1 billion bird fatalities – as conservative. Furthermore, the estimate lumped species together as if all birds are the same and the loss of all birds to windows has the same level of impact.

Homes with birdfeeders are associated with higher rates of window collisions than are homes without birdfeeders (Kummer and Bayne 2015, Kummer et al. 2016a), so the developed area might pose even greater hazard to birds if it includes numerous birdfeeders. Another factor potentially biasing national or North American estimates low was revealed by Bracey et al.'s (2016) finding that trained fatality searchers found 2.6× the number of fatalities found by homeowners on the days when both trained searchers and homeowners searched around homes. The difference in carcass detection was

30.4-fold when involving carcasses volitionally placed by Bracey et al. (2016) in blind detection trials. This much larger difference in trial carcass detection rates likely resulted because their placements did not include the sounds that typically alert homeowners to actual window collisions, but this explanation also raises the question of how often homeowner participants with such studies miss detecting window-caused fatalities because they did not hear the collisions.

By the time Loss et al. (2014) performed their effort to estimate annual USA bird-window fatalities, many more fatality monitoring studies had been reported or were underway. Loss et al. (2014) were able to incorporate many more fatality rates based on scientific monitoring, and they were more careful about which fatality rates to include. However, they included estimates based on fatality monitoring by homeowners, which in one study were found to detect only 38% of the available window fatalities (Bracey et al. 2016). Loss et al. (2014) excluded all fatality records lacking a dead bird in hand, such as injured birds or feather or blood spots on windows. Loss et al.'s (2014) fatality metric was the number of fatalities per building (where in this context a building can include a house, low-rise, or high-rise structure), but they assumed that this metric was based on window collisions. Because most of the bird-window collision studies were limited to migration seasons, Loss et al. (2014) developed an admittedly assumption-laden correction factor for making annual estimates. Also, only 2 of the studies included adjustments for carcass persistence and searcher detection error, and it was unclear how and to what degree fatality rates were adjusted for these factors. Although Loss et al. (2014) attempted to account for some biases as well as for large sources of uncertainty mostly resulting from an opportunistic rather than systematic sampling data source, their estimated annual fatality rate across the USA was highly uncertain and vulnerable to multiple biases, most of which would have resulted in fatality estimates biased low.

In my review of bird-window collision monitoring, I found that the search radius around homes and buildings was very narrow, usually 2 meters. Based on my experience with bird collisions in other contexts, I would expect that a large portion of bird-window collision victims would end up farther than 2 m from the windows, especially when the windows are higher up on tall buildings. In my experience, searcher detection rates tend to be low for small birds deposited on ground with vegetation cover or woodchips or other types of organic matter. Also, vertebrate scavengers entrain on anthropogenic sources of mortality and quickly remove many of the carcasses, thereby preventing the fatality searcher from detecting these fatalities. Adjusting fatality rates for these factors – search radius bias, searcher detection error, and carcass persistence rates – would greatly increase nationwide estimates of bird-window collision fatalities.

Buildings can intercept many nocturnal migrants as well as birds flying in daylight. As mentioned above, Johnson and Hudson (1976) found 266 bird fatalities of 41 species within 73 months of monitoring of a four-story glass walkway at Washington State University (no adjustments attempted). Somerlot (2003) found 21 bird fatalities among 13 buildings on a university campus within only 61 days. Monitoring twice per week, Hager et al. (2008) found 215 bird fatalities of 48 species, or 55 birds/building/year, and at another site they found 142 bird fatalities of 37 species for 24 birds/building/year.

Gelb and Delacretaz (2009) recorded 5,400 bird fatalities under buildings in New York City, based on a decade of monitoring only during migration periods, and some of the high-rises were associated with hundreds of fatalities each. Klem et al. (2009) monitored 73 building façades in New York City during 114 days of two migratory periods, tallying 549 collision victims, nearly 5 birds per day. Borden et al. (2010) surveyed a 1.8 km route 3 times per week during 12-month period and found 271 bird fatalities of 50 species. Parkins et al. (2015) found 35 bird fatalities of 16 species within only 45 days of monitoring under 4 building façades. From 24 days of survey over a 48 day span, Porter and Huang (2015) found 47 fatalities under 8 buildings on a university campus. Sabo et al. (2016) found 27 bird fatalities over 61 days of searches under 31 windows. In San Francisco, Kahle et al. (2016) found 355 collision victims within 1,762 days under a 5-story building. Ocampo-Peñuela et al. (2016) searched the perimeters of 6 buildings on a university campus, finding 86 fatalities after 63 days of surveys. One of these buildings produced 61 of the 86 fatalities, and another building with collision-deterrent glass caused only 2 of the fatalities, thereby indicating a wide range in impacts likely influenced by various factors. There is ample evidence available to support my prediction that the proposed project would result in many collision fatalities of birds.

## **Response to Comment No. 2-19**

The commenter claims that the proposed Project would result in collision fatalities of birds and that the EIR was not prepared with the benefit of survey visits by wildlife biologists. To support this claim, the commenter provides several sources regarding bird collisions and fatalities; however, not of these sources contain specific information regarding the Project or its vicinity.

CEQA requires an analysis of impacts on any species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. As discussed in the Initial Study, Subsection IV., Biological Resources, the Project Site is entirely developed and has been operating as an urban use for decades. Grand Park, located approximately 400 feet to the northeast, is the nearest park that would contain habitat that could attract local birds to the area. However, as discussed above under Response to Comment 2-18, the only special-status species observed in this park was a Peregrine falcon in 2010. Furthermore, the nearest waterway, the Los Angeles River, is a concrete channel and is located approximately 0.89 mile to the east of the Project Site and Elysian Park is located approximately 1-mile north of the Project Site. Thus, the likelihood of encountering special-status avian species in the vicinity of the Project Site is considered low. While there are existing street trees surrounding the Project Site, these would be maintained, and additional trees would be planted as a part of the Project. As discussed in the Initial Study, Subsection IV., Biological Resources, given the proximity of existing trees, the potential exists for protected bird species to be nesting in the street trees during Project construction. To reduce potential impacts and avoid disturbance of nesting birds, should any construction activities occur during nesting season (February 15 to August 31), Mitigation Measure MM-BIO-1 would be implemented and would require that all suitable habitat (i.e., street trees and shrubs) be surveyed for the presence of nesting birds by a qualified biologist. Thus, Implementation

of this mitigation measure would reduce potential impacts to nesting birds to a less-than-significant level.

Regarding the summarized fatality numbers provided by the commenter, while these numbers were taken from multiple sources across the United States, only one of those sources was focused in California and it was focused on a building within a large urbanized park and not a downtown area. Furthermore, the majority of the sources provided had monitoring that was conducted in rural or suburban landscapes and, thus, are not representative of an urban environment such as downtown Los Angeles, where there is less likelihood for special-status avian species to be present. Furthermore, the U.S. Fish and Wildlife Service (USFWS) provides the following regarding the effects of tall buildings versus other buildings:

Annual bird mortality resulting from window collisions in the U.S. is estimated to be between 365-988 million birds (Loss et al. 2014). While most people consider bird/glass collisions an urban phenomenon involving tall, mirrored-glass skyscrapers, the reality is that 56% of collision mortality occurs at low-rise (i.e., one to three story) buildings, 44% at urban and rural residences, and <1% at high-rises (Loss et al. 2014).<sup>13</sup>

Therefore, the analysis provided by the commenter does not support the commenter's claim that there is ample evidence that the Project would result in many collision fatalities of birds or special-status avian specie and the analysis and mitigation provided in the Initial Study and Draft EIR is sufficient. Thus, no additional analysis is needed.

## **Comment No. 2-20**

### **PROJECT IMPACT PREDICTION**

Predicting the number of bird collisions at a new project is challenging because the study of window collisions remains in its early stages. Researchers have yet to agree on a collision rate metric. Some have reported findings as collisions per building per year and some as collisions per building per day. Some have reported findings as collisions per m2 of window. The problem with the temporal factor in the collision rate metrics has been monitoring time spans varying from a few days to 10 years, and even in the case of the 10-year span, monitoring was largely restricted to spring and fall migration seasons. Short-term monitoring during one or two seasons of the year cannot represent a 'year,' but monitoring has rarely spanned a full year. Using 'buildings' in the metric treats buildings as all the same size, when we know they are not. Using square meters of glass in the metric treats glass as the only barrier upon which birds collide against a building's façade, when we know it is not. It also treats all glass as equal, even though we know that collision risk varies by type of glass as well as multiple factors related to contextual settings.

Without the benefit of more advanced understanding of window collision factors, my prediction of project impacts will be uncertain. Klem's (1990) often-cited national

<sup>13</sup> U.S. Fish and Wildlife Service, Division of Migratory Bird Management. January 2016. Reducing Bird Collisions with Buildings and Building Glass: Best Practices.

estimate of avian collision rate relied on an assumed average collision rate of 1 to 10 birds per building per year, but studies since then have all reported higher rates of collisions 12 to 352 birds per building per year. Because the more recent studies were likely performed at buildings known or suspected to cause many collisions, collision rates from them could be biased high. By the time of these comments I had reviewed and processed results of bird collision monitoring at 181 buildings and façades for which bird collisions per m<sup>2</sup> of glass per year could be calculated and averaged (Johnson and Hudson 1976, O'Connell 2001, Somerlot 2003, Hager et al. 2008, Borden et al. 2010,

Hager et al. 2013, Porter and Huang 2015, Parkins et al. 2015, Kahle et al. 2016, Ocampo-Peñuela et al. 2016, Sabo et al. 2016, Barton et al. 2017, Schneider et al. 2018). These study results averaged 0.077 bird deaths per m<sup>2</sup> of glass per year (95% CI: 0.04- 0.11). Looking over the proposed building design, I estimated the buildings would include at least 30,000 m<sup>2</sup> of glass windows, which applied to the mean fatality rate would predict 2,310 bird deaths per year (95% CI: 1,200-3,300) at the buildings. The 50-year toll from this average annual fatality rate would be 115,500 bird deaths (95% CI: 60,000-165,000), which would continue until the buildings are either renovated to reduce bird collisions or they come down. The vast majority of these deaths would be of birds newly protected under Fish and Game Code section 3513, which was amended by Governor Newsom's signing of AB 454 on 27 September 2019 to reinstate as state law the recently repealed federal Migratory Bird Treaty Act. If the project moves forward as proposed, and annually kills thousands of birds protected by AB 454, the project will cause significant unmitigated impacts.

As mentioned earlier, the accuracy of my window collision predictions depends on factors known or hypothesized to affect window collision rates. However, from the national average collision rate, I used all the variation in collision rates that was available and which resulted from a wide range in building height, type of glass, indoor and outdoor landscaping, interior light management, window to wall ratio, and structural context of the façade. This variation contributed to a robust bird-window collision rate represented by a wide 95% confidence interval. According to the confidence interval, which again was based on the wide range of conditions in the underlying data, the proposed project built as designed at 100 locations would be predicted to kill between 1,200 and 3,300 birds per year at 95 of those 100 locations, leaving the other 5 to kill birds at rates either lower or higher than this range. Even at the low end of the interval, the death toll would be excessive, amounting to 60,000 bird deaths over 50 years. This impact would be significant, especially considering that the predicted fatality rate can be prevented by implementing appropriate mitigation measures. Below I will discuss hypothesized bird-window collision factors, and I will recommend mitigation measures.

## Response to Comment No. 2-20

The commenter suggests that the Project will result in large numbers of avian annual window collision fatalities based on personal anecdotal evidence and scientific articles without specifying how it relates to the Project location. As discussed in the Initial Study, Subsection IV., *Biological Resources*, the Project Site is entirely developed and has been operating as an urban use for decades. As discussed in Response to Comment 2-19, to the summarized fatality numbers provided by the commenter were taken from

multiple sources across the United States, only one of those sources was focused in California and none were focused on the Project and its vicinity. The majority of the sources provided had monitoring that was conducted in rural or suburban landscapes and, thus, are not representative of an urban environment such as downtown Los Angeles. Therefore, there is no evidence that an urbanized location with already existing skyscrapers could increase collision fatalities of birds or evidence of an avian migration corridor existing within the Project Site. To the contrary, as set forth in Response to Comment 2-19, the USFW has determined that less than one percent of avian collisions involve high rises. Given the lack of substantial evidence of a potential impact, no further analysis is required.

Summarizing data from multiple articles without taking into account the lack of avian observations (especially migrating passerine species which have been documented to have the highest window collision mortality), and the preexisting urbanized landscape does not conclusively yield an accurate average collision rate. Furthermore, the commenter states that the study of window collisions remains in its early states and that the commenter's own predictions of project impacts are uncertain without the benefit of more advanced understanding of window collisions factors, which indicates the speculative and uncertain nature of the comment with respect to this specific Project Site and its surrounding context. Therefore, the estimates provided by the commenter are inaccurate and do not appropriately represent the Project.

## **Comment No. 2-21**

### **BIRD-WINDOW COLLISION FACTORS**

Below is a list of collision factors I found in the scientific literature. Following this list are specific notes and findings taken from the literature and my own experience.

- (1) Inherent hazard of a structure in the airspace used for nocturnal migration or other flights
- (2) Window transparency, falsely revealing passage through structure or to indoor plants
- (3) Window reflectance, falsely depicting vegetation, competitors, or open airspace
- (4) Black hole or passage effect
- (5) Window or façade extent, or proportion of façade consisting of window or other reflective surface
- (6) Size of window
- (7) Type of glass
- (8) Lighting, which is correlated with window extent and building operations
- (9) Height of structure (collision mechanisms shift with height above ground)

- 
- (10) Orientation of façade with respect to winds and solar exposure
  - (11) Structural layout causing confusion and entrapment
  - (12) Context in terms of urban-rural gradient, or surrounding extent of impervious surface vs vegetation
  - (13) Height, structure, and extent of vegetation grown near home or building
  - (14) Presence of birdfeeders or other attractants
  - (15) Relative abundance
  - (16) Season of the year
  - (17) Ecology, demography and behavior
  - (18) Predatory attacks or cues provoking fear of attack
  - (19) Aggressive social interactions

(1) Inherent hazard of structure in airspace.—Not all of a structure’s collision risk can be attributed to windows. Overing (1938) reported 576 birds collided with the Washington Monument in 90 minutes on one night, 12 September 1937. The average annual fatality count had been 328 birds from 1932 through 1936. Gelb and Delacretaz (2009) and Klem et al. (2009) also reported finding collision victims at buildings lacking windows, although many fewer than they found at buildings fitted with windows. The takeaway is that any building going up at the project site would likely kill birds, although the impacts of a glass-sided building would likely be much greater.

(2) Window transparency.—Widely believed as one of the two principal factors contributing to avian collisions with buildings is the transparency of glass used in windows on the buildings (Klem 1989). Gelb and Delacretaz (2009) felt that many of the collisions they detected occurred where transparent windows revealed interior vegetation.

(3) Window reflectance.—Widely believed as one of the two principal factors contributing to avian collisions with buildings is the reflectance of glass used in windows on the buildings (Klem 1989). Reflectance can deceptively depict open airspace, vegetation as habitat destination, or competitive rivals as self-images (Klem 1989). Gelb and Delacretaz (2009) felt that many of the collisions they detected occurred toward the lower parts of buildings where large glass exteriors reflected outdoor vegetation. Klem et al. (2009) and Borden et al. (2010) also found that reflected outdoor vegetation associated positively with collisions.

(4) Black hole or passage effect.—Although this factor was not often mentioned in the bird-window collision literature, it was suggested in Sheppard and Phillips (2015). The black hole or passage effect is the deceptive appearance of a cavity or darkened ledge that certain species of bird typically approach with speed when seeking roosting sites.

The deception is achieved when shadows from awnings or the interior light conditions give the appearance of cavities or protected ledges. This factor appears potentially to be nuanced variations on transparency or reflectance or possibly an interaction effect of both of these factors.

(5) Window or façade extent.—Klem et al. (2009), Borden et al. (2010), Hager et al. (2013), and Ocampo-Peñuela et al. (2016) reported increased collision fatalities at buildings with larger reflective façades or higher proportions of façades composed of windows. However, Porter and Huang (2015) found a negative relationship between fatalities found and proportion of façade that was glazed.

(6) Size of window.—According to Kahle et al. (2016), collision rates were higher on large-pane windows compared to small-pane windows.

(7) Type of glass.—Klem et al. (2009) found that collision fatalities associated with the type of glass used on buildings. Otherwise, little attention has been directed towards the types of glass in buildings.

(8) Lighting.—Parkins et al. (2015) found that light emission from buildings correlated positively with percent glass on the façade, suggesting that lighting is linked to the extent of windows. Zink and Eckles (2010) reported fatality reductions, including an 80% reduction at a Chicago high-rise, upon the initiation of the Lights-out Program. However, Zink and Eckles (2010) provided no information on their search effort, such as the number of searches or search interval or search area around each building.

(9) Height of structure.—I found little if any hypothesis-testing related to building height, including whether another suite of factors might relate to collision victims of high-rises. Are migrants more commonly the victims of high-rises or of smaller buildings?

(10) Orientation of façade.—Some studies tested façade orientation, but not convincingly. Confounding factors such as the extent and types of windows would require large sample sizes of collision victims to parse out the variation so that some portion of it could be attributed to orientation of façade. Whether certain orientations cause disproportionately stronger or more realistic-appearing reflections ought to be testable through measurement, but counting dead birds under façades of different orientations would help.

(11) Structural layout.—Bird-safe building guidelines have illustrated examples of structural layouts associated with high rates of bird-window collisions, but little attention has been directed towards hazardous structural layouts in the scientific literature. An exception was Johnson and Hudson (1976), who found high collision rates at 3 stories of glassed-in walkways atop an open breezeway, located on a break in slope with trees on one side of the structure and open sky on the other, Washington State University.

(12) Context in urban-rural gradient.—Numbers of fatalities found in monitoring have associated negatively with increasing developed area surrounding the building (Hager et al. 2013), and positively with more rural settings (Kummer et al. 2016a).

(13) Height, structure and extent of vegetation near building.—Correlations have sometimes been found between collision rates and the presence or extent of vegetation near windows (Hager et al. 2008, Borden et al. 2010, Kummer et al. 2016a, Ocampo-Peñuela et al. 2016). However, Porter and Huang (2015) found a negative relationship between fatalities found and vegetation cover near the building. In my experience, what probably matters most is the distance from the building that vegetation occurs. If the vegetation that is used by birds is very close to a glass façade, then birds coming from that glass will be less likely to attain sufficient speed upon arrival at the façade to result in a fatal injury. Too far away and there is probably no relationship. But 30 to 50 m away, birds alighting from vegetation can attain lethal speeds by the time they arrive at the windows.

(14) Presence of birdfeeders.—Dunn (1993) reported a weak correlation ( $r = 0.13$ ,  $P < 0.001$ ) between number of birds killed by home windows and the number of birds counted at feeders. However, Kummer and Bayne (2015) found that experimental installment of birdfeeders at homes increased bird collisions with windows 1.84-fold.

(15) Relative abundance.—Collision rates have often been assumed to increase with local density or relative abundance (Klem 1989), and positive correlations have been measured (Dunn 1993, Hager et al. 2008). However, Hager and Craig (2014) found a negative correlation between fatality rates and relative abundance near buildings.

(16) Season of the year.—Borden et al. (2010) found 90% of collision fatalities during spring and fall migration periods. The significance of this finding is magnified by 7-day carcass persistence rates of 0.45 and 0.35 in spring and fall, rates which were considerably lower than during winter and summer (Hager et al. 2012). In other words, the concentration of fatalities during migration seasons would increase after applying seasonally-explicit adjustments for carcass persistence. Fatalities caused by collisions into the glass façades of the project's building would likely be concentrated in fall and spring migration periods.

(17) Ecology, demography and behavior.—Klem (1989) noted that certain types of birds were not found as common window-caused fatalities, including soaring hawks and waterbirds. Cusa et al. (2015) found that species colliding with buildings surrounded by higher levels of urban greenery were foliage gleaners, and species colliding with buildings surrounded by higher levels of urbanization were ground foragers. Sabo et al. (2016) found no difference in age class, but did find that migrants are more susceptible to collision than resident birds.

(18) Predatory attacks.—Panic flights caused by raptors were mentioned in 16% of window strike reports in Dunn's (1993) study. I have witnessed Cooper's hawks chasing birds into windows, including house finches next door to my home and a northern mocking bird chased directly into my office window. Predatory birds likely to collide with the project's windows would include Peregrine falcon, red-shouldered hawk, Cooper's hawk, and sharp-shinned hawk.

(19) Aggressive social interactions.—I found no hypothesis-testing of the roles of aggressive social interactions in the literature other than the occasional anecdotal

account of birds attacking their self-images reflected from windows. However, I have witnessed birds chasing each other and sometimes these chases resulting in one of the birds hitting a window.

## Response to Comment No. 2-21

This comment provides a description of collision factors taken from literature and the commenter's experience. However, the comment does not explain why or how these factors are relevant to the Project. This comment does not specifically contain any environmental issues contained in the EIR. Therefore, no further response is warranted. Further responses are provided below.

## Comment No. 2-22

### WINDOW COLLISION SOLUTIONS

Given the magnitude of bird-window collision impacts, there are obviously great opportunities for reducing and minimizing these impacts going forward. Existing structures can be modified or retrofitted to reduce impacts, and proposed new structures can be more carefully sited, designed, and managed to minimize impacts. However, the costs of some of these measures can be high and can vary greatly, but most importantly the efficacies of many of these measures remain uncertain. Both the costs and effectiveness of all of these measures can be better understood through experimentation and careful scientific investigation. **Post-construction fatality monitoring should be an essential feature of any new building project.** Below is a listing of mitigation options, along with some notes and findings from the literature.

Any new project should be informed by preconstruction surveys of daytime and nocturnal flight activity. Such surveys can reveal the one or more façades facing the prevailing approach direction of birds, and these revelations can help prioritize where certain types of mitigation can be targeted. It is critical to formulate effective measures prior to construction, because post-construction options will be limited, likely more expensive, and probably less effective.

#### (1) Retrofitting to reduce impacts

- (1A) Marking windows
- (1B) Managing outdoor landscape vegetation
- (1C) Managing indoor landscape vegetation
- (1D) Managing nocturnal lighting

(1A) Marking windows.—Whereas Klem (1990) found no deterrent effect from decals on windows, Johnson and Hudson (1976) reported a fatality reduction of about 69% after placing decals on windows. In an experiment of opportunity, Ocampo-Peñuela et al. (2016) found only 2 of 86 fatalities at one of 6 buildings – the only building with windows treated with a bird deterrent film. At the building with fritted glass, bird collisions were 82% lower than at other buildings with untreated windows. Kahle et al. (2016) added external window shades to some windowed façades to reduce fatalities 82% and 95%. Many external and internal glass markers have been tested experimentally, some

showing no effect and some showing strong deterrent effects (Klem 1989, 1990, 2009, 2011; Klem and Saenger 2013; Rössler et al. 2015).

Following up on the results of Johnson and Hudson (1976), I decided to mark windows of my home, where I have documented 5 bird collision fatalities between the time I moved in and 6 years later. I marked my windows with decals delivered to me via US Postal Service from a commercial vendor. I have documented no fatalities at my windows during the 8 years hence. On 8 December 2018, I photographed a ruby-crowned kinglet pulling up short of my window (Figure 2), right at one of my installed markers. In my assessment, markers can be effective in some situations.

**Figure 2.** *Ruby-crowned kinglet puts on the brakes in front of a decal I applied to mark windows of my home, 8 December 2018. This window killed birds prior to marking, but I have found no window collision victims since marking the windows. Windows with attractive built-in marking are commercially available.*



## **(2) Siting and Designing to minimize impacts**

- (2A) Deciding on location of structure
- (2B) Deciding on façade and orientation
- (2C) Selecting type and sizes of windows
- (2D) Designing to minimize transparency through two parallel façades
- (2E) Designing to minimize views of interior plants
- (2F) Landscaping to increase distances between windows and trees and shrubs

## **(3) Monitoring for adaptive management to reduce impacts**

- (3A) Systematic monitoring for fatalities to identify seasonal and spatial patterns
- (3B) Adjust light management, window marking and other measures as needed.

## **Response to Comment No. 2-22**

The commenter provides a list of solutions to prevent window collisions. However, as stated above under Response to Comments 2-18 and 2-19, the commenter provides no credible evidence support to his assertion that the Project could cause collision fatalities of birds. This comment does not specifically contain any environmental issues contained in the EIR. Therefore, no further response is warranted. Further responses are provided below.

## **Comment No. 2-23**

### **GUIDELINES ON BUILDING DESIGN**

If the project goes forward, it should at a minimum adhere to available guidelines on building design intended to minimize collision hazards to birds. The American Bird Conservancy (ABC) produced an excellent set of guidelines recommending actions to: (1) Minimize use of glass; (2) Placing glass behind some type of screening (grilles, shutters, exterior shades); (3) Using glass with inherent properties to reduce collisions, such as patterns, window films, decals or tape; and (4) Turning off lights during migration seasons (Sheppard and Phillips 2015). The City of San Francisco (San Francisco Planning Department 2011) also has a set of building design guidelines, based on the excellent guidelines produced by the New York City Audubon Society (Orff et al. 2007). The ABC document and both the New York and San Francisco documents provide excellent alerting of potential bird-collision hazards as well as many visual examples. The San Francisco Planning Department's (2011) building design guidelines are more comprehensive than those of New York City, but they could have gone further. For example, the San Francisco guidelines probably should have also covered scientific monitoring of impacts as well as compensatory mitigation for impacts that could not be avoided, minimized or reduced. Monitoring and the use of compensatory mitigation should be incorporated at any new building project because the measures recommended in the available guidelines remain of uncertain effectiveness, and even if these measures are effective, they will not reduce collision fatalities to zero. The only way to assess effectiveness and to quantify post-construction fatalities is to monitor the project for fatalities.

### **Response to Comment No. 2-23**

The commenter provides some recommendations for building design to mitigate bird impacts. As previously stated, because there would be less-than-significant impacts on special-status avian species, mitigation beyond what was provided in the Initial Study is not warranted. However, the comment is noted and will be provided to the decisionmakers.

### **Comment No. 2-24**

#### **CUMULATIVE IMPACTS**

City of Los Angeles (2019a,b) provides no analysis of cumulative impacts on birds caused by window collisions in the City, nor any analysis of the proposed project's contribution to cumulative impacts of window collisions. This missing analysis is a critical shortfall, because bird abundance across North America has declined 29% over the last 48 years (Rosenberg et al. 2019). The proposed project alone is predicted to kill 2,310 bird deaths per year (95% CI: 1,200-3,300), which would add to many thousands more killed by windows in Los Angeles. City of Los Angeles needs to provide an estimate of the extent of windows already constructed, as well as an estimate of projected future extent of windows in the City. From such estimates, the City's cumulative toll on birds colliding with windows can be estimated.

### **Response to Comment No. 2-24**

The commenter claims that the City will have a cumulative impact on birds caused by window collisions. The Project would have less-significant-impacts on special-status

avian species with implementation of Mitigation Measure MM-BIO-1. For the reasons set forth in Response to Comments 2-18 and 2-19, the commenter does not provide substantial evidence that there would be bird-related fatalities related to window collisions at the Project Site or at the sites of related projects. Moreover, many of the related projects in the Project vicinity are high rise buildings, which as noted experience only a small percentage of bird collisions. Therefore, cumulative impacts would be less than significant and the Project's contribution would not be considerable. Thus, no further analysis is warranted.

## **Comment No. 2-25**

### **MITIGATION**

Bird surveys need to be performed to adequately characterize flight patterns through the project area. These surveys need to inform a revised EIR, which should require adherence to the available guidelines on minimizing bird-window collisions (see earlier comments). Compensatory mitigation should be formulated for those collision fatalities that cannot be avoided through implementation of guidelines. Unavoidable collision fatalities should be measured through two or more years of post-construction fatality monitoring, and the revised EIR should tie levels of compensatory mitigation to threshold fatality rates.

## **Response to Comment No. 2-25**

The commenter recommends bird surveys as mitigation measures to minimize bird-window collisions. As stated above in Response to Comment 2-18, the Project would have less-significant-impacts on special-status avian species with implementation of Mitigation Measure MM-BIO-1, which requires that all suitable habitat (i.e., street trees and shrubs) be surveyed for the presence of nesting birds by a qualified biologist should construction activities occur in nesting season (February 15 to August 31). Given that surveys are currently proposed as mitigation to reduce potential impacts during the nesting season, no additional mitigation is necessary.

## **Comment No. 2-26**

### **FUND WILDLIFE REHABILITATION FACILITIES**

Compensatory mitigation ought also to include funding contributions to wildlife rehabilitation facilities to cover the costs of injured animals that will be delivered to these facilities for care. Most of the wildlife injuries will likely be caused by window collisions. But the project's impacts can also be offset by funding the treatment of injuries to animals caused by other buildings, electric lines, cars, and house cats.

## **Response to Comment No. 2-26**

The commenter recommends compensatory mitigation, such as funding contributions to wildlife rehabilitation facilities, as mitigation. Given that the Project would have less-significant-impacts on special-status avian species with implementation of Mitigation Measure MM-BIO-1 and, as discussed above in Response to Comments 2-18 and 2-

19, the commenter does not provide substantial evidence that there would be bird-related fatalities related to window collisions, no additional mitigation is necessary.

### **Comment No. 2-27**

The remainder of Exhibit A contains References Cited and a resume for the commenter and are provided in Attachment A of this response.

### **Response to Comment No. 2-27**

The comment does not raise an environmental issue. No response is warranted.

### **Comment No. 2-28**

#### **EXHIBIT B**

Dear Mr. Drury,

We have reviewed the March 2019 Draft Environmental Impact Report (“DEIR”) for the Times Mirror Square Project (“Project”) located in the City of Los Angeles (“City”). The Project proposes to demolish an existing 183,758 square foot executive building and 6-story parking garage in order to construct two buildings with 1,127 residential units and 34,572 square feet of restaurant space, for a total of 1,135,803 square feet of new development. The Project also proposes to rehabilitate three existing buildings, totaling 376,105 square feet.

Our review concludes that the DEIR fails to adequately evaluate the Project’s Air Quality, Health Risk, and Greenhouse Gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An updated DEIR should be prepared to adequately assess and mitigate the potential air quality and health risk impacts that the project may have on the surrounding environment.

### **Response to Comment No. 2-28**

This comment is an introduction to the remainder of the comment. Detailed responses to these comments are provided in Responses to Comment Nos. 2-29 through 2-54.

### **Comment No. 2-29**

#### **Air Quality**

##### **Unsubstantiated Input Parameters Used to Estimate Project Emissions**

The DEIR’s air quality analysis relies on emissions calculated with CalEEMod.2016.3.2.<sup>1</sup> CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act (CEQA) requires that such changes be justified by substantial evidence.<sup>2</sup> Once all of the values are inputted into the model, the Project’s

construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters were utilized in calculating the Project's air pollutant emissions and make known which default values were changed as well as provide justification for the values selected.<sup>3</sup>

Review of the Project's air modeling demonstrates that the DEIR underestimates emissions associated with Project activities. As previously stated, the DEIR's air quality analysis relies on air pollutant emissions calculated using CalEEMod. When reviewing the Project's CalEEMod output files, provided in Appendix C to the DEIR, we found that several of the values inputted into the model were not consistent with information disclosed in the DEIR. As a result, the Project's construction and operational emissions are underestimated. An updated DEIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

Footnote 1: CAPCOA (November 2017) CalEEMod User's Guide, [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4).

Footnote 2: Ibid, p. 1, 9.

Footnote 3: Supra, fn 1, p. 11, 12 – 13. A key feature of the CalEEMod program is the "remarks" feature, where the user explains why a default setting was replaced by a "user defined" value. These remarks are included in the report.

## **Response to Comment No. 2-29**

Contrary to the comment, the Project's air modeling provided in the Draft EIR does not underestimate emissions associated with the Project's construction and operational activities. The Project's CalEEMod output files, provided in Appendix C to the Draft EIR, contain input values that are consistent with information disclosed in the Draft EIR and in some cases slightly more conservative in order to ensure that the Project's potential air quality impacts are disclosed. As a result, the Project's construction and operational emissions are not underestimated, and the Draft EIR adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality. Refer to Responses to Comments 2-30 through 2-38 for responses to the specific items raised in the comments regarding the Project's CalEEMod output files.

## **Comment No. 2-30**

### *Failure to Include All Proposed Land Uses*

Review of the Project's CalEEMod output files demonstrates that not all of the land uses proposed by the DEIR were included in the model. As a result, the Project's construction and operational emissions may be underestimated.

According to the DEIR, the proposed Towers would include approximately 34,572 square feet of restaurant uses (see excerpt below) (p. II-30, Table II-2).

**TABLE II-2  
PROPOSED DEVELOPMENT<sup>A</sup>**

North and South Towers Uses	North Tower	South Tower	Total
<b>Residential Uses</b>			
Studio	90 Units	0	90 Units
I Bedroom	166 Units	380 Units	546 Units
1 Bedroom + Den	60 Units	100 Units	160 Units
2 Bedroom	132 Units	192 Units	324 Units
3 Bedroom	0 Units	4 Units	4 Units
Penthouse	2 Units	1 Unit	3 Units
<b>Total Residential Units</b>	<b>450 Units</b>	<b>677 Units</b>	<b>1,127 Units</b>
<i>Total Residential Floor Area</i>			<i>1,071,692 sf</i>
<b>Non-Residential Uses</b>			
Loading			2,586 sf
Restaurant			34,572 sf
<i>Total Non-Residential Floor Area</i>			<i>64,111 sf</i>
<b>Proposed New Floor Area in North and South Towers</b>			<b>1,135,803 sf</b>

Review of the Project’s CalEEMod output files for the Towers, however, demonstrates that the restaurant land use was not included (see excerpt below) (Appendix C, pp. 135, 181).

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	37.60	1000sqft	0.86	37,597.00	0
Enclosed Parking with Elevator	1,754.00	Space	0.68	697,600.00	0
Other Non-Asphalt Surfaces	74.64	1000sqft	0.09	74,643.00	0
City Park	0.92	Acre	0.09	28,777.00	0
Health Club	25.62	1000sqft	0.59	25,618.00	0
Apartments High Rise	1,127.00	Dwelling Unit	0.80	1,071,692.00	1894

As you can see in the excerpt above, the Towers air model fails to include the proposed restaurant land use. The land usage parameters, including land use types and sizes, are used throughout CalEEMod to determine default variables and emission factors that go into the model’s calculations.<sup>4</sup> For example, land use areas are used for certain calculations such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts). Therefore, by failing to include the proposed restaurant land use in the Towers air model, the construction and operational emissions are not properly accounted for in the model. Therefore, an updated air quality analysis should be prepared in an updated DEIR to adequately evaluate the Project’s construction and operational air quality impacts.

Footnote 4: “CalEEMod User’s Guide.” CAPCOA, November 2017, available at: [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4), p. 18.

## Response to Comment No. 2-30

The comment is referring to the Project’s construction CalEEMod output files provided in Appendix C (C-2, Project Construction Emissions) of the Draft EIR. Construction of the Project’s proposed new restaurant use is accounted for in the CalEEMod construction emissions modeling. In the CalEEMod output files, the Project’s proposed new restaurant use is included within the land use type listed as “General Office Building” with a floor area of 37,597 square feet. For construction emissions modeling purposes, the CalEEMod would not result in any greater construction emissions if it were to be listed with a land use type of “Restaurant.” In other words, changing the land use type to Restaurant would not result in any increase to the quantified construction emissions. In fact, with respect to CalEEMod default values, the change in land use type from General Office Building to Restaurant would only affect the CalEEMod default values for construction worker trips and vendor trips. As indicated on page 14 of the CalEEMod User’s Guide, Appendix A: Calculation Details for CalEEMod, the construction worker trip rate for office uses (0.42 daily trips per 1,000 square feet) is slightly greater than for commercial/retail uses (0.34 daily trips per 1,000 square feet) while the construction vendor trip rate for office uses is the same as commercial/retail uses (0.1639 daily trips per 1,000 square feet).<sup>14</sup> The CalEEMod default values for construction worker trips were utilized in the analysis. Therefore, the construction emissions disclosed in the Draft EIR are slightly more conservative for worker trip-related emissions given the slightly higher worker trip rate. In addition, as the modeling assumed 37,597 square feet for the use instead of 34,572 square feet, both the construction worker trips and vendor trips are proportionately overstated.

The Project’s construction emissions of VOCs from architectural coating are fully disclosed in the Draft EIR since VOC emissions from architectural coating sources in CalEEMod are calculated based on square footage and do not differentiate whether the land use type is General Office Building or Restaurant.<sup>15</sup> As a result, construction emissions for the Project are conservatively estimated and construction air quality impacts are adequately disclosed in the Draft EIR. This slight overestimation of construction emissions has no effect on the significance determination of the Project, and the Project would still implement the same air quality mitigation measures as provided in the Final EIR.

With respect to operational emissions, as discussed below in Response to Comment No. 2-31 below, restaurant uses are accounted for in the operational emissions modeling within CalEEMod. Thus, no changes to the quality analysis are warranted.

<sup>14</sup> California Air Pollution Control Officers Association, California Emissions Estimator Model User’s Guide, Appendix A: Calculation Details for CalEEMod, p. 14, October 2017.

<sup>15</sup> California Air Pollution Control Officers Association, California Emissions Estimator Model User’s Guide, Appendix A: Calculation Details for CalEEMod, p. 34, October 2017.

**Comment No. 2-31***Underestimated Land Use Size*

Review of the Project's CalEEMod output files demonstrates that the size of the proposed General Office Building land use was underestimated within the operational model. According to the DEIR, the Project will include 307,288 square feet of office space once operational (p. II-30, table II-2). However, review of the CalEEMod output files reveals that an area value of 285,088 square feet was modeled for the General Office Building land use (see excerpt below) (Appendix C, pp. 258, 269).

**1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	285.09	1000sqft	0.95	285,088.00	0
User Defined Commercial	3.02	User Defined Unit	0.04	3,025.00	0
Enclosed Parking with Elevator	1,754.00	Space	0.68	697,600.00	0
Other Non-Asphalt Surfaces	74.64	1000sqft	0.08	74,643.00	0
City Park	0.92	Acre	0.08	28,777.00	0
Health Club	25.62	1000sqft	0.08	25,618.00	0
High Turnover (Sit Down Restaurant)	53.39	1000sqft	0.28	53,389.00	0
Quality Restaurant	22.20	1000sqft	0.20	22,200.00	0
Apartments High Rise	1,127.00	Dwelling Unit	0.60	1,071,692.00	1694
Supermarket	50.00	1000sqft	0.50	50,000.00	0

As you can see in the excerpt above, the operational CalEEMod model estimates emissions assuming a General Office Building land use size of 285,088 square feet. This underestimates the operational office space by 22,200 square feet. As previously stated, the land use type and size features are used throughout CalEEMod to determine default variable and emission factors that go into the model's calculations.<sup>5</sup> The square footage of a land use is used for certain calculations such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts). Therefore, because the size of the General Office Building land use within the operational air model is underestimated, the operational emissions generated by the proposed Project are underestimated and should not be relied upon to determine Project significance.

Footnote 5: "CalEEMod User's Guide." CAPCOA, November 2017, available at: [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4), p. 18.

**Response to Comment No. 2-31**

The comment is referring to the Project's operational CalEEMod output files provided in Appendix C (C-3, Project Operational Emissions) of the Draft EIR. Operation of the Project's proposed office use is accounted for in the CalEEMod operational emissions modeling. In the CalEEMod output files, the Project's 307,088 square feet of offices uses

proposed office use is represented as 285,088 square feet of “General Office Building” and 22,200 square feet of “Quality Restaurant.” This provided for a more conservative analysis. As indicated in Table 8.1 of the CalEEMod User’s Guide, Appendix D: Default Data Tables, the operational building energy demand values for Quality Restaurant are higher than for General Office Building by approximately 70 percent for electricity and 95 percent for natural gas.<sup>16</sup> Therefore, the Project’s operational emissions disclosed in the Draft EIR are slightly more conservative for building energy demand-related emissions given the higher energy demand rates.

The Project’s operational emissions of VOCs from architectural coating and the use of consumer products are fully disclosed in the Draft EIR since VOC emissions from these sources in CalEEMod are calculated based on square footage and do not differentiate whether the land use type is General Office Building or Quality Restaurant.<sup>17</sup> As a result, operational emissions for the Project are conservatively estimated, and operational air quality impacts are adequately disclosed in the Draft EIR. This slight overestimation of operational emissions has no effect on the significance determination of the Project and the Project would still implement the same air quality mitigation measures as provided in the Final EIR. Thus, no changes to air quality analysis are warranted. It should be noted that this comment on the CalEEMod output file does not affect the Project’s construction air quality analysis.

## Comment No. 2-32

### *Unsubstantiated Reduction in Land Use Population*

Review of the Project’s CalEEMod output files demonstrates that the population associated with the residential land use was manually reduced without proper justification. As a result, the Project’s operational emissions may be underestimated.

According to the “User Entered Comments and Non-Default Data” table, the land use population was changed from 3,223 to 1,894 (see excerpt below) (Appendix B, pp. 138, pp. 184, pp. 260, pp. 271).

tblLandUse	Population	3,223.00	1,894.00

As you can see in the excerpt above, the population size is reduced by 1,329 residents, or approximately 41%. However, the DEIR fails to mention this reduction or justify any change to the land use population for high-rise apartments. According to the CalEEMod User’s Guide, the land use population metric is used throughout CalEEMod to calculate

<sup>16</sup> California Air Pollution Control Officers Association, California Emissions Estimator Model User’s Guide, Appendix D: Calculation Details for CalEEMod, Table 8.1, October 2017. The default values for Quality Restaurant (climate zone 12, not historical) are as follows: Title 24 Electricity 8.11 kilowatt-hour (kWh) per square foot (sf); Non-Title 24 Electricity 28.16 kWh/sf; Lighting 7.87 kWh/sf; Title 24 Natural Gas 43 kilo-British thermal units (kBtu) per sf; Non-Title 24 Natural Gas 188 kBtu/sf. The default values for General Office Building (climate zone 12, not historical) are as follows: Title 24 Electricity 4.6 kWh/sf; Non-Title 24 Electricity 4.62 kWh/sf; Lighting 3.77 kWh/sf; Title 24 Natural Gas 10 kBtu/sf; Non-Title 24 Natural Gas 0 kBtu/sf.

<sup>17</sup> California Air Pollution Control Officers Association, California Emissions Estimator Model User’s Guide, Appendix A: Calculation Details for CalEEMod, p. 33 and 34, October 2017.

emissions associated with Project activities.<sup>6</sup> As a result, the operational emissions associated with the Project may be underestimated and should not be relied upon to estimate emissions.

Footnote 6: “CalEEMod User’s Guide.” CAPCOA, November 2017, available at: [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4), p. 18.

## Response to Comment No. 2-32

The default population values supplied CalEEMod are based on the statewide default or information supplied by individual air districts.<sup>18</sup> Thus, CalEEMod does not contain city-specific or project site specific population data. As stated in the User’s Guide, CalEEMod was designed to allow the user to change the defaults to reflect site- or project-specific information, when available, provided that the information is supported by substantial evidence as required by CEQA.<sup>19</sup> The estimated future residential population value for the Project entered into the CalEEMod emissions modeling run, as shown in the CalEEMod output files provided in Appendix C of the Draft EIR, was calculated using an estimated person per household value of 1.68 for the Central City Community Plan area (the Community Plan area in which the Project is located), based on the 2015 Demographics Statistics Report by the City’s Department of City Planning Demographics Research Unit. Section IV.J, *Population and Housing*, of the Draft EIR conservatively utilized a population value of 2,739 based on a Citywide person per household factor for multi-family units as published in the 2016 American Community Survey of 2.43, rather than using the lower factor specific to the Central City Community Plan area. However, the difference in the population number does not affect the emissions modeling as the population value is not used to estimate any emission factors or emissions for the Project within CalEEMod version 2016.3.2, the most recent version that was used for the Project. Appendix A of the CalEEMod User’s Guide describes the methods, assumptions and data sources that are used for calculating all emission categories.<sup>20</sup> While Appendix A generally states that the residential population is used to estimate some metrics,<sup>21</sup> it identifies no specific use of residential population for calculating emissions. This general stature is likely a holdover from previous models and methodologies that calculated VOC emissions from consumer product usage based on residential population values. However, VOC emissions from consumer product usage is no longer calculated based on residential population, but is currently calculated based on square footage. Therefore, changing the population value in CalEEMod would have no effect on the emissions calculations. As a result, construction and operational emissions for the Project are adequately disclosed in the Draft EIR, and no changes to the air quality analysis are warranted.

<sup>18</sup> California Air Pollution Control Officers Association, California Emissions Estimator Model User’s Guide, Appendix A: Calculation Details for CalEEMod, p. 5, October 2017.

<sup>19</sup> California Air Pollution Control Officers Association, California Emissions Estimator Model User’s Guide, p. 12, November 2017.

<sup>20</sup> California Air Pollution Control Officers Association, California Emissions Estimator Model User’s Guide, Appendix A: Calculation Details for CalEEMod, p. 1, October 2017.

<sup>21</sup> California Air Pollution Control Officers Association, California Emissions Estimator Model User’s Guide, Appendix A: Calculation Details for CalEEMod, p. 5, October 2017.

## Comment No. 2-33

### *Incorrectly Applied Tier 4 Mitigation Measure*

According to the DEIR, the Project will implement the use of Tier 4 engines for off-road construction equipment in order to reduce construction emissions (p. IV.B-77). The DEIR states,

“As detailed in mitigation measures MM AQ-1 and MM AQ-2, construction of the Project would be required to utilize off-road diesel powered construction equipment that meet or exceed the stringent CARB and USEPA Tier 4 off-road emissions standards for those equipment rated at 50 hp or greater during Project construction” (p. IV.B-77).

MM-AQ-1 goes on to state,

“Off-road diesel-powered equipment that will be used an aggregate of 40 or more hours during any portion of the construction activities associated with grading/excavation/export phase shall meet the Tier 4 standards” (IV. B-78).

As the above excerpt demonstrates, MM-AQ-1 does not specify whether the Project would implement Tier 4 Interim or Tier 4 Final engines. Review of the CalEEMod output files demonstrates that the model assumed that Tier 4 Final engines would be used for 150 pieces of construction equipment.

The excerpts below demonstrate that emissions were modeled assuming that 150 pieces of construction equipment were equipped with Tier 4 Final engines in the Tower, renovation, and vibratory pile driver air models (see excerpts below) (Appendix C, pp. 137, 183, 227, 233, 240, 249).

## Response to Comment No. 2-33

Mitigation measure MM-AQ-1 has been clarified to state the Tier 4 Final standards as follows:

**MM-AQ-1:** The Applicant shall implement construction equipment features for equipment operating at the Project Site. These features shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment prior to the commencement of any construction activities. Construction features will include the following:

- a. During plan check, the Project representative shall make available to the lead agency and SCAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used during any of the construction phases. The inventory shall include the horsepower rating, engine production year, and certification of the specified Tier standard. A copy of each such unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided on-site at the time of mobilization of each applicable unit of equipment to allow the Construction Monitor to compare the on-site equipment with the inventory and certified Tier

specification and operating permit. Off-road diesel-powered equipment equal to or greater than 50 horsepower that will be used during any portion of the construction activities shall meet or exceed the Tier 4 Final standards. Construction contractors supplying heavy duty diesel equipment greater than 50 horsepower shall be encouraged to apply for SCAQMD SOON funds. Information including the SCAQMD website shall be provided to each contractor which uses heavy duty diesel for on-site construction activities.

Paragraphs b and c of MM-AQ-1 remain unchanged.

**Comment No. 2-34**

Tower Construction

tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	42.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00



Maximum horsepower	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015+	
25shp<50																						
50shp<75																						
75shp<100																						
100shp<175																						
175shp<300																						
300shp<600																						
600shp<750																						
Mobile Machines > 750hp																						
750hp<GEN ≤1200hp																						
GEN>1200 hp																						

Source: derived from California Air Resources Board, [http://www.arb.ca.gov/msprog/ordiesel/documents/Off-Road\\_Diesel\\_Std.s.xls](http://www.arb.ca.gov/msprog/ordiesel/documents/Off-Road_Diesel_Std.s.xls).

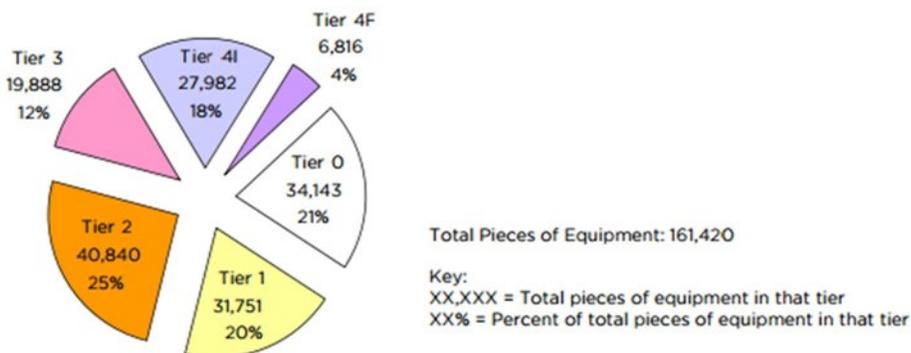
- a) When ARB and USEPA standards differ, the standards shown here represent the more stringent of the two.
- b) Standards given for all sizes of Tier 1 engines are hydrocarbons/oxides of nitrogen (NOx)/carbon monoxide (CO)/particulate matter (PM) in grams per brakehorsepower per hour (g/bhp-hr).
- c) Standards given for all sizes of Tier 2 and Tier 3 engines, and Tier 4 engines below 75 horsepower are non-methane hydrocarbons (NMHC)+NOx/CO/PM in g/bhp-hr.
- d) Standards given for Tier 4 engines above 75 horsepower are NMHC/NOx/CO/PM in g/bhp-hr.
- e) Engine families in this power category may alternately meet Tier 3 PM standards (0.30 g/bhp-hr) from 2008-2011 in exchange for introducing final PM standards in 2012.
- f) The implementation schedule shown is the three-year alternate NOx approach. Other schedules are available.
- g) Certain manufacturers have agreed to comply with these standards by 2005.



As demonstrated in the figure above, Tier 4 Interim and Tier 3 equipment have greater emission levels than Tier 4 Final equipment. Therefore, by modeling construction emissions assuming nearly a full Tier 4 Final equipment fleet, the Project Applicant failed to account for higher emissions that may occur as a result of the use of Tier 3 or Tier 4 Interim equipment. Since MM-AIR-1 fails to specify whether the Project will use Tier 4 Interim or Tier 4 Final equipment, it is incorrect to model emissions assuming that Tier 4 Final equipment will be used. Until the Project Applicant specifies that the Project will actually use Tier 4 Final engines during all phases of construction, and not utilize Tier 4 Interim equipment, the Project’s potential impacts should not be evaluated assuming the use of this cleaner burning equipment.

Furthermore, review of the DEIR demonstrates that the DEIR failed to evaluate the feasibility in obtaining Tier 4 equipment. Due to the limited amount of Tier 4, especially Tier 4 Final, equipment available, the DEIR should have assessed the feasibility in obtaining equipment with Tier 4 Final (or interim) engines (see excerpt below).<sup>8</sup>

Figure 4: 2014 Statewide All Fleet Sizes (Pieces of Equipment)



As demonstrated in the figure above, the Tier 4 Final equipment only accounts for 4% of all off-road equipment currently available in California. Thus, emissions are modeled

assuming that the Project will be able to obtain 150 pieces of Tier 4 Final equipment even though this equipment only accounts for 4% of available off-road equipment currently available in California. As a result, the model represents the best-case scenario even though obtaining these types of equipment may not be feasible.

Footnote 7: “San Francisco Clean Construction Ordinance Implementation Guide for San Francisco Public Projects.” August 2015, available at: [https://www.sfdph.org/dph/files/EHSdocs/AirQuality/San\\_Francisco\\_Clean\\_Construction\\_Ordinance\\_2015.pdf](https://www.sfdph.org/dph/files/EHSdocs/AirQuality/San_Francisco_Clean_Construction_Ordinance_2015.pdf), p. 6.

Footnote 8: *Ibid.*

## Response to Comment No. 2-34

The use of Tier 4 Final equipment will be a requirement in the bid document and a successful bid must include proof of the fleet. As such, the Draft EIR’s impact analysis appropriately considers the use of Tier 4 Final equipment in analyzing the Project’s potential impacts and determining their significance. As required in MM-AQ-1, a copy of each such unit’s certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided on-site at the time of mobilization of each applicable unit of equipment to allow the Construction Monitor to compare the onsite equipment with the inventory and certified Tier specification and operating permit.

As discussed on pages IV.B-5 and -6, in Section IV.B, *Air Quality*, of the Draft EIR, CARB has promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower, which aim to reduce emissions by the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models (13 CCR, Section 2449). Implementation of these standards is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with large fleets beginning compliance in 2014, medium fleets in 2017, and small fleets in 2019. The compliance schedule requires that Best Available Control Technology (BACT) turn overs or retrofits (Verified Diesel Emission Control Strategies [VDECS] installation) be fully implemented by 2023 in all equipment for large fleets (fleets with more than 5,000 horsepower) and medium fleets (fleets with 2,501 to 5,000 horsepower) and by 2028 for small fleets (fleets with less than or equal to 2,500 horsepower). The Project will require the use of many pieces of construction equipment and will require a contractor with a large or medium fleet. Thus, the proportion of cleaner construction equipment that meet the Tier 4 standard would be high, given that the full compliance date of 2023 is near the time the Project would actually start construction.

Additional evidence of the reasonable availability of cleaner construction equipment meeting the Tier 4 standard is provided in the CARB OFFROAD2017 model. OFFROAD2017 is CARB’s inventory tool for off-road diesel equipment that provides the population, emissions, fuel, and equipment information for off-road diesel vehicles.<sup>22</sup> Any heavy-duty diesel equipment manufactured 2015 or later, is required to meet the

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<sup>22</sup> California Air Resources Board, Mobile Source Emissions Inventory, Off-Road Diesel Vehicles, OFFROAD 2017-ORION, 2017. <https://www.arb.ca.gov/orion/>. Accessed November 19, 2019.

Tier 4 Final emission standards. OFFROAD2017 was used to estimate the amount of Tier 4 Final equipment that would be available in 2019. Project construction may begin at a later date, in which case the supply of Tier 4 Final equipment would be higher. Based on CARB OFFROAD2017 model, which uses past data on the adoption rate of previous engine Tiers after their introduction to forecast future year adoption rates, the 2019 statewide construction fleet would include 41,862 pieces of diesel equipment meeting Tier 4 Final emission standards, representing approximately 30 percent of the statewide construction fleet.<sup>23</sup> Tier 4 Final equipment fleet populations would grow to 50,886 and 61,039, representing 36 and 42 percent of the 2020 and 2021 construction fleets, respectively.

By 2023, large and medium contractors are required to have all Tier 4 Final equipment to meet State law. The commenter's claim that it would be infeasible for the Project to utilize Tier 4 Final equipment for equipment greater than 50 horsepower is incorrect because it is based on Tier 4 Final fleet quantity data from 2014 and does not represent the currently available data. Furthermore, CARB's OFFROAD2017 inventory shows more than 40,000 pieces of Tier 4 Final equipment are included in California's construction fleet and cleaner engines, including Tier 4 Final, would be integrated into large and medium fleets to meet CARB regulations for off-road diesel vehicles. Therefore, it is feasible for the Project to utilize and incorporate Tier 4 Final equipment for Project construction.

In summary, substantial evidence supports the Draft EIR's analysis of the Project's potential air quality impacts, with incorporation of Tier 4 Final equipment. As discussed in MM-AQ-1, Tier 4 Final requirements must be included in the bid documents, and the successful contractor(s) must demonstrate the ability to supply such equipment; therefore, the Tier 4 equipment requirements are an integral part of the Project's construction process. It is realistic and feasible to assume that construction contractors would have equipment meeting Tier 4 requirements because as stated above, large and medium fleets began compliance in 2014 and 2017, respectively, facing full implementation by 2023. These contractors, which are the type required for construction of the Project, can reasonably be expected to have a sufficient number of Tier 4 equipment by the time the Project actually starts construction based on the substantial evidence discussed above and in the Draft EIR.

## **Comment No. 2-35**

### *Unsubstantiated Application of Fuel Type Mitigation Measure*

Review of the CalEEMod output files for the Towers demonstrates that the fuel types for several pieces of construction equipment were changed from diesel to electrical without proper justification. As a result, construction emissions are underestimated.

<sup>23</sup> California Air Resources Board, OFFROAD2017 and 2017 Off-Road Diesel Emission Factor Update for NOX and PM, 2017. [https://ww3.arb.ca.gov/msei/ordiesel/ordas\\_ef\\_fcf\\_2017.pdf](https://ww3.arb.ca.gov/msei/ordiesel/ordas_ef_fcf_2017.pdf). Accessed November 19, 2019.

According to the Project's CalEEMod output files, the fuel type for 16 pieces of construction equipment were manually changed from diesel to electrical (see excerpt below) (Appendix C, pp. 136, 182)

tbiConstEquipMitigation	FuelType	Diesel	Electrical
tbiConstEquipMitigation	FuelType	Diesel	Electrical
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

As you can see in the excerpt above, the model assumes that 12 pieces of construction equipment would use electrical engines rather than the default diesel engines. As previously stated, the CalEEMod User's Guide requires that any non-default values inputted must be justified.<sup>9</sup> While the DEIR states that "[c]onstruction equipment such as tower cranes and signal boards shall utilize electricity from power poles or alternative fuels (i.e., non-diesel), rather than diesel power generators and/or gasoline power generators," it fails to demonstrate how many and which pieces of construction equipment will actually utilize electrical engines (p. IV. B-78). Furthermore, the DEIR fails to actually commit to the implementation and enforcement of this measure. As a result, the application of this mitigation measure cannot be verified, and the air model should not be relied upon to determine Project significance.

Footnote 9: "CalEEMod User's Guide." CAPCOA, November 2017, available at: [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4), p. 7, 13.

## Response to Comment No. 2-35

Appendix C (C-2, Project Construction Emissions) of the Draft EIR provides a list of the off-road heavy-duty construction equipment that would be electric powered. As shown in Appendix C-2, the two types of equipment include signal boards and cranes (a total of 11 equipment in the CalEEMod output files). This is reflected in the CalEEMod output files with two rows that indicates two equipment types with electrical, rather than the default diesel fuel type (i.e., indicated as two rows in the CalEEMod output file with "electrical" as the fuel type). The CalEEMod output files rows for the number of equipment mitigated (below the fuel type rows) include equipment that would incorporate Tier 4 Final equipment as per MM-AQ-1.

MM-AQ-1 requires that tower cranes and signal boards utilize electricity from power poles or alternative fuels (i.e., non-diesel) rather than diesel power generators and/or gasoline power generators. Electric tower cranes and signal boards are available and are commonly used types of construction equipment. Furthermore, this type of measure is commonly used for development projects in Los Angeles. The requirements of MM-AQ-1 will be included in applicable bid documents, and the successful contractor(s) must demonstrate the ability to supply such equipment. The Project will require the use of many pieces of construction equipment and will require a contractor with a large or medium fleet. Thus, it is expected that the successful contractor(s) would be capable of supplying the required equipment. Therefore, it is feasible for the Project to utilize and incorporate electrical equipment for Project construction as required in MM-AQ-1.

**Comment No. 2-36**

*Incorrect Number of Worker Trips for Construction*

The CalEEMod model relies on an incorrect number of worker trips to estimate the Project’s construction emissions. As a result, the Project’s construction-related air pollutant emissions and associated impacts may be underestimated and are inadequately addressed.

According to the Transportation and Traffic section of the DEIR, there would be 728 two-way, or 1,456 one-way, worker trips for building construction (see excerpt below) (p. IV.P-45, Table IV.P-7).

**TABLE IV.P-7  
CONSTRUCTION PERIOD TRIP GENERATION**

Peak Day Activity Under Each Phase (two-way trips)	Phase 1: Demolition	Phase 2: Renovation	Phase 3: Site Preparation	Phase 4: Grading	Phase 5: Foundation/Concrete Pour	Phase 6: Building Construction
Construction Workers	29	62	29	30	19	728
Passenger Car Equivalent (PCE) factor	1.0	1.0	1.0	1.0	1.0	1.0
Haul Truckloads	10	0	0	140	0	0
PCE factor	2.5	2.5	2.5	2.5	2.5	2.5
Delivery/Equipment Truckloads	0	0	0	0	703	179
PCE factor	2.0	2.0	2.0	2.0	2.0	2.0

As you can see in the excerpt above, the Project is anticipated to generate 728 two-way, or 1,456 one-way, trips during Project construction. Review of the CalEEMod output files, however, demonstrates that the Towers model includes an incorrect number of worker trips (see excerpt below) (Appendix C, pp. 150, 196).

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	20	58.00	0.00	3,500.00	14.70	6.90	22.10	LD_Mix	HDT_Mix	HHDT
Site Preparation	18	58.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	24	60.00	0.00	51,088.00	14.70	6.90	22.10	LD_Mix	HDT_Mix	HHDT
Foundation (North Tower)	15	38.00	1,406.00	0.00	14.70	25.00	20.00	LD_Mix	HHDT	HHDT
Foundation (South Tower)	15	38.00	1,173.00	0.00	14.70	25.00	20.00	LD_Mix	HHDT	HHDT
Subterranean Parking Structure	35	1,186.00	302.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Podium Construction	35	1,186.00	357.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	33	1,186.00	271.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	237.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

As you can see in the excerpt above, the total number of worker trips expected to occur during the Building Construction phase is underestimated by 270 trips. Without inputting the 1,456 trips discussed in the DEIR, the Towers air model fails to include all emissions

expected for Project construction. As a result, construction emissions are underestimated. In order to provide the most conservative analysis, as is required by CEQA, the DEIR's Towers air model should have utilized the trip values indicated to model the Project's construction-related air pollutant emissions.

## Response to Comment No. 2-36

Contrary to the comment, the Project's CalEEMod output file shows the correct number of worker trips during construction of the Project. In Section IV.P, Transportation and Traffic, of the Draft EIR, Table IV.P-7 references 728 two-way, or 1,456 one-way, construction worker trips during Phase 6: Building Construction, of Project construction. This number of construction worker trips in the traffic analysis refers to the maximum number of trips that would occur during building construction activities, which also includes architectural coating and paving. However, CalEEMod output files segregate Phase 6 into three separate sub-phases: Building Construction; Architectural Coating; and Paving. As shown in the Project's construction CalEEMod output files provided in Appendix C (C-2, Project Construction Emissions) of the Draft EIR, the total amount of trips for these three sub-phase, and Paving or  $(1,186 + 237 + 33 = 1,456$  one-way trips) is exactly the same as specified in the traffic analysis for Phase 6. As a result, construction emissions for the Project are adequately disclosed in the Draft EIR, and no changes to the air quality analysis are warranted.

## Comment No. 2-37

### *Unsubstantiated Changes to Indoor and Outdoor Water Use Rates*

Review of the Project's CalEEMod output files demonstrates that the Project's indoor water use rates were artificially changed without proper justification. As result, operational emissions may be underestimated.

According to the Project's CalEEMod output files, numerous indoor water use rates were changed from their default values (see excerpt below) (Appendix C, pp. 262, 273).

Table Name	Column Name	Default Value	New Value
tbiWater	IndoorWaterUseRate	73,428,586.88	41,370,819.10
tbiWater	IndoorWaterUseRate	50,670,114.22	22,622,497.88
tbiWater	IndoorWaterUseRate	1,515,247.35	4,209,271.08
tbiWater	IndoorWaterUseRate	16,205,664.91	4,236,560.43
tbiWater	IndoorWaterUseRate	6,738,448.42	1,761,629.58
tbiWater	IndoorWaterUseRate	6,163,410.74	3,967,634.18
tbiWater	IndoorWaterUseRate	0.00	511,321.06

As you can see in the excerpt above, the values for indoor water use rates were altered manually. According to the CalEEMod User's Guide, indoor and outdoor water use rates are used to determine land use contributions of GHG emissions associated with supplying and treating water and wastewater.<sup>10</sup> Regarding changes to water use rates, the DEIR states that "[t]he Project would reduce outdoor potable water use by a minimum of 20 percent compared to baseline water consumption" (p. II-48). However, this does not provide any justification for the changes to the Project's indoor water use

rate. As a result, these changes cannot be verified, and the Project's operational emissions may be underestimated.

Footnote 10: [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4), p. 44

### **Response to Comment No. 2-37**

As noted, the CalEEMod User's Guide allows default inputs to be replaced with project-specific data. In this case, the default water rates in CalEEMod were adjusted with Project-specific information for water usage from the Project's Water Supply Assessment approved by the Los Angeles Department of Water and Power (LADWP), which is further discussed in the Section IV.R, *Water Supply*, of the Draft EIR. The Water Supply Assessment also includes conservation commitments, which are provided as Project Design Feature PDF-WS-1 in the Draft EIR, which will help achieve the Project-specific water reductions. For example, in the operational CalEEMod files provided in Appendix C (C-3, Project Operational Emissions), and as shown in the excerpt in the comment, the residential water usage rate of 41,370,819.10 gallons per year is based on the water demand rate shown in Table IV.R-4 of 116,446 gallons per day. When considering the total additional water conservation of 5,935 gallons per day across all Project uses, a portion of which was allocated as water savings to the residential water usage, and multiplying by 365 days per year, the residential use was calculated as 41,370,819.10. Similar calculations were made for the residential amenity uses and non-residential uses. As a result, the Project's water demand and associated water-related emissions calculations for the Project are justified and accurate. No changes to the air quality analysis are warranted.

### **Comment No. 2-38**

#### **Failure to Implement All Feasible Mitigation to Reduce Emissions**

The DEIR determines that the Project's construction NOx emissions would result in a significant air quality impact (see excerpt below) (p. IV.B-61, Table IV.B-7).

**TABLE IV.B-11**  
**ESTIMATED MAXIMUM MITIGATED REGIONAL CONSTRUCTION EMISSIONS (POUNDS PER DAY)<sup>a</sup>**

Source	VOC	NO <sub>x</sub>	CO <sup>d</sup>	SO <sub>2</sub>	PM10 <sup>b</sup>	PM2.5 <sup>b</sup>
<b>Individual Phases</b>						
Demolition	2	15	91	<1	5	1
Site Preparation	2	8	75	<1	1	<1
Grading	5	99	89	<1	7	2
Foundation (North Tower)	16	502	125	1.4	33	11
Foundation (South Tower)	13	420	107	1.2	28	9
Subterranean Parking Structure Construction	10	52	148	<1	16	5
Podium Construction	9	54	137	<1	16	5
Building Construction	9	43	117	<1	16	5
Building Construction/Architectural Coating	23	40	122	<1	18	5
Building Construction/Paving/Architectural Coating	23	42	159	<1	19	5
Existing Building Renovations <sup>c</sup>	1	9	21	<1	2	1
<b>Maximum Daily Emissions</b>	<b>25</b>	<b>512</b>	<b>180</b>	<b>1.5</b>	<b>35</b>	<b>11</b>
<b>SCAQMD Numeric Indicators</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
Exceeds Thresholds?	No	Yes	No	No	No	No

As you can see in the excerpt above, the DEIR determines that construction NO<sub>x</sub> emissions will exceed the SCAQMD threshold. The DEIR then concludes that the Project's construction NO<sub>x</sub> emissions will result in a significant air quality impact. As a result, the DEIR proposes a few mitigation measures to reduce the Project's criteria air pollutant emissions. However, even after implementation, the DEIR concludes that the Project's construction NO<sub>x</sub> emissions would be "significant and unavoidable" (p. IV.B-62). While we agree that the Project would result in a significant construction-related NO<sub>x</sub> impact, the DEIR's conclusion that these impacts are "significant and unavoidable" is incorrect. According to the California Environmental Quality Act (CEQA),

"CEQA requires Lead Agencies to mitigate or avoid significant environmental impacts associated with discretionary projects. Environmental documents for projects that have any significant environmental impacts must identify all feasible mitigation measures or alternatives to reduce the impacts below a level of significance. If after the identification of all feasible mitigation measures, a project is still deemed to have significant environmental impacts, the Lead Agency can approve a project, but must adopt a Statement of Overriding Consideration to explain why further mitigation measures are not feasible and why approval of a project with significant unavoidable impacts is warranted."<sup>11</sup>

Thus, an impact can only be labeled as significant and unavoidable after all available, feasible mitigation is considered. Review of the Project's proposed mitigation measures, however, demonstrates that not all feasible mitigation measures are being implemented (p. IV.B- 77 – IV.B- 79). While the DEIR does include two mitigation measures for construction, MM- AQ- 1 and MM- AQ- 2, it fails to incorporate all feasible mitigation, as is required by CEQA. Therefore, the DEIR's conclusion that impacts are significant and unavoidable is unsubstantiated. As a result, additional mitigation measures should be identified and incorporated in order to reduce the Project's air quality impacts to the maximum extent possible. Until all feasible mitigation is reviewed and incorporated into the Project's design, impacts from construction NO<sub>x</sub> emissions cannot be considered significant and unavoidable.<sup>12</sup>

As a result of the air modeling issues discussed above, we find the Project's air quality impacts to be inadequately evaluated and require that an updated DEIR with an updated CalEEMod model be prepared that properly evaluates and mitigates the Project's air quality impacts to a less than significant level.

Footnote 11: "Guidance for Assessing and Mitigating Air Quality Impacts." SJVAPCD, March 2015, available at: [http://www.valleyair.org/transportation/GAMAQI\\_3-19-15.pdf](http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf), p. 115 of 125.

Footnote 12: See section titled "Mitigation Measures Available to Reduce Construction Emissions" of this comment letter. These measures would effectively reduce construction-related NO<sub>x</sub> emissions.

## Response to Comment No. 2-38

The comment states that Project construction would still exceed the SCAQMD NO<sub>x</sub> threshold even with adherence to MM-AQ-1, resulting in 512 pounds per day of mitigated regional NO<sub>x</sub> emissions during construction. As discussed on page IV.B-80 of Section IV.B, *Air Quality*, of the Draft EIR, MM-AQ-1 and MM-AQ-2 would minimize regional NO<sub>x</sub> emissions to below SCAQMD regional numeric indicators for all phases of Project construction except for the two continuous concrete pouring foundation phases, which would be expected to last up to a total of approximately two days each. Accordingly, the foundation pour for the North Tower would have mitigated regional emissions of 502 pounds per day of NO<sub>x</sub> for up to two days. The foundation pour for the South Tower would have mitigated regional emissions of 420 pounds per day of NO<sub>x</sub> for up to two days. Although unlikely, if existing building renovation construction activity would occur on the same days as the foundation pours, the maximum mitigated regional emissions for the North Tower foundation pour plus existing building renovations would be approximately 512 pounds per day of NO<sub>x</sub> for up to two days and the South Tower foundation pour plus existing building renovations would be approximately 430 pounds per day of NO<sub>x</sub> for up to two days. The remaining phases would have regional mitigated NO<sub>x</sub> emissions under the 100 pounds per day significance threshold. Thus, the Project would have a maximum of four days above the SCAQMD regional numeric indicator, out of a total of approximately 4 years of construction, which would not considerably hinder attainment of the ozone NAAQS (the primary concern for NO<sub>x</sub> emissions in the South Coast Air Basin is that it is an ozone precursor emission).

The NO<sub>x</sub> exceedances would occur during the two continuous concrete pouring foundation phases of Project construction, which would last a maximum of four days. The emissions associated with these phases of Project construction are overwhelmingly the result of emissions from concrete trucks required to deliver and pour the concrete at the Project Site. The City as lead agency considered other mitigation measure to reduce these emissions further, but ultimately determined they would not be feasible. Specifically, the City considered the use of zero emissions (ZE) and near zero emissions (NZE) trucks as part of the Final EIR. Response to Comment 4-9 of the FEIR contains a detailed explanation of why ZE and NZE concrete trucks would not be commercially available for use during Project construction. The commenter provides no credible evidence to the contrary.

Construction of the Project is expected to occur over approximately four years, with the air quality emissions modeling analysis assuming construction in late 2018 to late 2022, and a full operational year of 2023.<sup>24</sup> However, even when adjusting the construction dates to 2020 to 2024, according to the reports cited below, there would not be enough commercially available ZE and NZE concrete truck fleets and/or infrastructure to accommodate the use of ZE and NZE technology for the Project. According to a Feasibility Assessment for Drayage Trucks for the San Pedro Bay Ports Clean Air Action Plan, ZE and NZE on-road haul trucks availability, as of late-2018, includes one ZE and one NZE fuel-technology platform sold by Original Equipment Manufacturers (OEMs) in commercially available Class 8 trucks suitable for Port use.<sup>25,26</sup> With the development of ZE and NZE platforms, infrastructure has emerged as one of the most significant near-term barriers to wide-scale adoption of these technologies due to standardization difficulties and the ability to develop the full charging infrastructure over the next several years. Additionally, according to the Feasibility Assessment, one OEM plans to begin offering a ZE battery-electric Class 8 truck by 2021, the other OEMs have similar or later timeframes. None will have readily available fleets in time for Project construction use, in particular for the Project's specific need for many concrete trucks over a short duration.<sup>27</sup>

The International Council on Clean Transportation (ICCT) in a November 2017 white paper titled "Transitioning to Zero-Emission Heavy-Duty Freight Vehicles"<sup>28</sup> states that

<sup>24</sup> As noted in on page IV.B-31 of Section IV.B, *Air Quality*, of the Draft EIR, "If the onset of construction is delayed to a later date than assumed in the modeling analysis, construction impacts would be less than those analyzed, because a more energy-efficient and cleaner burning construction equipment and vehicle fleet mix would be expected in the future, pursuant to State regulations that require construction equipment fleet operators to phase-in less polluting heavy-duty equipment. As a result, should the Project commence construction on a later date than modeled in this air quality impact analysis, air quality impacts would be less than the impacts disclosed herein." Please refer to the Errata.

<sup>25</sup> Port of Long Beach & The Port of Los Angeles, San Pedro Bay Ports Clean Air Action Plan, 2018 Feasibility Assessment for Drayage Trucks, April 2019, <http://www.cleanairactionplan.org/documents/final-drayage-truck-feasibility-assessment.pdf/>. Accessed June 4, 2019.

<sup>26</sup> Class 8 trucks means any in-use on-road vehicle with a gross vehicle weight rating (GVWR) greater than 33,001 pounds, which includes concrete trucks. See: <https://afdc.energy.gov/data/10380>.

<sup>27</sup> Letter dated February 28, 2020 attached as Appendix D.

<sup>28</sup> Moultak, M., Lutsey, N., Hall, D., Transitioning to Zero-Emission Heavy-Duty Freight Vehicles, The International Council on Clean Transportation (ICCT), September 26, 2017,

there are “prevailing barriers to widespread viability” of plug-in electric heavy-duty freight vehicles, primarily limited electric range, high vehicle cost, long recharging time, and tradeoffs on cargo weight and/or volume. This report does not cite heavy-duty Class 8 trucks with a gross vehicle weight rating (GVWR) greater than 33,001 pounds, which are similar to the GVWR of the heavy-duty concrete trucks that would be used for the Project, as a promising segment for widespread commercialization. As stated in the white paper, there are “barriers to the growth of electric and hydrogen fuel cell heavy-duty commercial freight trucks include limited technology availability, limited economies of scale, long-distance travel requirements, payload mass and volume constraints, and a lack of refueling and recharging infrastructure.”<sup>29</sup> The white paper also states that technologies analyzed are all in research, exploratory, and early demonstration phases. Thus, this report further demonstrates that the ZE and NZE truck fleet would not be viable during construction of the Project.

Furthermore, a recent report by Next 10<sup>30</sup> concludes that California will meet or exceed its 1.5 million by 2025 ZEV goal, primarily through automobiles, but that the state’s charging infrastructure is not keeping pace with the growth of its electric vehicle fleet. Through October 2017, more than 337,000 ZEVs had been sold in California, and ZEV sales increased 29.1 percent in California over the previous year. Meanwhile, California has 16,549 public and nonresidential private sector charging outlets - most in the nation by far but only 0.05 public charging outlets per ZEV. Studies show that California will need 125,000 to 220,000 charging ports from private and public sources by 2020 in order to provide adequate infrastructure. The charging stations for EV, especially heavy-duty concrete trucks, are not readily available and would not support the amount of heavy-duty concrete trucks required for the Project.

As demonstrated above, the EV and NEV heavy-duty truck fleet is not readily available at this time, nor would it likely be available within the timeframe for construction of the Project. Since there is not a large percentage of the Class 8 fleet utilizing EV or NEV technology, requiring the Project to utilize EV or NEV trucks as a mitigation measure is not feasible or practicable, in particular for the Project’s specific need for many concrete trucks over a short duration for the two-day concrete pour for each tower. Additionally, as stated above, the Project would only exceed the SCAQMD numeric indicators for a short time, up to four days, during the concrete pours for the foundations. Thus, a mitigation measure requiring the use of EV or NEV technology is not feasible.

In addition, the Lead Agency considered a mitigation measure requiring 2010 model year or newer engines. As discussed in the Response to Comment 4-9 of the Final EIR, the Lead Agency does not believe that a mitigation measure requiring 2010 model year or newer engines is necessary because this is already required through the CARB 2008 Truck and Bus Regulation. As discussed on page IV.B-5 in Section IV.B, *Air Quality*, of

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[http://www.theicct.org/sites/default/files/publications/Zero-emission-freight-trucks\\_ICCT-white-paper\\_26092017\\_vF.pdf](http://www.theicct.org/sites/default/files/publications/Zero-emission-freight-trucks_ICCT-white-paper_26092017_vF.pdf). Accessed November 19, 2019.

<sup>29</sup> Moulak, M., Lutsey, N., Hall, D., Transitioning to Zero-Emission Heavy-Duty Freight Vehicles, The International Council on Clean Transportation (ICCT), September 26, 2017, [http://www.theicct.org/sites/default/files/publications/Zero-emission-freight-trucks\\_ICCT-white-paper\\_26092017\\_vF.pdf](http://www.theicct.org/sites/default/files/publications/Zero-emission-freight-trucks_ICCT-white-paper_26092017_vF.pdf). Accessed November 19, 2019.

<sup>30</sup> Next 10, The Road Ahead for Zero-Emission Vehicles in California: Market Trends & Policy Analysis, January 2018.

the Draft EIR, “In 2008, CARB approved the Truck and Bus regulation to reduce NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions from existing diesel vehicles operating in California (13 CCR, Section 2025).” The regulation requires that trucks with a gross vehicle weight rating greater than 26,000 pounds, which includes heavy-duty trucks that would be used during Project construction, meet 2010 engine standards, or better. The regulation is phased over 8 years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this requirement would meet or exceed the 2010 engine emission standards for NO<sub>x</sub> and diesel particulate matter by 2023. Truck fleet operators are required to report compliance with the regulation in accordance with CARB’s reporting procedures for the Truck Regulation Upload, Compliance and Reporting System (TRUCRS).<sup>31</sup>

Nonetheless, the Lead Agency has conservatively added the following subparagraph d. to MM AQ-1 to ensure the maximum use of 2010 model or newer engines during the concrete pouring foundation phases:

- d. All concrete trucks used during the Project’s concrete pouring foundation shall have 2010 model or newer engines. Prior to issuance of a building permit, the applicant shall provide evidence (such as copies of contracts with concrete subcontractors with specifications or engine certifications) satisfactory to the Department of City Planning demonstrating compliance with this measure.

However, this added measure would not reduce the NO<sub>x</sub> emission levels during the concrete pouring phases to below the applicable significance threshold, and impacts would remain significant.<sup>32</sup>

There are no other feasible mitigation measures that would reduce the construction NO<sub>x</sub> emissions impact associated with the two continuous concrete pouring foundation phases of Project construction as a result of emissions from concrete trucks required to deliver and pour the concrete at the Project Site. Therefore, the Lead Agency has appropriately considered feasible mitigation measures as required by CEQA and determined the impact to be significant and unavoidable.

## **Comment No. 2-39**

### **Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated**

The DEIR determines that the proposed Project would result in a less than significant health risk impact without conducting a quantitative construction or operational health risk assessment (HRA) to nearby sensitive receptors (p. IV.B-37). The DEIR attempts to justify the omission of a construction HRA by stating,

<sup>31</sup> California Air Resources Board, Welcome to the Truck Regulation Upload, Compliance and Reporting System (TRUCRS), [https://ssl.arb.ca.gov/ssltrucrsto/trucrs\\_reporting/login.php](https://ssl.arb.ca.gov/ssltrucrsto/trucrs_reporting/login.php). Accessed July 7, 2019.

<sup>32</sup> The Project’s construction emissions during the concrete pouring foundation phases with the above measure are provided in Appendix A to the Errata, which uses the same modeling inputs and methodology as the air quality analysis in the Draft EIR. Note that, as with the Draft EIR, Appendix A to the Errata assumes concurrent construction of the towers and renovation of the existing buildings in order to provide a more conservative analysis.

“Given the temporary and short- term construction schedule (approximately 48 months), the Project would not result in a long- term (i.e., lifetime or 70-year) exposure as a result of Project construction” (p. IV.B-69).

Furthermore, the DEIR attempts to justify the omission of an operational HRA by stating,

“Based on the uses expected on the Project Site, potential long- term operational impacts associated with the release of TACs would be minimal, regulated, and controlled, and would not be expected to exceed the SCAQMD numerical indicator of significance. Therefore, impacts would be less than significant” (p. IV.B-71).

However, these justifications for failing to evaluate the health risk posed to nearby sensitive receptors are incorrect for several reasons.

First, simply stating that the Project has a “short-term construction schedule” does not justify the omission of a construction HRA. According to the SCAQMD, the air pollution control agency for the proposed Project, it is recommended that health risk impacts from short-term projects also be assessed. The Guidance document states,

Since these short-term calculations are only meant for projects with limits on the operating duration, these short-term cancer risk assessments can be thought of as being the equivalent to a 30-year cancer risk estimate and the appropriate thresholds would still apply (i.e. for a 5-year project, the maximum emissions during the 5-year period would be assessed on the more sensitive population, from the third trimester to age 5, after which the project’s emissions would drop to 0 for the remaining 25 years to get the 30-year equivalent cancer risk estimate.<sup>13</sup>

Thus, an HRA is required to determine whether the Project would expose sensitive receptors to substantial air pollutants. The DEIR should have conducted some sort of quantitative analysis and should have compared the results of this analysis to applicable thresholds. The SCAQMD provides a specific numerical threshold of 10 in one million for determining a project’s health risk impact.<sup>14</sup> Therefore, the DEIR should have conducted an assessment that compares the Project’s construction and operational health risks to this threshold in order to determine the Project’s health risk impacts. By failing to prepare an HRA, the DEIR fails to provide a comprehensive analysis of the sensitive receptor impacts that may occur as a result of exposure to substantial air pollutants.

Furthermore, just because “potential long-term operational impacts associated with the release of TACs would be minimal, regulated, and controlled,” and because the DEIR asserts that impacts would not “exceed the SCAQMD numerical indicator of significance,” does not mean that the Project’s operational health-related impacts will inherently be less than significant. Although we were not given an operating schedule, we can reasonably assume that once Project construction is complete, it will operate for a long period of time. During operation, the Project will generate vehicle trips and truck deliveries, which will generate additional exhaust emissions, thus continuing to expose nearby sensitive receptors to emissions. As such, the DEIR should have conducted a

construction and operational HRA, as long-term exposure to DPM and other TACs may result in a significant health risk impact and therefore, should be properly assessed.

Third, the omission of a quantified HRA is inconsistent with the most recent guidance published by the Office of Environmental Health Hazard Assessment (OEHHA), the organization responsible for providing recommendations and guidance on how to conduct HRAs in California. In February of 2015, the OEHHA released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments*, which was formally adopted in March of 2015.<sup>15</sup> This guidance document describes the types of projects that warrant the preparation of an HRA. As previously stated, grading and construction activities for the proposed Project will produce emissions of DPM through the exhaust stacks of construction equipment over an approximate 48-month construction period (p. IV.B-37). The OEHHA document recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors.<sup>16</sup> Once construction is complete, Project operation will generate vehicle and truck trips, which will generate additional exhaust emissions, thus continuing to expose nearby sensitive receptors to DPM emissions. The OEHHA document recommends that exposure from projects lasting more than 6 months should be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident (MEIR).<sup>17</sup> Even though we were not provided with the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, per OEHHA guidelines, health risk impacts from Project construction and operation should have been evaluated in an HRA. These recommendations reflect the most recent HRA policy, and as such, an assessment of health risks to nearby sensitive receptors from construction and operation should be included in an updated DEIR.

Footnote 13: “Risk Assessment Procedures for Rules 1401, 1401.1 and 212.” SCAQMD, June 2015, available at: <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/riskassprocjune15.pdf?sfvrsn=2>, p. XII-1 – XII-2.

Footnote 14: “South Coast AQMD Air Quality Significance Thresholds.” SCAQMD, April 2019, available at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>

Footnote 15: “Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>

Footnote 16: “Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>, p. 8-18.

Footnote 17: “Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>, p. 8-6, 8-15.

## Response to Comment No. 2-39

The commenter maintains that the EIR should have included both a construction and operational health risk assessment of Project's toxic air contaminant (TACs) emissions. Pages IV.B-69 through IV.B-71 of the Draft EIR analyze and disclose the potential for the Project to cause adverse health impacts from exposure to TACs from the Project's construction and operational emissions consistent with CEQA Guidelines Section 15126.2(a). As discussed therein, with respect to Project construction, the Project would be consistent with applicable South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan strategies intended to reduce emissions from construction equipment and activities, which include the use of cleaner construction equipment. The Project would comply with regulatory mandates including CARB Air Toxic Control Measure that limits idling to no more than five minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation for the use of cleaner construction equipment. As a result, the impacts from TACs during construction would be less than significant. Consistent with and supportive of the goals of these regulatory mandates to minimize emissions and exposure to emissions, the Project would include emissions controls agreed upon by the City and the Applicant that will be full enforceable by the City, as per MM-AQ-1. While this mitigation measure is intended to reduce the Project's construction criteria pollutant emissions, it would also have the beneficial effect of reducing TACs, including diesel particulate matter (DPM) emissions, from Project construction equipment.

Implementation of MM-AQ-1 would result in the reduction of DPM exhaust emissions from the Project's construction equipment by over approximately 90 percent as compared to the fleet average emissions for construction equipment and vehicles (refer to emissions reductions in Table IV.B-12 and Table IV.B-13 compared to the emissions shown in Table IV.B-8 and Table IV.B-9 of the Draft EIR). As shown in Table IV.B-13 on page IV.B-83 of the Draft EIR, on-site construction emissions of PM<sub>2.5</sub>, which are highly correlated to DPM emissions, would be minimized to less than 1 pound per day with incorporation of MM-AQ-1. Furthermore, the Project would comply with the CARB ATCM that limits diesel powered equipment and vehicle idling to no more than 5 minutes at a location and the CARB In-Use Off-Road Diesel Vehicle Regulation. Compliance with these standards would substantially minimize emissions of TACs during construction. Therefore, the Draft EIR correctly concludes that construction impacts would be less than significant.

Furthermore, as disclosed in the Draft EIR on page IV.B-37, health effects from TACs for sensitive residential receptors are described in terms of individual cancer risk based on a long-term resident exposure duration (i.e., resident lifetime or 70-year). Given the temporary and short-term construction schedule (approximately 48 months), the Project would not result in a long-term (i.e., lifetime or 70-year) exposure as a result of Project construction.

The commenter's assertion that OEHHA guidance requires preparation of an HRA for short-term construction activities is not correct. The 2015 Guidance Manual was developed by OEHHA, in conjunction with the California Air Resources Board (CARB), for use in implementing the Air Toxics "Hot Spots" Program. The Air Toxics "Hot Spots"

Program requires stationary sources (e.g., power generation facilities, refineries, and chemical plants) to report the types and quantities of certain substances routinely released into the air. The intent in developing the 2015 Guidance Manual was to provide health risk assessment procedures for use in the Air Toxics Hot Spots Program or for the permitting of new or modified stationary sources. The Project is not a “Hot Spots” Program project, but rather involves the construction and operation of a mixed-use development that includes residential, office and retail.

The guidance states:

The local air pollution control districts sometimes use the risk assessment guidelines for the Hot Spots program in permitting decisions for short-term projects such as construction or waste site remediation. Frequently, the issue of how to address cancer risks from short-term projects arises. Cancer potency factors are based on animal lifetime studies or worker studies where there is long-term exposure to the carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime. (Page 8-17)

While OEHHA provides limited guidance on how to conduct HRAs for short-term projects, it acknowledges the “considerable uncertainty” in evaluating cancer risk over short-term durations. In addition, the guidance document does not identify short-term projects or non-stationary source projects that warrant the preparation of a HRA, nor does it recommend the preparation of HRAs for short-term construction projects or non-stationary source projects, like the proposed mixed-use development.

Although a quantitative construction health risk assessment (HRA) for the Project is not required for the reasons discussed on page IV.B-37 of Section IV.B, *Air Quality*, of the Draft EIR, in order to provide information that further supports the Draft EIR’s less than significant finding with respect to TAC emissions, a quantitative health risk assessment has been prepared, and is included as Appendix A of this response letter. The results of the quantitative HRA demonstrate that the Project would not exceed the SCAQMD significance threshold for health risk impacts from TAC emissions and re-confirms the Draft EIR’s less than significant finding with respect to TAC emissions. Refer to Response to Comment 2-40 for details regarding the refined quantitative construction HRA.

The analysis of TAC impacts from operation of the Project, provided on pages IV.B-70 and -71 in Section IV.B, *Air Quality*, of the Draft EIR, states that only minor amounts of TAC emissions would be generated. As clarification, this statement is supported by the fact that while the Project would generate approximately 6,994 net new vehicle trips per day (refer to Table IV.P-8 in Section IV.P, *Transportation and Traffic*, of the Draft EIR), the vast majority of these trips would occur from passenger vehicles that would not be diesel-fueled and would not emit diesel particulate matter. As discussed in the Draft EIR, the operational mobile source emissions were estimated using CalEEMod, which incorporates the CARB’s on-road vehicle emissions factor model, which assumes approximately 4.2 percent of the vehicle fleet would be diesel-fueled in the Project’s

buildout analysis year 2023.<sup>33</sup> Based on this evidence, the proposed Project would generate approximately 294 net new diesel-fueled vehicle trips per day, respectively, based on a 4.2 percent factor. These estimated trips are not all heavy-duty truck trips but rather trips from all diesel-fueled vehicle types including diesel-fueled passenger vehicles, pick-up trucks, delivery vans, light-duty trucks, and heavy-duty trucks. While the SCAQMD has not adopted a numerical threshold for diesel-fueled vehicle trips in which an operational HRA would be required for a land use development project, this provides a reasonable clarification for the operational TAC impacts analysis provided in the EIR.

The SCAQMD has published and adopted the Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, which provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities). The Project would not include any of these uses; therefore, an operational HRA is neither required nor warranted.

Although a quantitative operational HRA for the Project is not required for the reasons discussed on page IV.B-37 of Section IV.B, *Air Quality*, of the Draft EIR, in order to provide information that further supports the Draft EIR's less than significant finding with respect to TAC emissions, a quantitative health risk assessment has been prepared, and is included as Appendix A of this response letter. The results of the quantitative HRA demonstrate that the Project would not exceed the SCAQMD significance threshold for health risk impacts from TAC emissions and re-confirms the Draft EIR's less than significant finding with respect to TAC emissions. Refer to Response to Comment 2-40 for details regarding the refined quantitative operational HRA.

## **Comment No. 2-40**

### **Screening-Level Assessment Indicates Significant Impact**

In an effort to demonstrate the potential risk posed by Project construction and operation to nearby sensitive receptors, we prepared a simple screening-level HRA. The results of our assessment, as described below, provide substantial evidence that the Project's construction and operational DPM emissions may result in a potentially significant health risk impact not previously identified by the DEIR.

In order to conduct our screening level risk assessment, we relied upon AERSCREEN, which is a screening level air quality dispersion model.<sup>18</sup> The model replaced SCREEN3, and AERSCREEN is included in the OEHHA<sup>19</sup> and the California Air Pollution Control Officers Associated (CAPCOA)<sup>20</sup> guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSA"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed.

<sup>33</sup> California Air Resources Board, EMFAC2014, South Coast Air Basin; 2020; Annual; All vehicle types; Aggregate model year; Aggregate speed. Please refer also to the Errata regarding the Project buildout year.

If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

We prepared a preliminary HRA of the Project's construction and operational health-related impact to residential sensitive receptors using the annual PM<sub>10</sub> exhaust estimates from the SWAPE annual CalEEMod output files. According to the DEIR, the nearest residential sensitive receptor is located 250 feet, or approximately 75 meters, southeast of the Project site (p. IV.B-27). Consistent with recommendations set forth by OEHHA, we assumed that residential exposure begins during the third trimester stage of life. The Project's construction CalEEMod output files indicate that construction activities will generate approximately 228 pounds of diesel particulate matter (DPM) over the 1,559-day construction period. The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project construction, we calculated an average DPM emission rate by the following equation:

$$\text{Emission Rate } \left( \frac{\text{grams}}{\text{second}} \right) = \frac{227.8 \text{ lbs}}{1,559 \text{ days}} \times \frac{453.6 \text{ grams}}{\text{lbs}} \times \frac{1 \text{ day}}{24 \text{ hours}} \times \frac{1 \text{ hour}}{3,600 \text{ seconds}} = 0.0007673 \text{ g/s}$$

Using this equation, we estimated a construction emission rate of 0.000767 grams per second (g/s). Subtracting the 1,559-day construction duration from the total residential duration of 30 years, we assumed that after Project construction, the MEIR would be exposed to the Project's operational DP< for an additional 25.73 years, approximately. The Project's operational CalEEMod emissions indicate that operational activities will generate approximately 407 pounds of DPM per year throughout operation. Applying the same equation used to estimate the construction DPM rate, we estimated the following emission rate for Project operation:

$$\text{Emission Rate } \left( \frac{\text{grams}}{\text{second}} \right) = \frac{407 \text{ lbs}}{365 \text{ days}} \times \frac{453.6 \text{ grams}}{\text{lbs}} \times \frac{1 \text{ day}}{24 \text{ hours}} \times \frac{1 \text{ hour}}{3,600 \text{ seconds}} = 0.00585 \text{ g/s}$$

Using this equation, we estimated an operational emission rate of 0.00585 g/s. Construction and operational activity was simulated as a 3.6-acre rectangular area source in AERSCREEN with dimensions of 143 meters by 102 meters. A release height of three meters was selected to represent the height of exhaust stacks on operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution.

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10%.<sup>21</sup> AS previously stated, there are residential sensitive receptors located approximately 75 meters from the Project site. The single-hour concentration estimated by AERSCREEN for Project construction is approximately 1.396 µg/m<sup>3</sup> DPM at approximately 75 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration 0.1396

$\mu\text{g}/\text{m}^3$  for Project construction at the nearest sensitive receptor. For Project operation, the single-hour concentration is estimated by AERSCREEN is approximately  $10.65 \mu\text{g}/\text{m}^3$  at approximately 75 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of  $1.065 \mu\text{g}/\text{m}^3$  for Project operation at the nearest sensitive receptor.

We calculated the excess cancer risk to the residential receptors both maximally exposed and located closest to the Project site using applicable HRA methodologies prescribed by OEHHA and the SCAQMD. Consistent with the construction schedule proposed by the DEIR, the annualized average concentration for construction was used for the entire third trimester of pregnancy (0.25 years) and the first 0.75 years of the infantile stage of life (0 – 2 years). The annualized average concentration for operation was used for the remainder of the 30-year exposure period, which makes up the remainder of the infantile stage of life (0 – 2 years), child stages of life (2 – 16 years) and adult stages of life (16 – 30 years). Consistent with OEHHA, SCAQMD, BAAQMD, and SJVAPCD guidance, we used Age Sensitivity Factors (ASFs) to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution.<sup>22, 23, 24, 25</sup> According to the most updated guidance, quantified cancer risk should be multiplied by a factor of ten during the third trimester of pregnancy and during the first two years of life (infant) and should be multiplied by a factor of three during the child stage of life (2 to 16 years). We also included the quantified cancer risk without adjusting for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution in accordance with older OEHHA guidance from 2003. This guidance utilizes a less health protective scenario than what is currently recommended by SCAQMD, the air quality district responsible for the City, and several other air districts in the state. Furthermore, in accordance with guidance set forth by OEHHA, we used the 95<sup>th</sup> percentile breathing rates for infants.<sup>26</sup> Finally, according to SCAQMD guidance, we used a Fraction of Time At Home (FAH) Value of 1 for the 3rd trimester and infant receptors.<sup>27</sup> We used a cancer potency factor of  $1.1 (\text{mg}/\text{kg}\text{-day})^{-1}$  and an averaging time of 25,550 days. The results of our calculations are shown below.

## The Closest Exposed Individual at an Existing Residential Receptor

Activity	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	Cancer Risk without ASFs*	ASF	Cancer Risk with ASFs*
Construction	0.25	0.1396	361	1.9E-07	10	1.9E-06
<b>3rd Trimester Duration</b>	<b>0.25</b>			<b>1.9E-07</b>	<b>3rd Trimester Exposure</b>	<b>1.9E-06</b>
Construction	2.00	0.1396	1090	4.6E-06	10	4.6E-05
<b>Infant Exposure Duration</b>	<b>2.00</b>			<b>4.6E-06</b>	<b>Infant Exposure</b>	<b>4.6E-05</b>
Construction	2.02	0.1396				
Operation	11.98	1.065	572	1.1E-04	3	3.3E-04
<b>Child Exposure Duration</b>	<b>14.00</b>			<b>1.1E-04</b>	<b>Child Exposure</b>	<b>3.3E-04</b>
Operation	14.00	1.065	261	4.3E-05	1	4.3E-05
<b>Adult Exposure Duration</b>	<b>14.00</b>			<b>4.3E-05</b>	<b>Adult Exposure</b>	<b>4.3E-05</b>
<b>Lifetime Exposure Duration</b>	<b>30.00</b>			<b>1.6E-04</b>	<b>Lifetime Exposure</b>	<b>4.2E-04</b>

\* We, along with CARB and SCAQMD, recommend using the more updated and health protective 2015 OEHHA guidance, which includes ASFs.

The excess cancer risk posed to adults, children, infants, and during the third trimester of pregnancy at the closest receptor, located approximately 75 meters away, over the course of Project construction and operation, utilizing age sensitivity factors, are approximately 43, 330, 46, and 1.9 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years) at the closest receptor, with age sensitivity factors, is approximately 420 in one million. The excess cancer risk posed to adults, children, infants, and during the third trimester of pregnancy at the closest receptor, located approximately 75 meters away, over the course of Project construction and operation, without utilizing age sensitivity factors, are approximately 43, 110, 4.6, 0.19 in one million. The excess cancer risk over the course of a residential lifetime (30 years) at the closest receptor, without utilizing age sensitivity factors, is approximately 160 in one million.

An agency must include an analysis of health risks that connects the Project's air emissions with the health risk posed by those emissions. Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection.<sup>28</sup> The purpose of the screening-level construction HRA shown above is to demonstrate the link between the proposed Project's emissions and the potential health risk. Our screening-level HRA demonstrates that construction of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. Therefore, since our screening-level construction HRA indicates a potentially significant impact, an updated CEQA analysis should include a reasonable effort to connect the Project's air quality emissions and the potential health risks posed to nearby receptors. Thus, an updated DEIR should include a quantified air pollution model as well as an updated, quantified refined health risk

assessment which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

Footnote 18: “AERSCREEN Released as the EPA Recommended Screening Model,” USEPA, April 11, 2011, *available at*: [http://www.epa.gov/ttn/scram/guidance/clarification/20110411\\_AERSCREEN\\_Release\\_Memo.pdf](http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf)

Footnote 19: “Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, *available at*: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>

Footnote 20: “Health Risk Assessments for Proposed Land Use Projects,” CAPCOA, July 2009, *available at*: [http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA\\_HRA\\_LU\\_Guidelines\\_8-6-09.pdf](http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf)

Footnote 21: “Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised.” EPA, 1992, *available at*: [http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019\\_OCR.pdf](http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf); see also “Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, *available at*: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>, p. 4-36

Footnote 22: “Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, *available at*: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>.

Footnote 23: “Draft Environmental Impact Report (DEIR) for the Proposed The Exchange (SCH No. 2018071058).” SCAQMD, March 2019, *available at*: <http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2019/march/RVC190115-03.pdf?sfvrsn=8>, p. 4.

Footnote 24: “California Environmental Quality Act Air Quality Guidelines.” BAAQMD, May 2017, *available at*: [http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en), p. 56; see also “Recommended Methods for Screening and Modeling Local Risks and Hazards.” BAAQMD, May 2011, *available at*: <http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20Modeling%20Approach.ashx>, p. 65, 86.

Footnote 25: “Update to District’s Risk Management Policy to Address OEHHA’s Revised Risk Assessment Guidance Document.” SJVAPCD, May 2015, *available at*: <https://www.valleyair.org/busind/pto/staff-report-5-28-15.pdf>, p. 8, 20, 24.

Footnote 26: “Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics ‘Hot Spots’ Information and Assessment Act,” June 5, 2015, *available at*: <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588-risk-assessment-guidelines.pdf?sfvrsn=6>, p. 19. “Risk Assessment Guidelines Guidance

Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, *available at*: <https://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf>

Footnote 27: “Risk Assessment Procedures for Rules 1401, 1401.1, and 212.” SCAQMD, August 2017, *available at*: [http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures\\_2017\\_080717.pdf](http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures_2017_080717.pdf), p. 7.

Footnote 28: *Supra*, fn 20, p. 1-5.

## **Response to Comment No. 2-40**

This response provides information that re-confirms the Draft EIR’s less than significant finding with respect to TAC emissions for Project construction and operations.

### *(a) Construction Health Risk Assessment*

The quantified screening construction and operational HRA provided in the comment was conducted using the AERSCREEN model and indicates a screening risk of 160 in one million (1.6E-04) without age sensitivity factors applied. As stated in the comment, the AERSCREEN model is known to be conservative. In other words, the AERSCREEN model is known to overestimate impacts for several reasons. The AERSCREEN model assumes the construction DPM emissions are emitted from a single location, whereas in reality, DPM emissions are geographically dispersed. For instance, off-road construction equipment emissions would be generated on the Project Site whereas on-road truck emissions would be generated primarily on roadways near the Project Site. When conducting HRAs, the geographic distribution of pollutants associated with a project is a critical and important consideration because health risk impacts are a direct result of TAC concentrations. The AERSCREEN model by its very design cannot account for this type of geographic distribution of emissions. Furthermore, the AERSCREEN model cannot account for temporal distribution of emissions. For instance, construction emissions would be overwhelmingly generated during the daytime hours (when dispersion of TACs is greater), and the AERSCREEN model by its very design cannot account for this type of temporal distribution of emissions. Additionally, the AERSCREEN model does not have the capability to utilize real-world meteorological data to calculate the effects of wind speed and wind direction on pollutant concentrations. These factors are critical when conducting HRAs in order to more accurately determine modeled pollutant concentrations, and excluding these factors will result in concentrations of pollutants at modeled receptor locations that are artificially elevated to highly unreasonable levels. In summary, the commenter’s construction HRA uses a screening Tier 1/Tier 2 model, AERSCREEN, that does not take into account real-world meteorological conditions, geographic and temporal distribution of emissions (i.e., construction emissions that would occur in different areas of a project site, emissions that would vary by construction phase, and emissions that would be generated primarily during daytime hours), and that generates high impact results that overstates impacts.

The comment also provides AERSCREEN model results using age sensitivity factors. Early life exposure adjustments (i.e., age sensitivity factors and age-specific breathing rates) were introduced for the first time in the Office of Environmental Health Hazard

Assessment (OEHHA) Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments (Guidance Manual).<sup>34</sup> The Guidance Manual was developed by OEHHA, in conjunction with CARB, for use in implementing the Air Toxics “Hot Spots” Program (Health and Safety Code Section 44360 et. seq.). The Air Toxics “Hot Spots” Program requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics “Hot Spots” Act are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels. The comment references the OEHHA guidelines that apply to stationary source operations and which have no applicability to mixed-use residential and commercial projects, such as the proposed Project.

In comments presented to its Governing Board (Meeting Date: June 5, 2015, Agenda No. 28) relating to TAC exposures associated with Rules 1401, 1401.1, 1402 and 212 revisions, with regard to the use of the revised OEHHA guidelines for projects subject to CEQA, SCAQMD staff reported that:

*The Proposed Amended Rules are separate from the CEQA significance thresholds. Per the Response to Comments Staff Report PAR 1401, 1401.1, 1402, and 212 A—(8 June 2015), SCAQMD staff is currently evaluating how to implement the Revised OEHHA Guidelines under CEQA. The SCAQMD staff will evaluate a variety of options on how to evaluate health risks under the Revised OEHHA Guidelines under CEQA. The SCAQMD staff will conduct public workshops to gather input before bringing recommendations to the Governing Board.*

To date, the SCAQMD has not conducted public workshops nor developed policy relating to the applicability of applying the revised OEHHA guidance for projects prepared by other public/lead agencies subject to CEQA or for mixed-use residential and commercial projects, such as the proposed Project.

To emphasize the viability of the HRA prepared for the Project, regulatory agencies throughout the state including the California Department of Toxic Substances Control (DTSC), which is charged with protecting individuals and the environment from the effects of toxic substances and responsible for assessing, investigating and evaluating sensitive receptor populations to ensure that properties are free of contamination or that health protective remediation levels are achieved, have adopted U.S. Environmental Protection Agency (US EPA) policy in the application of early-life exposure adjustments.

A review of relevant guidance was conducted by the City to determine applicability of the use of early life exposure adjustments to identified carcinogens. The US EPA provides guidance relating to the use of early life exposure adjustment factors whereby adjustment factors are only considered when carcinogens act “through the mutagenic

<sup>34</sup> Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program, Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments, February 2015, <https://oehha.ca.gov/media/downloads/crnrr/2015guidancemanual.pdf>. Accessed December 30, 2019.

mode of action.”<sup>35</sup> In 2006, the US EPA published a memorandum, which provided guidance regarding the preparation of HRAs should carcinogenic compounds elicit a mutagenic mode of action. As presented in the technical memorandum, numerous compounds were identified as having a mutagenic mode of action. Based upon this review, none of the gaseous compounds considered in the HRA were identified and, therefore, early-life exposure adjustments were not considered. For diesel particulates (pollutants of concern from Project construction equipment and operational diesel-fueled vehicles), polycyclic aromatic hydrocarbons (PAHs) and their derivatives, which are known to exhibit a mutagenic mode of action, comprise less than one percent of the exhaust particulate mass. To date, the US EPA reports that whole diesel engine exhaust has not been shown to elicit a mutagenic mode of action. Therefore, early life exposure adjustments are neither required nor appropriate and, therefore, should not be considered in the Project’s TAC analysis.

As stated on pages IV.B-69 through IV.B-71 of Section IV.B, *Air Quality*, the Draft EIR analyzes and discloses the potential for the Project to cause adverse cancer and health impacts from exposure to TACs from the Project’s construction and operational emissions consistent with CEQA Guidelines Section 15126.2(a). Although a quantitative HRA for the Project is not required for the reasons discussed on page IV.B-37 of Section IV.B, *Air Quality*, of the Draft EIR and in Response to Comment No. 2-39, in order to provide information that further supports the Draft EIR’s less than significant finding with respect to TAC emissions, a refined quantitative construction health risk assessment (HRA) has been prepared, the results of which are discussed below.

The Project construction HRA was performed using a refined modeling approach in accordance with the exposure factors (e.g., fraction of time at home, daily breathing rate factors, exposure durations) in the SCAQMD *Risk Assessment Procedures*<sup>36</sup> in effect at the time of the 2003 OEHHA Guidance Manual, which does not use early life exposure adjustments. As discussed below, the results of the quantitative HRA supports the Draft EIR’s less than significant conclusion with respect to TAC emissions.

For the quantitative HRA, refined dispersion modeling was performed using the United States Environmental Protection Agency AMS/EPA Regulatory Model (AERMOD). Meteorological data from the SCAQMD’s Downtown Los Angeles monitoring station, which is the closest SCAQMD meteorological station to the Project Site, was used to represent local weather conditions and prevailing winds data. Terrain data from U.S. Geological Survey (USGS) was used to assign elevations to sources and modeling receptors. Sensitive receptors and worker receptors used for modeling were placed at the location of the receptor buildings near to the Project Site. Construction DPM emissions from heavy-duty off-road equipment were modeled using the heavy-duty construction equipment exhaust respirable particulate matter (PM<sub>10</sub>) emissions estimated from CalEEMod and characterized as volume sources within AERMOD. The volume sources were located throughout the Project Site to represent on-site

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<sup>35</sup> United States Environmental Protection Agency, Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-003F, March 2005.

<sup>36</sup> South Coast Air Quality Management District, Risk Assessment Procedures for Rules 1401 and 212 Version 7.0 and Attachment L Version 7.0, 2012.

construction emissions. Off-site DPM emissions from haul trucks traveling within one-quarter mile of the Project Site along street surrounding the Project Site (i.e., Broadway, W. 1st Street, Spring Street, W. 2nd Street, and Los Angeles Street) as well as truck routes towards the U.S. 101 Freeway within approximately 0.25 miles of the Project Site along Broadway, W. 1st Street to S. Main street, and W. 2nd Street to Los Angeles Street. On-road truck emissions were estimated using the CARB on-road vehicle emissions factor (EMFAC) model and were characterized in AERMOD as line-volume sources. Construction emissions were allocated in AERMOD to the active construction hours. The AERMOD model was also run using the urban modeling option, which is SCAQMD policy for all air quality impact analyses in its jurisdiction.

The results of the Project construction HRA using the refined AERMOD dispersion modeling are listed below. As shown, the Project would result in cancer risk impacts that would be below the significance threshold of an incremental risk of 10 in one million for the maximum impacted residential and worker receptors. The maximum non-cancer impacts for the Project would be an incremental increase in the hazard index of approximately 0.03, which is less than the threshold of 1.0. The results of this refined AERMOD dispersion modeling provides further substantial evidence that supports the Draft EIR's less than significant conclusion with respect to TAC emissions.

Project Construction Health Risk Assessment Results – Maximum Cancer Risk (Significance Threshold is 10 in one million) (refer to Appendix A, Health Risk Assessment Calculations, of this response letter):

- Residential Receptor: 0.28 in one million
- Worker (Commercial) Receptor: 0.73 in one million

The maximum cancer risk at the residential receptor would occur to the southeast of the Project Site at the Higgins Building Lofts apartment complex located at the corner of S. Main Street and West 2nd Street. The maximum cancer risk at the worker receptor would occur to the west of the Project Site at the adjacent Federal Courthouse on Broadway. The maximum impacts at residential and worker receptors would be below the significance threshold of 10 in one million, and impacts would be less than significant. This information supports the Draft EIR's less than significant finding with respect to TAC emissions and additional analysis is not required.

*(b) Operational Health Risk Assessment*

An operational HRA is provided as a response to this comment in consideration of the SCAQMD guidance, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, of which the SCAQMD states that it "is suggested that projects with diesel powered mobile sources use the following guidance document to quantify potential cancer risks from the diesel particulate emissions."<sup>37</sup> SCAQMD states that the guidance is a suggested analysis and not a requirement. The following discussion describes deficiencies in the screening

<sup>37</sup> South Coast Air Quality Management District, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, 2003.

analysis provided in the comment, including corrections to errors in the screening analysis based on a refined HRA prepared for the Project to support this response.

The screening construction and operational HRA provided in the comment was conducted using the AERSCREEN model and indicates a screening risk of 160 in one million (1.6E-04) without age sensitivity factors applied. As stated in the comment, the AERSCREEN model is known to be conservative. In other words, the AERSCREEN model is known to overestimate impacts. The risk value reported in the comment using the AERSCREEN model is immediately suspect as erroneous because it is a higher risk value than has been determined for industrial source projects, which generally generate much higher amounts of TACs than mixed-use residential and commercial projects such as the Project. For example, a refined HRA was conducted for the TAMCO Rancho Cucamonga Steel Mini-Mill facility in the City of Huntington Beach, which generates TAC emissions from steel recycling operations (steel furnaces, baghouses, fuel storage and dispensing, and other industrial processes), and determined a 30-year residential risk of 52.7 in one million (5.27E-05).<sup>38</sup> Operation of the proposed Project would only generate a small fraction of the TAC emissions from a minimal number of diesel-fueled vehicles compared to an industrial steel recycling facility with a large number of heavy-duty industrial-sized equipment and vehicles.

The screening operational HRA provided in the comment has several fatal flaws that render the analysis erroneous and unsupported, which are the likely reasons for the erroneously high risk value. The first fatal flaw assumes that all net new trips would generate diesel emissions. This is an erroneous assumption not supported by substantial evidence. As explained above, the proposed Project would generate 294 net new diesel-fueled vehicle trips per day, based on a 4.2 percent factor as determined from CARB's EMFAC model. Another fatal flaw in the comment assumes that the operational activities of the Project would generate annual emissions of approximately 407 pounds of diesel particulate matter per year (1.12 pounds per day). However, this value is overestimated, as it appears to include emissions that are not the result of diesel fuel combustion, such as from typical non-diesel passenger vehicles. Furthermore, the screening operational HRA provided in the comment appears to model all of the emissions from mobile sources as if the emissions were occurring at a single location. This is another fatal flaw because mobile sources, by their very nature, do not generate emissions at a single location but rather along the entire vehicle trip, which would disperse the emissions along regional roadways and not concentrate the emissions as a single location. When conducting HRAs, dispersion of pollutants is critical and important consideration because health risk impacts are a direct result of TAC concentrations. The screening operational HRA provided in the comment incorrectly assumes that all mobile source emissions would occur at a single location, which results in concentrations at a sensitive receptor that are artificially elevated to highly unreasonable levels that are unsupported by substantial evidence. Furthermore, as discussed above in the construction analysis, early life exposure adjustments are neither

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<sup>38</sup> South Coast Air Quality Management District, AB2588 Revised Health Risk Assessment (HRA) Approval, Gerdau – Rancho Cucamonga Mill (SCAQMD No.: 18931), October 8, 2015.

required nor appropriate and, therefore, should not be considered in the Project's operational TAC analysis.

A refined quantitative analysis has been prepared for Project operations and corrects the errors present in the screening operational HRA provided in the comment. The number of diesel-fueled vehicle trips has been corrected, as explained above, to 294 net new diesel-fueled vehicle trips per day for the Project. The estimated diesel particulate matter emissions and the location of those emissions have also been corrected. The SCAQMD evaluates TAC emissions within a 1/4-mile distance of a sensitive receptor for evaluating impacts.<sup>39</sup> The reason for this is because TAC emissions occurring beyond a 1/4-mile distance from a sensitive receptor disperse in the atmosphere such that they would not contribute to substantially elevated health risk impacts. Thus, in order to evaluate the incremental increase in operational impacts, it is necessary to determine the diesel particulate matter emissions from the net new diesel-fueled vehicle trips occurring on roadways within a 1/4-mile of sensitive receptors. CalEEMod generates emissions from the full length of vehicle trips in units of pounds per day (or tons per year), but does not separately report emissions within a 1/4-mile of sensitive receptors. Therefore, the EMFAC model was used directly to estimate the portion of the emissions within a 1/4-mile of sensitive receptors. Emission factors for diesel particulate matter were based on EMFAC exhaust PM10 emissions from the diesel-fueled vehicles using an aggregated weighted average for the all diesel-fueled vehicle types for the fleet operating in the South Coast Air Basin. The dispersion modeling analysis to determine the concentration of DPM at receptor locations was performed using AERMOD. Line-volume sources were placed along roadways within approximately 1/4 mile from the Project Site. Truck idling volume sources were located at the Project's north and south towers where new loading docks would be provided. Based on the results of the AERMOD analysis, the maximum concentration at a sensitive receptor location would occur at the residential use to the southeast of the Project. This is an anticipated result because the predominant winds in the Los Angeles region are from the west, which would tend to disperse pollutants towards the east.

The cancer risk impacts were conservatively estimated using the daily breathing rate factors and exposure factors from Table 9A and Table 9B of Attachment L<sup>40</sup> of the SCAQMD *Risk Assessment Procedures*. The maximum impacts to sensitive residential receptors for the proposed Project would be an incremental increase of approximately 0.19 in one million, which is less than the significance threshold of 10 in one million. The maximum non-cancer impacts for the Project would be an incremental increase in the hazard index of approximately 0.0001, which is less than the threshold of 1.0. This analysis supports the conclusion provided in the EIR that operation of the Project would generate only minor amounts of diesel emissions and that operational health impacts would be less than significant.

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<sup>39</sup> South Coast Air Quality Management District, CEQA Air Quality Handbook, p. 5-1, 1993.

<sup>40</sup> South Coast Air Quality Management District, Risk Assessment Procedures for Rules 1401, 1401.1 & 212, Attachment L, Version 7.0, p. 27, 2012.

Project Operational Health Risk Assessment Results – Maximum Cancer Risk (Significance Threshold is 10 in one million) (refer to Appendix A, Health Risk Assessment Calculations, of this response letter):

- Residential Receptor: 0.19 in one million
- Worker (Commercial) Receptor: < 0.1 in one million

This refined operational HRA was conducted to use Project-specific information and incorporate a reasonable level of conservatism, which means actual risks would likely be lower than stated above. The vehicle exhaust diesel particulate matter emissions were estimated in EMFAC based on the anticipated Project buildout year (i.e., 2023).<sup>41</sup> The analysis conducted for this response assumes that the vehicle emissions would remain at the same rate for the 30-year residential exposure duration. In reality, emission rates would decline in future years as the vehicle fleet turns over and older vehicle models are replaced with newer vehicle models that generate fewer emissions per mile and achieve greater fuel economy pursuant to federal and state vehicle emissions standards. Therefore, the analysis provided for this response is a reasonably conservative overestimation of the actual operational risks that would result from buildout of the Project, and indicates that health risks fall below the applicable thresholds of significance.

(c) *Combined Construction and Operational Impacts*

When combined, the cancer risk impacts from construction and operation of the Project would also be less than significant. Under a combined construction and operational impact scenario, the maximum combined construction and operational risk for the Project would be 0.47 in one million for the residential receptor and 0.77 in one million for the worker receptor, which would not exceed the significance threshold of 10 in one million. Furthermore, as discussed above, this analysis incorporates reasonably conservative assumptions that overestimate the actual risks that would result from buildout of the Project. Therefore, the risk numbers provided above are overestimated and the actual risks would be lower than stated above.

## **Comment No. 2-41**

### *Mitigation Measures Available to Reduce Construction Emissions*

The Northeast Diesel Collaborative (NEDC) is a regionally coordinated initiative to reduce diesel emissions, improve public health, and promote clean diesel technology. The NEDC recommends that contracts for all construction projects require the following diesel control measures:<sup>29</sup>

<sup>41</sup> As stated on page IV.B-31 of Section IV.B, *Air Quality*, of the Draft EIR, if the onset of construction is delayed to a later date than assumed in the modeling analysis, construction impacts would be less than those analyzed and therefore more conservative, because a more energy-efficient and cleaner burning construction equipment and vehicle fleet mix would be expected in the future, pursuant to State regulations that require construction equipment fleet operators to phase-in less polluting heavy-duty equipment. As a result, should the Project commence construction on a later date than modeled in this air quality impact analysis, air quality impacts would be less than the impacts disclosed herein.

- All diesel generators on site for more than 10 total days must be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85 percent.
- As previously mentioned, MM-AQ-1 requires that “[o]ff-road diesel-powered equipment that will be used an aggregate of 40 or more hours during any portion of the construction activities associated with grading/excavation/export phase shall meet the Tier 4 standards” (p. IV.B-78). We recommend that all diesel nonroad construction equipment have engines that meet EPA Tier 4 Final nonroad emission standards.
- All diesel vehicles, construction equipment, and generators on site shall be fueled with ultra-low sulfur diesel fuel (ULSD) or a biodiesel blend<sup>30</sup> approved by the original engine manufacturer with sulfur content of 15 parts per million (ppm) or less.

Footnote 29: Diesel Emission Controls in Construction Projects, *available at*: <http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf>

Footnote 30: Biodiesel lends are only to be used in conjunction with the technologies which have been verified for use with biodiesel blends and are subject to the following requirements: <http://www.arb.ca.gov/diesel/verdev/reg/biodieselcompliance.pdf>

## Response to Comment No. 2-41

MM-AQ-1 has been revised in the Final EIR to require heavy-duty construction equipment equal to or greater than 50 horsepower to meet the Tier 4 Final standards and eliminated the reference to an aggregate of 40 hours or more and the limitation to the grading/excavation/export phase. Refer to the revised MM-AQ-1 in the Mitigation Monitoring Program in the Final EIR and Errata. MM-AQ-1 would apply to generators and already requires Tier 4 Final standards, which is a United States Environmental Protection Agency (USEPA) and CARB verified control technology that reduces particulate matter emissions by a minimum of 85 percent. Biodiesel has been shown to potentially increase NO<sub>x</sub> emissions compared to diesel; therefore, biodiesel is not a feasible mitigation measure to reduce NO<sub>x</sub> emissions. For example, according to a USEPA, the use of biodiesel can increase NO<sub>x</sub> emissions by a small percentage.<sup>42</sup> As a result, biodiesel is not a feasible mitigation to reduce NO<sub>x</sub> emissions. No additional mitigation measures in this comment are required to be included for the Project.

## Comment No. 2-42

### Repower or Replace Older Construction Equipment Engines

The NEDC recognizes that availability of equipment that meets the EPA’s newer standards is limited.<sup>31</sup> Due to this limitation, the NEDC proposes actions that can be

<sup>42</sup> U.S. EPA, Renewable Fuel Standard Program (RFS2) Regulatory Impact Analysis, EPA-420-R-10-006, Table 3.2-7 and 3.2-8, 2010.

taken to reduce emissions from existing equipment in the Best Practices for Clean Diesel Construction report.<sup>32</sup> These actions include but are not limited to:

- Repowering equipment (i.e. replacing older engines with newer, cleaner engines and leaving the body of the equipment intact).

Engine repower may be a cost-effective emissions reduction strategy when a vehicle or machine has a long useful life and the cost of the engine does not approach the cost of the entire vehicle or machine. Examples of good potential replacement candidates include marine vessels, locomotives, and large construction machines.<sup>33</sup> Older diesel vehicles or machines can be repowered with newer diesel engines or in some cases with engines that operate on alternative fuels (see section “Use Alternative Fuels for Construction Equipment” for details). The original engine is taken out of service and a new engine with reduced emission characteristics is installed. Significant emission reductions can be achieved, depending on the newer engine and the vehicle or machine’s ability to accept a more modern engine and emission control system. It should be noted, however, that newer engines or higher tier engines are not necessarily cleaner engines, so it is important that the Project Applicant check the actual emission standard level of the current (existing) and new engines to ensure the repower product is reducing emissions for DPM.<sup>34</sup>

- Replacement of older equipment with equipment meeting the latest emission standards.

Engine replacement can include substituting a cleaner highway engine for a nonroad engine. Diesel equipment may also be replaced with other technologies or fuels. Examples include hybrid switcher locomotives, electric cranes, LNG, CNG, LPG or propane yard tractors, forklifts or loaders. Replacements using natural gas may require changes to fueling infrastructure.<sup>35</sup> Replacements often require some re-engineering work due to differences in size and configuration. Typically, there are benefits in fuel efficiency, reliability, warranty, and maintenance costs.<sup>36</sup>

Footnote 31:

<http://northeastdiesel.org/pdf/BestPractices4CleanDieselConstructionAug2012.pdf>

Footnote 32:

<http://northeastdiesel.org/pdf/BestPractices4CleanDieselConstructionAug2012.pdf>

Footnote 33: Repair, Rebuild, and Repower, EPA, *available at*: <https://www.epa.gov/verified-diesel-tech/learn-about-verified-technologies-clean-diesel#repair>

Footnote 34: Diesel Emissions Reduction Program (DERA): Technologies, Fleets and Projects Information, *available at*: <http://www2.epa.gov/sites/production/files/2015-09/documents/420p11001.pdf>

Footnote 35: Alternative Fuel Conversion, EPA, *available at*: <https://www3.epa.gov/otaq/consumer/fuels/altfuels/altfuels.htm#fact>

Footnote 36: Cleaner Fuels, EPA, *available at*: <https://www.epa.gov/verified-diesel-tech/learn-about-verified-technologies-clean-diesel#cleaner>

## **Response to Comment No. 2-42**

The measures suggested in this comment are already covered by MM-AQ-1, which requires heavy-duty construction equipment equal to or greater than 50 horsepower to meet the Tier 4 Final standards. No additional mitigation measures in this comment are required to be included for the Project.

## **Comment No. 2-43**

### *Install Retrofit Devices on Existing Construction Equipment*

PM emissions from alternatively-fueled construction equipment can be further reduced by installing retrofit devices on existing and/or new equipment. The most common retrofit technologies are retrofit devices for engine exhaust after-treatment. These devices are installed in the exhaust system to reduce emissions and should not impact engine or vehicle operation.<sup>37</sup> It should be noted that actual emissions reductions and costs will depend on specific manufacturers, technologies and applications. Should the Applicant be unable to obtain Tier 4 Interim or Tier 4 Final off-road equipment engines for all pieces of equipment with 50 hp or greater, the Applicant should consider use of engines that meet Tier 3 off-road emission standards and engines that are retrofitted with an ARB Level 2 or Level 3 Verified Diesel Emissions Control Strategy (VDECS).

Footnote 37: Retrofit Technologies, EPA, *available at*: <https://www.epa.gov/verified-diesel-tech/learn-about-verified-technologies-clean-diesel#retrofit>

## **Response to Comment No. 2-43**

The measures suggested in this comment are already covered by MM-AQ-1, which requires heavy-duty construction equipment equal to or greater than 50 horsepower to meet the Tier 4 Final standards. No additional mitigation measures in this comment are required to be included for the Project.

## **Comment No. 2-44**

### *Use Electric and Hybrid Construction Equipment*

CAPCOA's Quantifying Greenhouse Gas Mitigation Measures<sup>38</sup> report also proposes the use of electric and/or hybrid construction equipment as a way to mitigate DPM emissions. When construction equipment is powered by grid electricity rather than fossil fuel, direct emissions from fuel combustion are replaced with indirect emissions associated with the electricity used to power the equipment. Furthermore, when construction equipment is powered by hybrid-electric drives, emissions from fuel combustion are also greatly reduced. Electric construction equipment is available commercially from companies such as Peterson Pacific Corporation,<sup>39</sup> which specialize in the mechanical processing equipment like grinders and shredders. Construction equipment powered by hybrid-electric drives is also commercially available from companies such as Caterpillar<sup>40</sup>. For example, Caterpillar reports that during an 8- hour

shift, its D7E hybrid dozer burns 19.5 percent fewer gallons of fuel than a conventional dozer while achieving a 10.3 percent increase in productivity. The D7E model burns 6.2 gallons per hour compared to a conventional dozer which burns 7.7 gallons per hour.<sup>41</sup> Fuel usage and savings are dependent on the make and model of the construction equipment used. The Project Applicant should calculate project-specific savings and provide manufacturer specifications indicating fuel burned per hour.

Footnote 38: <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>

Footnote 39: Peterson Electric Grinders Brochure, *available at*: [http://www.petersoncorp.com/wp-content/uploads/peterson\\_electric\\_grinders1.pdf](http://www.petersoncorp.com/wp-content/uploads/peterson_electric_grinders1.pdf)

Footnote 40: Electric Power Products, *available at*: [http://www.cat.com/en\\_US/products/new/power-systems/electric-power-generation.html](http://www.cat.com/en_US/products/new/power-systems/electric-power-generation.html)

Footnote 41: <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>

## **Response to Comment No. 2-44**

The measures suggested in this comment are already covered by MM-AQ-1, which requires heavy-duty construction equipment equal to or greater than 50 horsepower to meet the Tier 4 Final standards. In addition, MM-AQ-1 requires cranes and signal boards to be electric. The use of other electric-powered equipment is not required to reduce impacts to less than significant. The significant air quality impact associated with the temporary and short-term construction NO<sub>x</sub> emissions during the two continuous concrete pouring foundation phases of Project construction is overwhelmingly the result of emissions from concrete trucks required to deliver and pour the concrete at the Project Site. As discussed in Response to Comment 2-9, the Lead Agency has conservatively added the following subparagraph d. to MM AQ-1 to ensure the maximum use of 2010 model or newer engines during the concrete pouring foundation phases:

- d. All concrete trucks used during the Project's concrete pouring foundation shall have 2010 model or newer engines. Prior to issuance of a building permit, the applicant shall provide evidence (such as copies of contracts with concrete subcontractors with specifications or engine certifications) satisfactory to the Department of City Planning demonstrating compliance with this measure.

However, this added measure would not reduce the NO<sub>x</sub> emission levels during the concrete pouring phases to below the applicable significance threshold, and impacts would remain significant.<sup>43</sup> The measures for off-road equipment suggested in this comment would not reduce the NO<sub>x</sub> emissions during the two continuous concrete pouring foundation phases of Project construction. Therefore, no additional mitigation measures in this comment are required to be included for the Project.

<sup>43</sup> Letter dated February 28, 2020 attached as Appendix D.

## Comment No. 2-45

### Implement a Construction Vehicle Inventory Tracking System

CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*<sup>42</sup> report recommends that the Project Applicant provide a detailed plan that discusses a construction vehicle inventory tracking system to ensure compliances with construction mitigation measures. The system should include strategies such as requiring engine run time meters on equipment, documenting the serial number, horsepower, manufacture age, fuel, etc. of all onsite equipment and daily logging of the operating hours of the equipment. Specifically, for each onroad construction vehicle, nonroad construction equipment, or generator, the contractor should submit to the developer's representative a report prior to bringing said equipment on site that includes:<sup>43</sup>

- Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, and engine serial number.
- The type of emission control technology installed, serial number, make, model, manufacturer, and EPA/CARB verification number/level.
- The Certification Statement<sup>44</sup> signed and printed on the contractor's letterhead.

Furthermore, the contractor should submit to the developer's representative a monthly report that, for each on- road construction vehicle, nonroad construction equipment, or generator onsite, includes:<sup>45</sup>

- Hour-meter readings on arrival on-site, the first and last day of every month, and on off-site date.
- Any problems with the equipment or emission controls.
- Certified copies of fuel deliveries for the time period that identify:
  - Source of supply
  - Quantity of fuel
  - Quality of fuel, including sulfur content (percent by weight).

In addition to these measures, we also recommend that the Applicant implement the following mitigation measures, called "Enhanced Exhaust Control Practices,"<sup>46</sup> that are recommended by the Sacramento Metropolitan Air Quality Management District (SMAQMD):

1. The project representative shall submit to the lead agency a comprehensive inventory of all off- road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project.

- 
- The inventory shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment.
  - The project representative shall provide the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.
  - This information shall be submitted at least 4 business days prior to the use of subject heavy-duty off-road equipment.
  - The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.
2. The project representative shall provide a plan for approval by the lead agency demonstrating that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet- average 20% NOX reduction and 45% particulate reduction compared to the most recent California Air Resources Board (ARB) fleet average.
- This plan shall be submitted in conjunction with the equipment inventory.
  - Acceptable options for reducing emissions may include use of late model engines, low- emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.
  - The District's Construction Mitigation Calculator can be used to identify an equipment fleet that achieves this reduction.
3. The project representative shall ensure that emissions from all off-road diesel-powered equipment used on the project site do not exceed 40% opacity for more than three minutes in any one hour.
- Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately. Non-compliant equipment will be documented and a summary provided to the lead agency monthly.
  - A visual survey of all in-operation equipment shall be made at least weekly.
  - A monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey.

4. The District and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this mitigation shall supersede other District, state or federal rules or regulations.

These measures offer a cost-effective, feasible way to incorporate lower-emitting equipment into the Project's construction fleet, which subsequently reduces NO<sub>x</sub> and DPM emissions released during Project construction. An updated DEIR must be prepared to include additional mitigation measures, as well as include an updated air quality assessment to ensure that the necessary mitigation measures are implemented to reduce construction emissions. Furthermore, the Project Applicant needs to demonstrate commitment to the implementation of these measures prior to Project approval to ensure that the Project's construction-related emissions are reduced to the maximum extent possible.

Footnote 42: <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>

Footnote 43: Diesel Emission Controls in Construction Projects, *available at*: <http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf>

Footnote 44: Diesel Emission Controls in Construction Projects, *available at*: <http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf> The NEDC Model Certification Statement can be found in Appendix A.

Footnote 45: Diesel Emission Controls in Construction Projects, *available at*: <http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf>

Footnote 46: [http://www.airquality.org/ceqa/Ch3EnhancedExhaustControl\\_10-2013.pdf](http://www.airquality.org/ceqa/Ch3EnhancedExhaustControl_10-2013.pdf)

## Response to Comment No. 2-45

The measures suggested in this comment are already covered by MM-AQ-1, which requires that during plan check, the Project representative shall make available to the lead agency and SCAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used during any of the construction phases. The inventory shall include the horsepower rating, engine production year, and certification of the specified Tier standard. MM-AQ-1 further requires a copy of each such unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit to be provided on-site at the time of mobilization of each applicable unit of equipment to allow the Construction Monitor to compare the on-site equipment with the inventory and certified Tier specification and operating permit. Implementation of MM-AQ-1 would result in the reduction of diesel particulate matter and NO<sub>x</sub> exhaust emissions from the Project's construction equipment by over approximately 90 percent and 80 percent, respectively, as compared to the fleet average emissions for construction equipment and vehicles (refer to emissions reductions in Table IV.B-12 and Table IV.B-13 compared to the emissions shown in Table IV.B-8 and Table IV.B-9 of the Draft EIR). Opacity is already regulated by SCAQMD Rule 401

(Visible Emissions), which is more stringent than the opacity measure provided in this comment and is discussed on page IV.B-8 of the Draft EIR. No additional mitigation measures in this comment are required to be included for the Project.

### **Comment No. 2-46**

#### *Use of Materials that Do Not Require Paint*

Using materials that do not require painting is a common mitigation measure where VOC emissions are a concern. Interior and exterior surfaces, such as concrete, can be left unpainted.

### **Response to Comment No. 2-46**

The Project would not result in significant impacts related to VOC emissions. Therefore, this mitigation measure is not warranted.

### **Comment No. 2-47**

#### *Use of Spray Equipment with Greater Transfer Efficiencies*

Various coatings and adhesives are required to be applied by specified methods such as electrostatic spray, high- volume, low-pressure (HVLP) spray, roll coater, flow coater, dip coater, etc. in order to maximize the transfer efficiency. Transfer efficiency is typically defined as the ratio of the weight of coating solids adhering to an object to the total weight of coating solids used in the application process, expressed as a percentage. When it comes to spray applications, the rules typically require the use of either electrostatic spray equipment or HVLP spray equipment. The SCAQMD is now able to certify HVLP spray applicators and other application technologies at efficiency rates of 65 percent or greater.<sup>47</sup>

These measures offer a cost- effective, feasible way to incorporate lower- emitting equipment into the Project's construction fleet, which subsequently reduces DPM emissions released during Project construction. Furthermore, these measures also offer a feasible way to reduce the construction-related ROG emissions released from paints and architectural coatings. A revised DEIR must be prepared to include additional mitigation measures, as well as include an updated air quality assessment to ensure that the necessary mitigation measures are implemented to reduce construction emissions. Furthermore, the Project Applicant needs to demonstrate commitment to the implementation of these measures prior to Project approval to ensure that the Project's construction- related emissions are reduced to the maximum extent possible.

Footnote 47: <http://www.aqmd.gov/home/permits/spray-equipment-transfer-efficiency>

### **Response to Comment No. 2-47**

The Project would not result in significant impacts related to VOC or particulate matter emissions. Therefore, this mitigation measure is not warranted.

## Comment No. 2-48

### Greenhouse Gas

#### Failure to Adequately Evaluate Greenhouse Gas Impacts

The DEIR determines that the Project's GHG impact would be less than significant as a result of consistency with CARB's 2017 Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, the LA Green Plan, and the Sustainable City pLAN (p. IV.E-38). The DEIR also quantifies emissions, but fails to compare them to the SCAQMD's bright-line threshold, claiming that the SCAQMD has not adopted a GHG significance threshold for land use development projects (p. IV.E-18). Specifically, the DEIR states,

"In the absence of any adopted numeric threshold, the significance of the Project's GHG emissions is evaluated consistent with *CEQA Guidelines* Section 15064.4(b) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. The 2016-2040 RTP/SCS is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the state's long-term climate goals. CARB's Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, the City's *LA Green Plan*, and *Sustainable City pLAN* all apply to the Project and are all intended to reduce GHG emissions to meet the statewide targets set forth in AB 32. Thus, the Lead Agency has determined that the Project would not have a significant effect on the environment if the Project is found to be consistent with the applicable regulatory plans and policies to reduce GHG emissions, including the emissions reduction measures discussed within CARB's 2017 Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, and the City's *LA Green Plan*, and *Sustainable City pLAN*" (emphasis added) (p. IV.E-38).

This justification and subsequent less-than-significant impact finding is incorrect and unsubstantiated for several reasons:

- (1) The California Air Resources Board ("CARB") 2017 Scoping Plan and the Southern California Association of Governments ("SCAG") Regional Transportation Plan/Sustainable Community Strategies ("RTP/SCS") cannot be relied upon to determine Project significance;
- (2) The City's *LA Green Plan* and *Sustainable City pLAN* do not meet the criteria for an officially adopted GHG reduction plan;
- (3) The DEIR conducts an incorrect and unsubstantiated analysis of the Project's GHG emissions;
- (4) Notwithstanding the flawed air model discussed above, the Project's estimated GHG emissions exceed applicable bright-line and efficiency thresholds, thus resulting in a significant impact that was not previously identified or addressed by the DEIR;

- (5) The DEIR's failure to apply the SCAQMD's bright-line and efficiency thresholds to Project emissions is inconsistent with evolving scientific knowledge and regulatory schemes.

## Response to Comment No. 2-48

The commenter states that the EIR applied the incorrect significance threshold for GHG emissions and that it should have used SCAQMD's proposed but never adopted interim thresholds from 2008. The City has not developed a quantitative GHG emissions threshold. As the Draft EIR explains on page IV.E-18 of Section IV.E, Greenhouse Gas Emissions, the SCAQMD has also not adopted a GHG significance threshold applicable to the Project. In the absence of adopted thresholds, the City has the discretion to select a significance threshold relevant to the proposed Project.

State CEQA Guidelines Section 15064.4 states that a lead agency shall make a good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency has the discretion to determine, in the context of a particular project, whether to: (1) use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use; *or* (2) rely on a qualitative analysis or performance based standards.

As discussed in detail under Subsection IV.E.3.c, Project Impacts, Thresholds of Significance, of Section IV.E, Greenhouse Gas Emissions, of the Draft EIR, in the absence of any adopted quantitative threshold, the City has determined that the Project would not have a significant effect on the environment if the Project is found to be consistent with applicable regulatory plans and policies to reduce GHG emissions, including the emissions reduction measures discussed within CARB's Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, and the City's LA Green Plan, Sustainable City pLAN, and Green Building Code. Therefore, if the Project does not conflict with these plans, the City will be able to achieve its GHG reduction goals, and, therefore, these plans can be used at a project level to show a project's consistency with the plans.

In addition, support for this threshold is found in recent California Supreme Court case law, such as *Center for Biological Diversity et al. vs. California Department of Fish and Wildlife* and *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 576.).

Thus, the City has exercised its discretion to utilize a qualitative threshold based on consistency with CARB's 2017 Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, the LA Green Plan, and the Sustainable City pLAN. As explained on pages IV.E-36 through IV.E-38 (which describes the approach to the analysis) and pages IV.E-39 through IV.E-75 (which provides the analysis and the results of the analysis) of Section IV.E, *Greenhouse Gas Emissions*, of the Draft EIR, the Project is consistent with the applicable provisions of these plans. Therefore, the EIR properly concluded that the Project's GHG impacts are less than significant.

## Comment No. 2-49

### 1) *Failure to Demonstrate Additionality*

The DEIR's reliance on the CARB 2017 Scoping Plan and SCAG's RTP/SCS is inadequate, as projects must incorporate emissions reductions measures beyond those that comprise basic requirements. Just because "a project is designed to meet high building efficiency and conservation standards ... does not establish that its [GHG] emissions from transportation activities lack significant impacts." *Newhall Ranch*, 62 Cal.4<sup>th</sup> at 229 (citing Natural Resources Agency).<sup>48</sup> This concept is known as "additionality" whereby GHG emission reductions otherwise required by law or regulation are appropriately considered part of the baseline and, pursuant to CEQA Guideline § 15064.4(b)(1), a new project's emissions should be compared against that existing baseline.<sup>49</sup> Hence, a "project should not subsidize or take credit for emissions reductions which would have occurred regardless of the project."<sup>50</sup> In short, as observed by the Court, newer developments must be more GHG-efficient. See *Newhall Ranch*, 62 Cal.4<sup>th</sup> at 226.

Furthermore, CARB asserts that SCAG's RTP/SCS is not enough, and recently found that California "***is not on track***" to meet GHG reductions expected under SB 375 (i.e., Sustainable Communities Strategy).<sup>51</sup> As warned by CARB (emphasis added), "with emissions from the transportation sector continuing to rise despite increases in fuel efficiency and decreases in the carbon content of fuel, ***California will not achieve the necessary [GHG] emissions reductions to meet mandates for 2030*** and beyond ...."<sup>52</sup> This is further supported by two recent climate change reports where scientists described (emphasis added) the ***quickenning rate of carbon dioxide emissions as a "speeding freight train"*** with an unexpected surge in people buying more cars and driving them farther than in the past — "***more than offsetting any gains from the spread of electric vehicles***."<sup>53</sup> Therefore, the Project may require more GHG-reducing measures to offset the lost GHG reductions anticipated under the outdated, unmonitored GGRP, such as the net-zero approach utilized in the wake of the Supreme Court's *Newhall Ranch* decision. See *Newhall Ranch*, 62 Cal.4<sup>th</sup> at 226 ("a greater degree of reduction may be needed from new land use projects ...."); see also *Californians for Alternatives to Toxics v. Department of Food and Agriculture* (2005) 136 Ca1.App.4<sup>th</sup> 1, 17 ("[c]ompliance with the law is not enough to support a finding of no significant impact under the CEQA."). Additional reduction efforts may be required for the Project, including those new, feasible mitigation measures found in CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*, which attempt to reduce GHG levels.

Footnote 48: See California Natural Resources Agency (Dec. 2009) Final Statement of Reasons for Regulatory Action: Amendments to State CEQA Guidelines Addressing Analysis and Mitigation of GHG Emissions Pursuant to SB-97, p. 23 (while a Platinum LEED® rating may be relevant to emissions from a building's energy use, "that performance standard may not reveal sufficient information to evaluate transportation-related emissions associated with that proposed project"), [http://resources.ca.gov/ceqa/docs/Final\\_Statement\\_of\\_Reasons.pdf](http://resources.ca.gov/ceqa/docs/Final_Statement_of_Reasons.pdf).

Footnote 49: *Ibid.*, p. 89; see also CAPCOA (Aug. 2010) Quantifying Greenhouse Gas Mitigation Measures, p. 32, A3 (“... in practice is that if there is a rule that requires, for example, increased energy efficiency in a new building, the project proponent cannot count that increased efficiency as a mitigation or credit unless the project goes beyond what the rule requires; and in that case, only the efficiency that is in excess of what is required can be counted.”), <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>.

Footnote 50: *Ibid.*, CAPCOA, p. 433.

Footnote 51: CARB (Nov. 2018) 2018 Progress Report, p. 4-7 (emphasis added), [https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report\\_SB150\\_112618\\_02\\_Report.pdf](https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf).

Footnote 52: *Ibid.*

Footnote 53: New York Times (12/5/18) Greenhouse Gas Emissions Accelerate Like a ‘Speeding Freight Train’ in 2018 (emphasis added), <https://www.nytimes.com/2018/12/05/climate/greenhouse-gas-emissions-2018.html>; see also Global Carbon Project (Dec. 2018) Global Carbon Budget 2018, <https://www.earth-syst-sci-data.net/10/2141/2018/essd-10-2141-2018.pdf>; R.B. Jackson, et al. (Dec. 2015) Global Energy Growth Is Outpacing Decarbonization, <http://iopscience.iop.org/article/10.1088/1748-9326/aaf303/pdf>.

## Response to Comment No. 2-49

The commenter maintains that the EIR fails to demonstrate the “additionality” concept whereby GHG emissions reductions otherwise required by law or regulation are appropriately considered part of the baseline, and pursuant to CEQA Guideline 15064.4(b)(1), a new project’s emissions should be compared against the existing baseline and a project should not take credit for emissions reductions that would have occurred regardless of the project. The commenter suggests that the state is not on track to meet GHG reduction targets. The commenter also states the proposed Project may require more GHG-reducing measures to offset the lost GHG reductions anticipated under the GGRP and additional reduction measures should be required for the proposed Project to attempt to reduce GHG levels.

The commenter mischaracterizes the California Supreme Court’s decision in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 62 Cal.4th 204 (also known as the Newhall Ranch case). As a preliminary matter, the Court does not even mention “additionality” in its decision. Rather, the Court reviewed the methodology used to analyze GHG emissions in an EIR prepared for a project that proposed 20,885 dwelling units with 58,000 residents on 12,000 acres of undeveloped land in a rural area of the County of Los Angeles. The EIR used a departure from “business as usual” (BAU) approach to determine whether the project would impede the state’s compliance with statutory emissions reduction mandate established by the AB 32 Climate Change Scoping Plan. The Court did not invalidate the BAU approach but did hold that “the Scoping Plan nowhere related that statewide level of reduction effort to the percentage

of reduction that would or should be required from individual projects and nothing DFW or Newhall have cited in the administrative record indicates the required percentage reduction from business as usual is the same for an individual project as for the entire state population and economy.” (Id. at 230.) The California Supreme Court suggested regulatory consistency as one pathway to compliance, by stating that a lead agency might assess consistency with AB 32’s goal in whole or in part by looking to compliance with regulatory programs designed to reduce GHG emissions from particular activities, including statewide programs and local climate action plans or GHG emissions reduction plans. This approach is consistent with CEQA Guidelines Section 15064, which provides that a determination that an impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including plans or regulations for the reduction of GHG emissions.

The Newhall Ranch case does not even mention the word “additionality,” much less require that a project exceed requirements in applicable GHG reduction plans. Rather, the Supreme Court stated: “To the extent a project’s design features **comply with or** exceed the regulations outlined in the Scoping Plan and adopted by the Air Board or other state agencies, a lead agency could appropriately rely on their use as showing compliance with ‘performance based standards’ adopted to fulfill ‘a... plan for the reduction or mitigation of greenhouse gas emissions.” (Emphasis added.)

Regarding the state’s progress on reducing GHG emissions, CARB recently found:

*In 2017, emissions from statewide emitting activities were 424 million metric tons of CO<sub>2</sub> equivalent (MMTCO<sub>2e</sub>), which is 5 MMTCO<sub>2e</sub> lower than 2016 levels. 2017 emissions have decreased by 14 percent since peak levels in 2004 and are 7 MMTCO<sub>2e</sub> below the 1990 emissions level and the State’s 2020 GHG limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.1 tonnes per person to 10.7 tonnes per person in 2017, a 24 percent decrease. Overall trends in the inventory also demonstrate that the carbon intensity of California’s economy (the amount of carbon pollution per million dollars of gross domestic product (GDP)) is declining. From 2000 to 2017, the carbon intensity of California’s economy has decreased by 41 percent from 2001 peak emissions while simultaneously increasing GDP by 52 percent. In 2017, GDP grew 3.6 percent while the emissions per GDP declined by 4.5 percent compared to 2016.<sup>44</sup>*

Moreover, no additional mitigation measures are warranted as the proposed Project’s impacts with respect to GHG emissions would be less than significant. The Project’s analysis of GHG emission impacts does not subsidize or take credit for emissions reductions which would have occurred regardless of the project. As discussed in great detail on pages IV.E-78 through -82 of Section IV.E, *Greenhouse Gas Emissions*, of the Draft EIR, the Project would represent an urban infill development, since it would be undertaken on a currently developed property, and would be located near existing off-site commercial, residential, and retail destinations and in close proximity to existing

<sup>44</sup> California Air Resources Board, California Greenhouse Gas Emissions for 2000 to 2017, Trends of Emissions and Other Indicators, 2019.

public transit stops. Infill development results in reduced vehicle trips and vehicle miles traveled, and reduced associated transportation-related emissions compared to a project without these Project Site-specific land use characteristics. As discussed on pages IV.E-78 through -82 of the Draft EIR, the Project's increased density, location efficiency, increased land use diversity and mixed-uses, increased destination accessibility, increased transit accessibility, improved design of development, and pedestrian network improvements would reduce the Project's GHG emissions. Furthermore, the Project would incorporate Project Design Features that would further reduce GHG emissions including incorporating green building designs that would meet the LEED Silver Certification or equivalent (PDF-AQ-1), provide more electric vehicle parking capable spaces than required by existing regulations (PDF-AQ-2), and including water conservation features beyond regulatory requirements that would reduce GHG emissions from the conveyance of water (PDF-WS-1). These Project Design Features would be fully enforceable by the Lead Agency as conditions of approval. The Project's GHG reductions from its land use characteristics and Project Design Features are not required of all land use development projects by law or regulation. These are reductions that would be a result of the Project's design and its specific land use characteristics and location and would be additional to existing regulations.

Based on the substantial evidence discussed above, and explained in detail in Section IV.E, *Greenhouse Gas Emissions*, of the Draft EIR (pages IV.E-39 through IV.E-91), the Lead Agency has determined that the Project would result in less than significant Project-level and cumulative-level GHG impacts.

## Comment No. 2-50

### 2) *The City's LA Green Plan and Sustainable City pLAn are not CAPs*

The DEIR determines that the Project's GHG impact would be less than significant as a result of consistency with the City's LA Green Plan and Sustainable City pLAn (p. IV.E-38). However, these regulatory plans do not meet the criteria for an officially adopted GHG reduction program, commonly referred to as a Climate Action Plan ("CAP"), for use as a threshold of significance for GHG emissions. As the CEQA Guidelines §§ 15064.4(b)(3) and 15183.5(b)(1) make clear, a qualified CAP "must be adopted by the relevant public agency through a public review process," and the CAP should include:

- (1) **Inventory:** Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities (e.g., projects) within a defined geographic area (e.g., lead agency jurisdiction);
- (2) **Establish GHG Reduction Goal:** Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
- (3) **Analyze Project Types:** Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- (4) **Craft Performance Based Mitigation Measures:** Specify measures or a group of measures, including performance standards, that substantial evidence

demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;

- (5) **Monitoring:** Establish a mechanism to monitor the CAP progress toward achieving said level and to require amendment if the plan is not achieving specified levels;

Here, the DEIR fails to demonstrate that the LA Green Plan and Sustainable City pLAN include the above-listed requirements to be considered a qualified CAP for the City. As such, the DEIR leaves an analytical gap showing that compliance with said plans can be used for project-level significance determination. Thus, compliance with these regulatory plans and policies should not be used as a threshold with which to determine the significance of the proposed Project's GHG impact.

## Response to Comment No. 2-50

The commenter incorrectly interprets State *CEQA Guidelines* Sections 15064.4(b)(3) and 15183.5 in asserting that a project must be consistent with an adopted Climate Action Plan (CAP). *CEQA Guidelines* § 15064.4(b)(3) allows a lead agency to consider “[t]he extent to which the project complies with regulations or requirements adopted to implement a **statewide, regional, or local plan** for the reduction or mitigation of greenhouse gas emissions.” (Emphasis added.) Moreover, the 2016 RTP/SCS as a CARB-certified GHG reduction plan. Section 15183.5(a) provides that a lead agency “may analyze and mitigate the significant effects of GHG emissions at the programmatic level, such as a general plan, a long-range development, or a separate plan to reduce greenhouse gas emissions.” The CARB Scoping Plan, SCAG’s RTP/SCS, SB 32, SB 375, and the LA Green Building Code have all undergone a public review process and are applicable planning policies and/or development regulations. The EIR does not state or infer that any of the applicable planning documents referenced serve as a CAP for purposes of setting a GHG threshold of significance. Therefore, the commenter’s assertion that a CAP is required to properly analyze GHGs is erroneous, and its assertion that and the City’s LA Green Plan and Sustainable City pLAN may not qualify as CAPs is irrelevant. Refer also to Response to Comment No. 2-49.

## Comment No. 2-51

### 3) *Incorrect and Unsubstantiated Analysis of Greenhouse Gas Emissions*

In addition to the Project’s incorrect reliance upon consistency with plans and regulations to determine Project significance, the DEIR fails to adequately compare the Project’s annual GHG emissions to the applicable SCAQMD threshold.

Review of the DEIR demonstrates that the Project would produce 14,922 metric tons of CO<sub>2</sub> equivalents per year (MT CO<sub>2e</sub>/year) (see excerpt below) (IV.E-85, Table IV.E-9).

**TABLE IV.E-9  
ANNUAL GREENHOUSE GAS EMISSIONS**

Emissions Sources	Project CO <sub>2</sub> e (Metric Tons per Year) <sup>a,b</sup>	
	Project Without GHG Reduction Characteristics, Features, and Measures	Proposed Project
Existing Site (refer to Table IV.E-2)	7,125	7,125
<b>Proposed Project Operational</b>		
On-Road Mobile Sources <sup>c</sup>	17,397	11,800
Stationary (Emergency Generators)	27	27
Area	20	20
Electricity	9,448	6,862
Natural Gas	1,869	1,846
Water Conveyance and Wastewater Treatment	663	505
Solid Waste	242	242
Construction (Amortized)	745	745
Proposed Subtotal	30,411	22,047
Percent Reduction (Project Only)	—	28%
Net Operational (Proposed – Existing)	23,286	14,922
Percent Reduction (Net Operational Total)	—	36%

<sup>a</sup> Totals may not add up exactly due to rounding in the modeling calculations.

<sup>b</sup> Detailed GHG emissions assumptions and calculations are provided in Appendix F-2 and Appendix F-3 of the GHG Technical Report

<sup>c</sup> On-road Mobile Sources:  $17,397 - 11,800 = 5,597 / 17,397 = 32.2\%$  reduction.

SOURCE: ESA, 2018.

As you can see in the excerpt above, the DEIR concludes that the Project will produce 14,922 MT CO<sub>2</sub>e/year from construction and operation. However, the DEIR fails to compare these emissions to relevant thresholds, claiming that the SCAQMD has not adopted a GHG significance threshold for land use development projects (p. IV.E-18). While the DEIR is correct in stating that the SCAQMD *Interim Thresholds* were never adopted, this does not mean, however, that they are inapplicable to the proposed Project or otherwise can be ignored. As explained below, consistent with CEQA Guidelines, the SCAQMD's interim thresholds should have been used by the DEIR. It is commonly recognized by California air districts that a project's impact on climate change is

cumulative in nature.<sup>54</sup> According to the Technical Advisory prepared by the Office of Planning and Research (“OPR”), “[t]he potential effects of a project may be individually limited but cumulatively considerable[]” and that “[l]ead agencies should not dismiss a proposed project’s direct and/or indirect climate change impacts without careful consideration, supported by substantial evidence ... [including] analysis should be provided for any project that may significantly contribute to new GHG emissions, either individually or cumulatively, directly or indirectly.”<sup>55</sup> Furthermore, OPR rightfully acknowledge, consistent with state regulatory scheme and CEQA case law, that “thresholds cannot be used to determine automatically whether a given effect will or will not be significant; instead, thresholds of significance can be used only as a measure of whether a certain environmental effect will normally be determined to be significant or normally will be determined to be less than significant by the agency.”<sup>56</sup> Recognizing this principle, CEQA Guidelines 15064.7(c) permit the use of thresholds developed by other public agencies.

Similarly, the California Supreme Court has made clear that CEQA demands robust GHG analysis to assess a project’s impact on climate change, and while lead agencies have discretion, that discretion must be exercised “based to the extent possible on scientific and factual data” and “stay[ing] in step with evolving scientific knowledge and state regulatory schemes.” *Cleveland National Forest Foundation San Diego Assn. of Governments* (“Cleveland II”) (2017) 3 Cal.5th 497, 504, 515, 518 (quoting CEQA Guidelines § 15064(b)); see also 519 (noting to meet the State’s long-term climate goals, “regulatory clarification, together with improved methods of analysis, may well change the manner in which CEQA analysis of long-term [GHG] emission impacts is conducted.”). Hence, a GHG analysis which “understates the severity of a project’s impacts impedes meaningful public discussion and skews the decision maker’s perspective concerning the environmental consequences of the project, the necessity for mitigation measures, and the appropriateness of project approval.” *Id.*, on remand (“Cleveland III”), 17 Cal.App.5th 413, 444; see also *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564 (quoting *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 392).

SCAQMD’s multi-tiered approach under its *Interim Threshold* was not officially adopted as a valid threshold or part of a plan “adopted by the relevant public agency through a public review process” as CEQA requires.<sup>57</sup> Moreover, SCAQMD developed its thresholds when AB 32 was the governing statute for GHG reductions in California. AB 32 requires California to reduce GHG emissions to 1990 levels by 2020. Health & Saf. Code § 38500 *et seq.* However, in September 2016, before the release of the DEIR, Governor Brown signed Senate Bill 32, enacting Health & Saf. Code § 38566. This statute (“SB 32”) requires California to achieve a new, more aggressive 40 percent reduction in GHG emissions over the 1990 level by the end of 2030. As a result, the Project’s reliance on AB 32 is incorrect and the Project must instead comply with Senate Bill 32 (SB 32), which would include a more aggressive GHG threshold.

Consistent with the edicts of SB 32, other air control districts have adopted more aggressive GHG thresholds for project-level analysis, including but not limited to the Sacramento Metropolitan Air Quality Management District (SMAQMD), the Bay Area Air

Quality Management District (BAAQMD), and the San Luis Obispo Air Pollution Control District (SLOAPCD) (as summarized in the tables below). Given the cumulative nature

SMAQMD (May 2018) Guide to Air Quality Assessment <sup>58</sup>		
<b>Land Development and Construction Projects</b>		
Construction Phase		Operational Phase
<b>Greenhouse Gas Emissions (GHG) Thresholds</b>		
GHG as CO <sub>2</sub> e	1,100 metric tons/year	1,100 metric tons/year
<b>Stationary Source Only</b>		
Construction Phase		Operational Phase
<b>Greenhouse Gas Emissions (GHG) Thresholds</b>		
GHG as CO <sub>2</sub> e	1,100 metric tons/year	10,000 metric tons/year

of GHG emissions and consistent with CEQA Guidelines § 15064.7(c), these recommended thresholds are appropriate for projects in the SCAQMD regions.

- 1) Construction phase of all project types – 1,100 MT CO<sub>2</sub>e/yr.
- 2) Operational phase of a land development project – 1,100 MT CO<sub>2</sub>e/yr (noting a 72-room hotel and a 122-unit high-rise apartment building would each be equivalent to the 1,100 MT CO<sub>2</sub>e/yr threshold).<sup>59</sup>
- 3) Stationary source operational emissions – 10,000 MT CO<sub>2</sub>e/yr.

BAAQMD (May 2017) CEQA Air Quality Guidelines <sup>60</sup>	
GHGs – Projects other than Stationary Sources	Compliance with Qualified GHG Reduction Strategy OR 1,100 MT of CO <sub>2</sub> e/yr OR 4.6 MT CO <sub>2</sub> e/SP/yr (residents+employees)
GHGs – Stationary Sources	10,000 MT/yr

While providing 10,000 MT CO<sub>2</sub>e/yr for stationary-source projects, other projects (e.g., residential, commercial, public land uses):

- 1) CAP: Compliance with a qualified GHG Reduction Strategy; or
- 2) Bright Line: Annual emissions less than 1,100 MT CO<sub>2</sub>e/year; or
- 3) Efficiency Level: 4.6 MT CO<sub>2</sub>e/SP/year (residents + employees).<sup>61</sup>

SLOAPCD (Mar. 2012) GHG Thresholds and Supporting Evidence <sup>62</sup>	
<b>GHG Emissions Threshold Summary</b>	
Residential and Commercial Projects	Compliance with Qualified GHG Reduction Strategy OR Bright-Line Threshold of 1,150 MT of CO <sub>2</sub> e/yr. OR Efficiency Threshold of 4.9 MT CO <sub>2</sub> e/SP*/yr.
Industrial (Stationary Sources)	10,000 MT of CO <sub>2</sub> e/yr.

- 1) CAP: Consistency with qualitative reduction strategies (e.g., Climate Action Plans).

- 2) Bright-Line Threshold: 1,150 MT CO<sub>2</sub>e/year after inclusion of emission-reducing features of a proposed project, those still exceeding the threshold would have to reduce their emissions below that level to be considered less than significant.
- 3) Efficiency-Based Threshold: 4.9 MT CO<sub>2</sub>e/SP/year dependent on per capita basis for residential projects or the sum of jobs and residents for mixed-use projects (noting 0.64 employees per 1,000 SF of hotel development).

Although more demanding, the above-listed thresholds adopted by these air districts are analogous with the application of SCAQMD's screening threshold for mixed-use developments (3,000 MT CO<sub>2</sub>e/year) and SCAQMD's Tier 4 efficiency target goals (4.8 MT CO<sub>2</sub>e/SP/year for target year 2020 and 3.0 MT CO<sub>2</sub>e/SP/year for target year 2035).<sup>63</sup> The actions taken by other air districts to reduce GHG emissions through more stringent thresholds is the most persuasive rationale as to why the *Interim Thresholds* apply as the current standard set of evolving scientific knowledge and regulatory schemes.

Even though the SCAQMD's interim thresholds may be outdated and may not be adopted, they are consistent with the methods of analysis that is regularly practiced by other air districts and furthers CEQA's demand for "conservative analysis" to afford "fullest possible protection of the environment."<sup>64</sup> Hence, the DEIR's GHG analysis is not consistent with evolving standards, nor is the conclusion that the Project has a less than significant GHG impact supported by substantial evidence.

Finally, the DEIR's quantification of Project GHG emissions is incorrect considering that it relies on a flawed CalEEMod model to determine emissions. As previously discussed, the DEIR's CalEEMod model fails to include all proposed land uses and relies on an incorrect land use size, incorrect land use population, unsubstantiated mitigation to construction equipment fuel type, incorrect number of worker trips, and incorrectly applied construction mitigation measures. As a result, the DEIR's CalEEMod models underestimate emissions and should not be relied upon to assess the Project's GHG emissions.

Footnote 54: See e.g., SCAQMD (Oct. 2008), *supra* fn. 28, p. 1-4-5 (citing the OPR Technical Advisor: "When assessing whether a project's effects on climate change are 'cumulatively considerable' even though its GHG contribution may be individually limited, the lead agency must consider the impact of the project when viewed in connection with the effects of past, current, and probable future projects."), [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgattachmente.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf); Bay Area Air Quality Management District ("BAAQMD") (May 2017) CEQA Air Quality Guidelines, p. 2-1 ("No single project could generate enough GHG emissions to noticeably change the global average temperature [but rather] [t]he combination of GHG emissions from past, present, and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts."), [http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en); San Luis Obispo County Air Pollution Control District ("SLOAPCD") (Mar. 28, 2012) GHG Threshold and Supporting Evidence, p. 5 ("No single land use project could generate enough GHG emissions to noticeably change the global average temperature. Cumulative GHG

emissions, however, contribute to global climate change and its significant adverse environmental impacts. Thus, the primary goal in adopting GHG significance thresholds, analytical methodologies, and mitigation measures is to ensure new land use development provides its fair share of the GHG reductions needed to address cumulative environmental impacts from those emissions.), <https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/Greenhouse%20Gas%20Thresholds%20and%20Supporting%20Evidence%204-2-2012.pdf>; Sacramento Metropolitan Air Quality Management District (“SMAQMD”) (May 2018) Guide to Air Quality Assessment in Sacramento County, p. 6-1-3, (“(GHG) emissions adversely affect the environment through contributing, on a cumulative basis, to global climate change ... *the District recommends that lead agencies address the impacts of climate change on a proposed project and its ability to adapt to these changes in CEQA documents...* [thus urging] evaluating whether the GHG emissions associated with a proposed project will be responsible for making a cumulatively considerable contribution to global climate change.”[emphasis original]), <http://www.airquality.org/LandUseTransportation/Documents/Ch6GHGFinal5-2018.pdf>.

Footnote 55: OPR (June 19, 2008) Technical Advisory on CEQA and Climate Change, p. 6, <http://opr.ca.gov/docs/june08-ceqa.pdf>.

Footnote 56: OPR (Nov. 2017) Proposed Updates to the CEQA Guidelines, p. 7 (citing CEQA Guidelines §§ 15064 and 15064.7 and *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1108-1109), [http://opr.ca.gov/docs/20171127\\_Comprehensive\\_CEQA\\_Guidelines\\_Package\\_Nov\\_2017.pdf](http://opr.ca.gov/docs/20171127_Comprehensive_CEQA_Guidelines_Package_Nov_2017.pdf).

Footnote 57: SCAQMD (Dec. 5, 2008), *supra* fn. 50, p. 3.

Footnote 58: SMAQMD (May 2018), *supra* fn. 50, p. 6-10-12; see also SMAQMD Thresholds of Significance Table, <http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable5-2015.pdf>.

Footnote 59: SMAQMD (Apr. 2018) SMAQMD Operational Screening Levels (showing that a 190-room hotel like Option A or a 160-unit high-rise apartment like Option B would exceed the 72-room and 122-unit thresholds), <http://www.airquality.org/LandUseTransportation/Documents/Ch4+Ch6OperationalScreening4-2018.pdf>.

Footnote 60: BAAQMD (May 2017), *supra* fn. 50, p. 2-2-4. Like the SCAQMD area, BAAQMD is designated as a nonattainment area for state/national ozone and particulate matter (PM) and thresholds would seem particularly apt for the 5<sup>th</sup> and Hill Project. *Compare id.* at p. 2-1 with SCAQMD NAAQS/CAAQS Attainment Status (noting “extreme” and “serious” nonattainment for multiple ozone and PM standards), <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf>.

Footnote 61: The BAAQMD has not formally adopted an efficiency level after 2020. However, other projects within BAAQMD's jurisdiction have extrapolated 2030 efficiency thresholds in order to comply with SB 32 reduction targets. For example, the Park View Towers Project's Addendum to the Final Supplemental Environmental Impact Report utilizes a 2030 efficiency threshold of 2.6 MT CO<sub>2</sub>e/year. Based on this efficiency threshold, the proposed Project would exceed threshold and result in a significant impact. Park View Tower's Addendum available at: <http://www.sanjoseca.gov/DocumentCenter/View/80743>

Footnote 62: SLOAPCD (Mar. 28, 2012), supra fn. 50, p. 25-30, 42.

Footnote 63: See SCAQMD (Dec. 5, 2008) Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2); see also SCAQMD (Oct. 2008) Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgattachmente.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf); SCAQMD (Sep. 28, 2010) Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group # 15, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf).

Footnote 64: "Warehouse Truck Trip Study Data Results and Usage Presentation: Inland Empire Logistics Council." SCAQMD, June 2014, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/final-ielc\\_6-19-2014.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/final-ielc_6-19-2014.pdf?sfvrsn=2), p. 3; see also *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 390 ("The foremost principle under CEQA is that the Legislature intended the act to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.") (internal citations omitted).

## Response to Comment No. 2-51

Again, as described above in Response to Comment No. 2-48 and in Section IV.E, *Greenhouse Gas Emissions*, page IV.E-18 of the Draft EIR, the SCAQMD staff's proposed Interim Thresholds cited by the commenter have never been formally adopted by the SCAQMD. In the absence of an applicable adopted threshold, the City has exercised its discretion to utilize a qualitative threshold based on consistency with CARB's 2017 Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, the LA Green Plan, and the Sustainable City pLAN. As explained in Section IV.E, *Greenhouse Gas Emissions* on pages IV.E-36 through IV.E-38 (which describes the approach to the analysis) and pages IV.E-39 through IV.E-75 (which provides the analysis and the results of the analysis), of the Draft EIR, the Project is consistent with the applicable provisions of these plans. Furthermore, as analyzed in Section IV.E, *Greenhouse Gas Emissions*, on pages IV.E-90 and IV.E-91 of the Draft EIR, the Project's GHG impacts were analyzed for the post-2020 time frame and specifically discusses SB 32. As stated

therein, SB 32 was passed on September 8, 2016, which would require CARB to ensure that statewide GHG are reduced to 40 percent below the 1990 emissions level by 2030. Within the context of SB 32 and post-2020 GHG reductions, SCAG's 2016-2040 RTP/SCS establishes a framework for achieving GHG reductions from the land use and transportation sectors and the state's long-term climate policies. As demonstrated in Section IV.E, *Greenhouse Gas Emissions*, in Table IV.E-5 of the Draft EIR, the Project would be consistent with the Actions and Strategies set forth in the 2016–2040 RTP/SCS and, as such, would not conflict with long-term land use and transportation strategies to achieve the state's long-term climate policies as required in SB 32. Therefore, the EIR properly concluded that the Project's GHG impacts are less than significant.

The commenter's claim that the proposed Project would result in a significant GHG emissions fails to recognize the fact that the Proposed Project is an infill development on an infill lot that is appropriately zoned and planned for the commercial office land uses that are proposed. Additionally, the Proposed Project's defining characteristics as an infill development project on an infill lot in a high quality transit area is precisely the type of project that is encouraged by the 2017 Scoping Plan, SB 375, and the 2016-2040 RTP/SCS. Thus, the commenter's argument that the Proposed Project would cause significant GHG emissions impacts is unsubstantiated. No additional analysis is warranted.

Refer also to Response to Comment 2-49.

Furthermore, as explained in detail in Responses to Comment Nos. 2-30 through 2-38, the Project's emissions modeling provided in the Draft EIR does not underestimate emissions associated with the Project's construction and operational activities. The Project's CalEEMod output files related to GHG emissions, provided in Appendix F to the Draft EIR, contain input values that are consistent with information disclosed in the Draft EIR and in some cases slightly more conservative in order to ensure that the Project's potential air quality impacts are disclosed. As a result, the Project's construction and operational GHG emissions are not underestimated and the EIR adequately evaluates the impacts that construction and operation of the Project will have on GHG emissions. Refer to Responses to Comment Nos. 2-30 through 2-38 for responses to the specific items raised in the comments regarding the Project's CalEEMod input parameters and output files. While Comment Nos. 2-30 through 2-38 were raised with respect to air pollutant emissions, the Responses to Comment Nos. 2-30 through 2-38 are also applicable to the Project's GHG emissions modeling in CalEEMod and explain the adequacy of the emissions modeling and that no changes to the GHG emissions modeling is required.

## **Comment No. 2-52**

### *4) Updated Greenhouse Gas Analysis Demonstrates Significant Impact*

Notwithstanding the flawed GHG evaluation discussed above, applicable thresholds demonstrate that the Project would have a significant GHG impact. As previously mentioned, in December 2008, SCAQMD released its *Interim Thresholds* that proposed the use of a 1,400 MT CO<sub>2</sub>e/yr threshold for commercial developments, a 3,000 MT

CO<sub>2</sub>e/yr threshold for mixed- use developments, a 3,500 MT CO<sub>2</sub>e/yr threshold for residential developments, and a 10,000 MTCO<sub>2</sub>e/yr threshold for industrial projects.<sup>65</sup> Because the proposed Project is a mixed-use development, the most appropriate screening threshold to apply to the Project would be the 3,000 MT CO<sub>2</sub>e/yr threshold recommended by the SCAQMD for mixed-use developments.

The CalEEMod output files disclose the Project's mitigated GHG emissions (p. IV.E-85, Table IV.E-9). When these emissions are compared to the 3,000 MT CO<sub>2</sub>e/year

<b>DEIR Annual Greenhouse Gas Emissions</b>	
<b>Project Phase</b>	<b>Proposed Project (MT CO<sub>2</sub>e/year)</b>
On-Road Mobile Sources	11,800
Stationary (Emergency Generators)	27
Area	20
Electricity	6,862
Natural Gas	1,846
Water Conveyance and Wastewater Treatment	505
Solid Waste	242
Construction (Amortized)	745
Proposed Subtotal	22,047
Percent Reduction (Project Only)	28%
<b>Net Operational (Proposed – Existing)</b>	<b>14,922</b>
SCAQMD Significance Threshold	3,000
<b><i>Exceed?</i></b>	<b><i>Yes</i></b>

threshold, we find that the Project's GHG emissions exceed the SCAQMD's mixed-use threshold (see table below).

As demonstrated in the table above, the proposed Project would generate a total of approximately 14,922 MT CO<sub>2</sub>e/year, which significantly exceeds the 3,000 MT CO<sub>2</sub>e/year mixed-use project screening threshold.<sup>66</sup> According to SCAQMD guidance, when emissions exceed the screening-level threshold, a more detailed review of the project's GHG emissions is warranted.<sup>67</sup> SCAQMD proposed per capita efficiency targets to be used in these detailed reviews. SCAQMD proposed a 2020 efficiency target of 4.8 MTCO<sub>2</sub>e/sp/yr for project-level analyses and 6.6 MTCO<sub>2</sub>e/sp/yr for plan-level projects (e.g., program- level projects such as general plans). Those per capita efficiency targets are based on AB 32's GHG reduction target and the 2020 GHG

emissions inventory prepared for CARB's 2008 Scoping Plan. SCAQMD also created a 2035 efficiency threshold by reducing the 2020 thresholds by 40 percent, resulting in an efficiency threshold for plans of 4.1 MTCO<sub>2</sub>e/sp/yr and an efficiency threshold at the project level of 3.0 MTCO<sub>2</sub>e/s/yr.<sup>68</sup> Therefore, per SCAQMD guidance, because the Project's GHG emissions exceed SCAQMD's 3,000 MTCO<sub>2</sub>e/yr screening-level threshold and the DEIR asserts that the Project will not be operational until 2023, the Project's emissions should be compared to the proposed 2035 efficiency target of 3.0 MT CO<sub>2</sub>e/sp/yr (p. II-48).

According to CAPCOA's CEQA & Climate Change report, service population is defined as "the sum of the number of residents and the number of jobs supported by the project."<sup>69</sup> The DEIR states that the proposed Project would generate approximately 2,739 new residents (with full occupancy) and 186 new employees (p. IV.J-13). As a result, we estimate that the Project's service population would be approximately 2,925 people<sup>70</sup>. Dividing the Project's GHG emissions by a service population value of 2,925, we find that the Project would emit approximately 5.1 MTCO<sub>2</sub>e/sp/yr.<sup>71</sup> When we compare the Project's per service population GHG emissions to the SCAQMD 2035 efficiency target of 3.0 MTCO<sub>2</sub>e/sp/yr, we find that the Project would result in a significant GHG impact (see table below).

Annual Greenhouse Gas Emissions Efficiency		
Source	Project Emissions	Unit
DEIR Annual Emissions	14,922	MT CO <sub>2</sub> e/year
Maximum Service Population	2,925	Residents & Employees
<b>Per Service Population Annual Emissions</b>	<b>5.1</b>	<b>MT CO<sub>2</sub>e/sp/year</b>
2035 SCAQMD Project Level Efficiency Threshold	3.0	MT CO <sub>2</sub> e/sp/year
<b>Exceed?</b>	<b>Yes</b>	-

As you can see in the table above, when we compare the per service population emissions estimated by the DEIR to the SCAQMD threshold of 3.0 MTCO<sub>2</sub>e/sp/yr for 2035, we find that the Project's emissions would exceed the threshold, thus resulting in a potentially significant impact. According to CEQA Guidelines § 15064.4(b), if there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, a full CEQA analysis must be prepared for the project. The DEIR may not ignore this analysis and application of routinely used GHG thresholds by claiming discretion in deciding which thresholds it wishes to employ. As one court explained when setting aside an EIR where commenters questioned the city's use of a particular threshold, the discretion granted to lead agencies are not "unbounded" and (emphasis added):

*"[T]he fact that a particular environmental effect meets a particular threshold cannot be used as an automatic determinant that the effect is or is not significant ... a threshold of significance cannot be applied in a way that would foreclose the consideration of other substantial evidence tending to show the environmental effect to which the threshold relates might be significant." *East Sacramento Partnership for a Livable City v. City of Sacramento* (2016) 5 Cal.App.5th 281, 300, 303-304 (internal citations omitted).*

Thus, the results of the above analysis provide substantial evidence that the proposed Project's GHG emissions are still cumulatively considerable notwithstanding its purported compliance with CARB's 2017 Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, the LA Green Plan, and the Sustainable City pLAn (as challenged herein). Therefore, an updated CEQA analysis must be prepared for the Project, and mitigation should be implemented where necessary, per CEQA guidelines.

Footnote 65: *Supra* fn. 61.

Footnote 66: It should further be noted that this amounts to a mere 2.1 percent reduction of GHG emissions as compared to the Project's unmitigated emissions (i.e., 9,211 MT CO<sub>2</sub>e/year). See pp. 193, pp. 195.

Footnote 67: SCAQMD (12/5/08), *supra* fn. 61, p. 6; see also SCAQMD (9/28/10), *supra* fn. 61, p. 2.

Footnote 68: *Ibid.*

Footnote 69: CAPCOA (Jan. 2008) CEQA & Climate Change, p. 71-72, <http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf>.

Footnote 70: Calculated: (2,739 residents + 186 employees) = (2,925 service population)

Footnote 71: Calculated: (14,922 MTCO<sub>2</sub>e/yr / (2,925 service population) = (5.10 MTCO<sub>2</sub>e/sp/yr)

## Response to Comment No. 2-52

As the Draft EIR explains on page IV.E-18 of Section IV.E, *Greenhouse Gas Emissions*, the SCAQMD has also yet to adopt a GHG significance threshold for residential and mixed-use development projects. As a point of reference, the SCAQMD Governing Board did adopt an interim 10,000 MTCO<sub>2</sub>e/yr GHG significance threshold for projects where the SCAQMD is lead agency (e.g., stationary sources, rules, and plans). While this adopted threshold is not applicable to the Project, it shows that SCAQMD can and will adopt a numeric threshold that it deems appropriate.

In 2008, the SCAQMD formed a GHG Significance Threshold Working Group to further evaluate potential GHG significance thresholds. However, the aforementioned Working Group has been inactive since 2010. For this Project, the City has determined not to rely on interim drafted thresholds developed almost 10 years ago and that were never adopted. In the absence of adopted thresholds, the City has the discretion to use a significance threshold relevant to the proposed Project.

Refer also to Response to Comment 2-49 and 2-51.

## Comment No. 2-53

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this

report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

### **Response to Comment No. 2-53**

This comment does not specifically contain any environmental issues contained in the EIR. Therefore, no further response is warranted.

### **Comment No. 2-54**

The remainder of Exhibit B contains resumes and CVs for the commenters and are provided in Attachment A of this response.

### **Response to Comment No. 2-54**

This comment does not specifically contain any environmental issues contained in the EIR. Therefore, no further response is warranted.

### **Comment No. 2-55**

#### **EXHIBIT C**

Dear Mr. Drury:

At your request, I have reviewed the Draft Environmental Impact Report (hereinafter the "DEIR") for the Times Mirror Square Project (the "Project") in the City of Los Angeles (the "City"). My review is specific to the Traffic and Circulation sections of that document and related appendices.

My qualifications to perform this review include registration as a Civil and Traffic Engineer in California and over 50 years professional consulting engineering practice in the traffic and transportation industry. I have both prepared and performed adequacy reviews of numerous transportation and circulation sections of environmental impact reports prepared under the California Environmental Quality Act (CEQA) including residential and mixed use complexes. My professional resume is attached. Findings of my review are summarized below.

#### **Overview**

The DEIR discloses that the Project would have significant traffic impact in the Existing + Project condition at the intersection of Broadway with W. 2nd and in the Future (2023 + Project condition) at six intersections:

##### **1. S. Figueroa Street & W. 2nd Street (PM peak hour)**

5. Hill Street & W. 1st Street (AM peak hour)
10. Broadway & W. 1st Street (both peak hours)
11. S. Broadway & W 2nd Street (both peak hours)
12. S. Broadway & W. 3rd Street (AM peak hour)
17. S. Spring Street & W. 2nd Street (AM peak hour).

It is critical that the severity of impact at these locations be accurately disclosed since the DEIR finds that physical improvements at these locations are infeasible. As a consequence, in order to approve this Project, findings of overriding considerations will have to be made. To make such findings, public policy-makers and the public must have confidence that the severity of impacts that are overridden are accurately disclosed.

### **Response to Comment No. 2-55**

This comment provides an overview to the remainder of the comment letter. Detailed responses to each of the points in the overview are provided below in Responses to Comment Nos. 2-56 through 2-66 and as part of Appendix C to this response letter.

### **Comment No. 2-56**

There are reasons why the true severity of the Project's impacts have not been disclosed. One of these is that with the significant impacts at the intersections disclosed as noted above, it is highly likely that there would be queuing impacts at those locations. Yet the DEIR fails to consider queues at those locations. It only analyzes queues at the Project driveways.

### **Response to Comment No. 2-56**

The transportation impact analysis in the Draft EIR traffic study was conducted in accordance with the methodology and criteria specified in the Los Angeles Department of Transportation's (LADOT's) *Transportation Impact Study Guidelines* in effect at the time of the analysis. The analysis was confirmed and accepted by LADOT in their traffic study assessment letter dated May 21, 2018, and included in Appendix L of the Draft EIR. The City, as the Lead Agency, has the discretion to determine the appropriate methodology and significance thresholds for assessing traffic impacts. The City has never established any methodology or impact criteria based on queuing. Rather, the City established and historically utilized the Critical Movement Analysis (CMA) methodology, which assesses traffic impacts based on changes in volume to capacity ratios and levels of service (LOS). The Project traffic analysis appropriately used this established methodology. As acknowledged by the commenter in Comment No. 2-55, the Draft EIR did find that the Project would have significant impacts at six intersections. This finding was based on LADOT's impact criteria for level of service. Level of service is a measure of the operating condition of an intersection and inherently reflects queuing in that there are greater levels of queuing at worse levels of service.

**Comment No. 2-57**

Another reason is because the DEIR analysis distained to consider the traffic consequences of the Downtown Streetcar operation. This streetcar would operate in street-running configuration southbound on Broadway and northbound on Hill Street in the Project vicinity. Seven of the DEIR's study intersections and four of the intersections disclosed to be significantly impacted by the subject Project would be on the streetcar route. The operations and/or lane reservations for the streetcar would inevitably have deleterious effects on traffic that could only intensify the severity of the Projects traffic impacts that have been disclosed. Also, the traffic impacts of the Project could have deleterious effect on streetcar operations.

**Response to Comment No. 2-57**

As discussed in Section IV.P, *Transportation and Traffic*, on page II-15 of the Draft EIR, the Downtown Streetcar is not currently funded. Metro's Measure M funding plan does not allocate funds to the Downtown Streetcar project until fiscal year 2053, much later than the Project's buildout year of 2024. As such, consideration of the Downtown Streetcar as a related project in the Draft EIR would be speculative. Also see the Response to Comment 2-62.

**Comment No. 2-58**

Another reason is the trip generation analysis applies an obsolete basic trip generation data resource and applies trip generation adjustment factors in ways that are inconsistent with the timing of certain transit improvements and the characteristics of the setting of the Project. As a consequence, the Project's contribution of net new trips is understated.

**Response to Comment No. 2-58**

See Response to Comments 2-63 and 2-64.

**Comment No. 2-59**

Yet another reason is that the traffic analysis assumes that 35 percent of the Project's vehicle trips will originate or be destined within a roughly circular area of the downtown ranging in radius from about 0.75 to 0.85 miles from the intersection of W. 2nd and Broadway. While this percentage is likely true of the total person-trips generated by the Project, most of the vehicle trips generated are likely to originate or be destined outside of this circle. As a consequence, the Project's contribution of traffic to critical gateway intersections at and near freeway ramps serving the downtown is understated.

**Response to Comment No. 2-59**

The commenter states that the Project's trip distribution understates traffic outside of a radius from about 0.75 to 0.85 miles from the intersection of W. 2nd and Broadway. The commenter agrees that this percentage is likely true of the person-trips generated by the Project. Since many of these trips could be made by walking, bicycling or transit, assigning these trips as vehicle trips is in fact a conservative assumption.

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**Comment No. 2-60**

Finally, the analysis fails to consider the impacts of increasing reliance on Transportation Network Companies (TNCs or ridesharing).

We explore the above issues in the paragraphs below

**Response to Comment No. 2-60**

See Response to Comment 2-66.

**Comment No. 2-61****Failure to Consider Queuing**

As noted above, the DEIR discloses that the Project would have significant traffic impacts at 6 intersections in the 2023 project completion scenario. At 4 of these locations the impacts involve operations in the Level-of-Service (LOS) E or F. Locations experiencing LOS E or F operations are highly likely to have queuing problems which further degrade conditions. Yet the DEIR performed no queue analysis at these obvious locations.

**Response to Comment No. 2-61**

The commenter states that the Draft EIR does not provide queuing analysis at the impacted intersections in the 2023 project completion scenario. Refer to Response to Comment No. 2-56. The transportation impact analysis provided in Section IV.P, *Transportation and Traffic*, of the Draft EIR and Appendix L-1 of the Draft EIR, the Traffic Study was conducted in accordance with the methodology and criteria specified in the Los Angeles Department of Transportation's (LADOT's) *Transportation Impact Study Guidelines* in force at the time of the analysis. The Draft EIR's traffic analysis was confirmed and accepted by LADOT in their traffic study assessment letter dated May 21, 2018, and included in Appendix L-2 to the DEIR. As acknowledged by the commenter, the Draft EIR did find that the Project would have significant impacts at six intersections. This finding was based on LADOT's impact criteria for level of service. Level of service is a measure of the operating condition of an intersection and inherently reflects queuing in that there are greater levels of queuing at worse levels of service.

**Comment No. 2-62****Failure to Consider the Effects of the Downtown Streetcar**

As noted above, the City has approved plans for a downtown streetcar operation that would run by the Project site southbound on Broadway and close to the Project site on Hill Street. It would run through 4 of the intersections where the DEIR discloses the Project would have significant traffic impacts. The DEIR dismisses consideration of the streetcar project in the traffic analysis of the subject Project, Citing the fact that as of August 3, 2018 the Streetcar Project was not fully funded.<sup>1</sup> However, the Notice of Preparation ("NOP") on the subject Project was not issued until June 30, 2017. By that date the LA Bureau of Engineering published a CEQA FEIR on the Streetcar on October

24, 2016 and it was certified by the City Council on November 29, 2016. The LA City Council also approved the streetcar route on November 29, 2016. Hence, the streetcar project was reasonably foreseeable at the time of the NOP for the Times-Mirror EIR and its design was defined at a level of detail sufficient for traffic impact analysis.

Disregarding the streetcar based on funding status is inconsistent with the City's treatment of other developments contained in the list of Related Projects LADOT provides as input to the cumulative analysis. There is no evidence of consideration whether a project is fully funded to be entered onto the related projects list. The only criterion seems to be that a project has formally filed for planning, zoning and environmental approvals.

Footnote 1: See DEIR at page II-15

## **Response to Comment No. 2-62**

The commenter states that the EIR should consider the Streetcar Project as part of the cumulative analysis. As discussed on page II-15 of Chapter II, *Project Description*, of the Draft EIR, the Downtown Streetcar is not currently funded. Metro's Measure M funding plan does not allocated funds to the Downtown Streetcar project until fiscal year 2053, much later than the Project's buildout year of 2023<sup>45</sup>. As such, consideration of the Downtown Streetcar as a related project in the Draft EIR would be speculative. This is consistent with the City's standard approach and applicable case law, under which transportation improvement projects without funding are not considered as related projects. The City has no reason to believe that development projects that have filed for approvals are not funded.

## **Comment No. 2-63**

### **Obsolete Trip Generation Data Resource, Adjustments Inconsistent With Timing of Transit Improvements and Adjustments Inconsistent With the Nature of Project Components**

The DEIR's transportation impact analysis relies on basic trip generation rates from the Institute of Transportation Engineers publication, *Trip Generation, 9th Edition*, released in 2012. The subsequent *10th Edition* was released in late 2017. A significant improvement of the *10th Edition* over the *9th Edition* is a focus on data for high rise residential and mixed use developments in dense urban settings. Even though the *10th Edition* was released a few months later than the date of the NOP, the EIR traffic impact analysis, which was not completed until early May, 2018,<sup>2</sup> could easily have relied on the superior edition of the data source.

Because of the limitations of early editions of Trip Generation, which focused on sites involving single land use types which were most easily countable in suburban settings where transit and pedestrian activity tended to be minimal as opposed to dense urban, well-transit-served, highly pedestrianized areas with mixed use developments, and also did not distinguish between new trips generated by the project as differentiated from

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<sup>45</sup> Please refer to the Errata.

trips attracted from existing traffic (passers-by), adjustment factors were developed to take account of these considerations. However, in the subject DEIR some adjustments seem to have been misapplied.

## Response to Comment No. 2-63

The comment states that Draft EIR's traffic analysis uses obsolete trip generation data resources. The ITE 9th Edition trip generation manual was the most up-to-date source available at the time the transportation impact analysis was conducted for the Project. The data from this source was the basis for the trip generation estimates approved by LADOT in the traffic study MOU for the Project, which was signed in March 2017 prior to release of the ITE 10th Edition manual.

The ITE 10<sup>th</sup> Edition trip generation manual provides more current trip generation rates for Center City Core areas that were not available in the ITE 9<sup>th</sup> Edition manual and are lower than trip generation rates for more suburban locations. **Table 1, Comparison of 9<sup>th</sup> and 10<sup>th</sup> Edition ITE Trip Generation Rates for Project Uses**, shows the differences between the two editions for both the AM and PM Peak Hour.

**TABLE 1**  
**COMPARISON OF 9<sup>TH</sup> AND 10<sup>TH</sup> EDITION ITE TRIP GENERATION RATES FOR PROJECT USES**

Land Use	9 <sup>th</sup> Edition AM Peak Hour Rate	10 <sup>th</sup> Edition AM Peak Hour Rate	9 <sup>th</sup> Edition PM Peak Hour Rate	10 <sup>th</sup> Edition PM Peak Hour Rate
High-Rise Residential	0.34	0.22	0.38	0.23
Office	1.56	0.50	1.49	0.43
Supermarket	3.40	3.82	9.48	-- <sup>a</sup>
Quality Restaurant	0.81	0.73	7.49	7.80
a The fitted curve equation $\ln(T)=0.75\ln(x)+3.21$ was used to calculate PM peak period trips for Supermarket land uses due to variance between the fitted curve and average rate. SOURCE: Institute of Transportation Engineers (ITE), Trip Generation, 9 <sup>th</sup> Edition and 10 <sup>th</sup> Edition.				

As shown in Table 1, the AM peak hour rates for the supermarket and the PM peak hour rate for the quality restaurant increased slightly. However, all other rates decreased. If the analysis were to be updated to utilize the more recently available data from the ITE 10th Edition trip general manual, the overall peak hour and estimated daily trip generation for the Project would be lower under the 10<sup>th</sup> Edition ITE than that estimated in the Draft EIR under the 9<sup>th</sup> Edition ITE. Therefore, the transportation impact analysis presented in the Draft EIR is conservative.

## Comment No. 2-64

In specific, the DEIR analysis takes a 25 percent peak hour transit credit on the trips of the Project's non-residential components based on the assumed 2023 completion of the of the 2<sup>nd</sup> St./Broadway Regional Connector Station immediately adjacent to the Project site (same completion year as the Project). This is fine for the 2023 analysis. However,

for the Existing + Project analysis those Project components should only get the 15 percent transit credit the analysis assumes for the existing uses of the site since that adjacent station did not exist in 2017.

Also, the analysis assumes a 40 percent attracted passer-by discount on trips to/from the supermarket component of the Project. However, this is a passer-by attraction rate generally only achieved in supermarkets located along suburban arterials in centers with copious surface parking. This is not even close to realistic when people are already encased in their vehicles on urban streets in a dense urban downtown trying to get somewhere else and where they would have to enter and exit a multi-level parking garage or hunt for scarce street parking.

Reasonable changes to both of these adjustment factors could significantly alter the severity of the impacts disclosed and might result in impacts at other locations. In particular, at intersection 7, Hill Street with W. 3<sup>rd</sup>, which is on the cusp of the Project causing sufficient volume/capacity (V/C) change<sup>3</sup> to be found to be significantly impactful (and is also on the route of the downtown streetcar) appropriate changes to these adjustment factors would certainly result in findings of significant impact.

Footnote 2: Based on the dates imprinted on the Appendix L ICU computation sheets.

Footnote 3: See DEIR Appendix L, Table 8 at page 37.

## **Response to Comment No. 2-64**

The comment states that the Draft EIR's traffic analysis overestimates discounted trips based on Project components.

The transit credit taken in the transportation impact analysis is consistent with guidance in the LADOT *Transportation Impact Study Guidelines* in force at the time of the analysis. The LADOT guidance provides for a 25 percent credit for projects adjacent to a rail transit station. The 2nd Street/Broadway Regional Connector Station is currently under construction and will be open prior to the Project completion in 2023. Therefore, it is appropriate to consider this as an adjusted baseline condition in both the Existing plus Project and Future Project impact analyses. Furthermore, the Existing plus Project scenario is a hypothetical scenario as the Project will not be operational until 2023/2024. As it was included for comparison purposes, the same trip generation assumptions were made as for the future scenario.

Regarding the 40 percent discount applied to the supermarket, traditional pass-by trips are vehicle trips attracted from an adjacent suburban arterial. In the case of a supermarket located in a dense urban center, however, many patrons will likely walk from nearby locations and the pass-by discount was used as a surrogate for these trips. It is unlikely that a supermarket in this location would attract vehicle trips at the level that a supermarket in a suburban setting would attract; however, the available trip generation rates (in both the ITE 9<sup>th</sup> and ITE 10<sup>th</sup> Editions) are for supermarkets in suburban locations. Therefore, the 40 percent discount is appropriate. LADOT reviewed and approved the trip generation estimates and trip reduction credits in the traffic study MOU for the Project.

## **Comment No. 2-65**

### **The Project Trip Distribution Understates Traffic at Critical Locations**

The DEIR traffic analysis assumes that 35 percent of the Project's vehicle trips will originate or be destined within a roughly circular area of the downtown ranging in radius from about 0.75 to 0.85 miles from the intersection of W. 2nd and Broadway. It is understood that the City of Los Angeles Travel Demand Model, the reported basis for the 35 percent local trips assumption, is a person-trip mode. While this percentage is likely true of the total person-trips generated by the Project, most of the vehicle trips generated are likely to originate or be destined outside of this circle. As a consequence, the Project's contribution of traffic to critical gateway intersections at and near freeway ramps serving the downtown is understated.

### **Response to Comment No. 2-65**

The commenter states that the Project's trip distribution understates traffic outside of a radius from about 0.75 to 0.85 miles from the intersection of W. 2nd and Broadway. The commenter agrees that this percentage is likely true of the person-trips generated by the Project. Since most of these trips could be made by walking, bicycling or transit, assigning these trips as vehicle trips is in fact a conservative assumption.

## **Comment No. 2-66**

### **Lack of Consideration of Transportation Network Companies (Ridesharing) Effects on Tripmaking and Mode Choice**

The rise of Transportation Network Companies (ridesharing operations like Uber and Lyft) has dramatically changed the way people travel in urban areas in recent years. Recent studies have found that TNCs have cut into transit, walk and bike shares of trip-making and caused induced trips (trips that would not otherwise be made) and, due to the recirculation to access new rides and careless loading and unloading, caused an approximate doubling in congestion and vehicle miles traveled (VMT) over that which would be ordinarily be accounted for by land use development in dense urban areas.<sup>4</sup> The DEIR has made no effort to estimate traffic due to TNC use due to the Project. This is a critical flaw.

Footnote 4: *TNCs & Congestion*, San Francisco County Transportation Authority, October, 2018

### **Response to Comment No. 2-66**

The commenter states that the traffic analysis does not consider transportation network companies (TNCs) in the analysis. To date, research data into mode shares for TNC use is limited, and LADOT has not established a methodology for considering their use. Anecdotal evidence suggests that TNCs are used more for occasional discretionary trips (such as to restaurants) rather than for daily trips (such as most trips generated by residential or office uses) due to their higher cost. While the proposed Project does contain supermarket and restaurant uses, the majority of the Project is residential and office.

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## **Comment No. 2-67**

### **Conclusion**

This concludes my comments on the Times-Mirror Project DEIR transportation element. Given the foregoing, I conclude that the DEIR transportation analysis must be revised and recirculated in draft status.

### **Response to Comment No. 2-67**

This comment is a conclusion to the commenter's letter. Responses to these comments are provided in Response to Comment Nos. 2-56 through 2-66.

## **Comment No. 2-63**

The remainder of Exhibit C contains a resume for the commenter and is provided in Attachment A of this response.

### **Response to Comment No. 2-63**

No response is needed.

## **Comment No. 2-64**

### **EXHIBIT D**

Exhibit D contains an article written by Wanyu Chan, Yang-Seon Kim, Brett Singer, and Iain Walker on *Indoor Air Quality in New California Homes with Mechanical Ventilation*.

### **Response to Comment No. 2-64**

Responses related to the contents of this article as it relates to the Project and the EIR are provided in Response to Comment No. 2-13.

VTT-74761-1A  
Exhibit E

Appendix A  
**Construction and Operational  
Health Risk Assessment**



**Times Mirror Square Project**  
**Air Quality Assessment**  
**Construction Health Risk Assessment**

**Off-Road Heavy-Duty Construction Equipment Emission Rates W/ MM-AQ-1**

Construction Activity	Equipment Type	Schedule <sup>a</sup>		Work Days by Activity (days)	Work Hours per Day (hours/day)	DPM Exhaust Emissions <sup>b</sup> (tons/year)	Emissions Rate during Work Period (grams/second)
		Start Date	End Date				
I. Demolition	Off-Road Heavy-Duty	7/1/2018	1/31/2019	184	12	0.0220	2.51E-03
II. Site Preparation	Off-Road Heavy-Duty	2/1/2019	2/28/2019	24	12	0.00251	2.20E-03
III. Grading	Off-Road Heavy-Duty	3/1/2019	9/30/2019	183	12	0.0234	2.69E-03
IV. Foundation (North Tower)	Off-Road Heavy-Duty	10/1/2019	10/2/2019	2	12	0.00019	1.99E-03
V. Foundation (South Tower)	Off-Road Heavy-Duty	10/3/2019	10/4/2019	2	12	0.00019	1.99E-03
VI. Subterranean Parking Structure	Off-Road Heavy-Duty	10/5/2019	6/26/2020	230	12	0.0460	4.20E-03
VII. Podium Construction	Off-Road Heavy-Duty	6/27/2020	8/27/2020	53	12	0.0101	4.00E-03
VIII. Building Construction	Off-Road Heavy-Duty	8/28/2020	10/6/2022	660	12	0.1036	3.30E-03
IX. Paving	Off-Road Heavy-Duty	3/1/2022	10/6/2022	189	12	0.0109	1.21E-03
X. Architectural Coating	Off-Road Heavy-Duty	1/1/2021	10/6/2022	552	12	-	0.00E+00
XI. Renovation <sup>c</sup>	Off-Road Heavy-Duty	7/1/2018	8/8/2020	660	12	0.0133	4.22E-04
<i>Maximum 12-Month Emissions (for Chronic HI analysis)</i>							
VIII. Building Construction	Off-Road Heavy-Duty	8/28/2020	10/6/2022	313	12	0.1036	3.30E-03
IX. Paving	Off-Road Heavy-Duty	3/1/2022	10/6/2022	189	12	0.0109	1.21E-03
X. Architectural Coating	Off-Road Heavy-Duty	1/1/2021	10/6/2022	313	12	-	-
						<i>Emissions Rate:</i>	<i>4.03E-03</i>
XI. Renovation <sup>c</sup>	Off-Road Heavy-Duty	7/1/2018	8/8/2020	313	12	0.0133	4.22E-04

Notes:

- In order to provide a conservative emissions analysis, for modeling purposes, construction emissions were modeled with a starting time period in calendar year 2018. The Project would be expected to be fully built-out with full operation of all uses by calendar year 2023. Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. If the onset of construction is delayed to a later date than assumed in the modeling analysis, construction impacts would be less than those analyzed, because a more energy-efficient and cleaner burning construction equipment and vehicle fleet mix would be expected in the future, pursuant to State regulations that require construction equipment fleet operators to phase-in less polluting heavy-duty equipment. As a result, should the Project commence construction on a later date than modeled in this air quality impact analysis, air quality impacts would be less than the impacts disclosed herein.
- California Air Resources Board, California Emissions Estimator Model (CalEEMod).
- Renovation activity could occur at a later time. In order to provide a conservative assessment, renovation activity was modeled at the earliest possible time since emission factors are higher in earlier years compared to later years.

Source: ESA 2019

**Travel On-Road Haul, Concrete, Vendor Truck Emission Rates**

Construction Activity	Equipment Type	Schedule <sup>a</sup>		Work Days per Year (days/year)	Work Hours per Day (hours/day)	Construction Activity Year	Total One-Way Truck Trips	One-Way Trip Distance per Day <sup>b</sup> (miles)	DPM Running Emissions Factor <sup>c</sup> (grams/mile)	Emissions Rate during Work Period (grams/second)
		Start Date	End Date							
I. Demolition	T7 single construction	7/1/2018	1/31/2019	184	12	2018-2019	3,500	0.525	0.0373	8.63E-06
II. Site Preparation		2/1/2019	2/28/2019	24	12	2019	-	-	-	-
III. Grading	T7 single construction	3/1/2019	9/30/2019	183	12	2019	51,088	0.525	0.0329	1.11E-04
IV. Foundation (North Tower)	T7 single construction	10/1/2019	10/2/2019	2	12	2019	1,874	0.525	0.0329	3.74E-04
V. Foundation (South Tower)	T7 single construction	10/3/2019	10/4/2019	2	12	2019	1,564	0.525	0.0329	3.12E-04
VI. Subterranean Parking Structure	HHDT	10/5/2019	6/26/2020	230	12	2019-2020	69,460	0.525	0.0232	8.53E-05
VII. Podium Construction	HHDT	6/27/2020	8/27/2020	53	12	2020	18,921	0.525	0.0191	8.29E-05
VIII. Building Construction	HHDT	8/28/2020	10/6/2022	660	12	2020-2022	178,860	0.525	0.0191	6.29E-05
IX. Paving		3/1/2022	10/6/2022	189	12	2022	-	-	-	-
X. Architectural Coating		1/1/2021	10/6/2022	552	12	2021-2022	-	-	-	-
XI. Renovation <sup>d</sup>	HHDT	7/1/2018	8/8/2020	660	12	2018-2020	40,920	0.525	0.0254	1.91E-05
<b>Maximum 12-Month Emissions (for Chronic HI analysis)</b>										
VIII. Building Construction	HHDT	8/28/2020	10/6/2022	313	12	2020-2022	178,860	0.525	0.0191	6.29E-05
IX. Paving		3/1/2022	10/6/2022	189	12	2022	-	-	-	-
X. Architectural Coating		1/1/2021	10/6/2022	313	12	2021-2022	-	-	-	-
									<i>Emissions Rate:</i>	<i>6.29E-05</i>
XI. Renovation <sup>d</sup>	HHDT	7/1/2018	8/8/2020	313	12	2018-2020	40,920	0.525	0.0254	1.91E-05

Notes:

- a. In order to provide a conservative emissions analysis, for modeling purposes, construction emissions were modeled with a starting time period in calendar year 2018. The Project would be expected to be fully built-out with full operation of all uses by calendar year 2023. Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. If the onset of construction is delayed to a later date than assumed in the modeling analysis, construction impacts would be less than those analyzed, because a more energy-efficient and cleaner burning construction equipment and vehicle fleet mix would be expected in the future, pursuant to State regulations that require construction equipment fleet operators to phase-in less polluting heavy-duty equipment. As a result, should the Project commence construction on a later date than modeled in this air quality impact analysis, air quality impacts would be less than the impacts disclosed herein.
- b. The portion of the on-road trip length within a 1/4 mile of the Project Site. Measured as 1/2 of the distance around the Project Site plus the average on the N Broadway, Spring Street, and Los Angeles Street route distances.
- c. California Air Resources Board, EMFAC2014 on-road vehicle emissions model. Exhaust PM10 is used as a surrogate for diesel particulate matter.
- d. Renovation activity could occur at a later time. In order to provide a conservative assessment, renovation activity was modeled at the earliest possible time since emission factors are higher in earlier years compared to later years.

Source: ESA 2019

**Idling On-Road Haul, Concrete, Vendor Truck Emission Rates**

Construction Activity	Equipment Type	Schedule <sup>a</sup>		Work Days per Year (days/year)	Work Hours per Day (hours/day)	Construction Activity Year	Total Number of Trucks	Idling Time per Truck (minutes)	DPM Idling Emissions Factor <sup>b</sup> (grams/min)	Emissions Rate during Work Period (grams/second)
		Start Date	End Date							
I. Demolition	T7 single construction	7/1/2018	1/31/2019	184	12	2018-2019	1,750	15	7.87E-05	2.60E-07
II. Site Preparation		2/1/2019	2/28/2019	24	12	2019	-	-	-	-
III. Grading	T7 single construction	3/1/2019	9/30/2019	183	12	2019	25,544	15	7.03E-05	3.41E-06
IV. Foundation (North Tower)	T7 single construction	10/1/2019	10/2/2019	2	12	2019	937	15	7.03E-05	1.14E-05
V. Foundation (South Tower)	T7 single construction	4/3/2019	10/4/2019	2	12	2019	782	15	7.03E-05	9.54E-06
VI. Subterranean Parking Structure	HHDT	4/3/2019	6/26/2020	230	12	2019-2020	34,730	15	5.43E-05	2.85E-06
VII. Podium Construction	HHDT	6/27/2020	8/27/2020	53	12	2020	9,461	15	3.48E-05	2.16E-06
VIII. Building Construction	HHDT	8/28/2020	10/6/2022	660	12	2020-2022	89,430	15	3.48E-05	1.64E-06
IX. Paving		3/1/2022	10/6/2022	189	12	2022	-	-	-	-
X. Architectural Coating		1/1/2021	10/6/2022	552	12	2021-2022	-	-	-	-
XI. Renovation <sup>c</sup>	HHDT	7/1/2018	8/8/2020	660	12	2018-2020	20,460	15	6.22E-05	6.70E-07
<b>Maximum 12-Month Emissions (for Chronic HI analysis)</b>										
VIII. Building Construction	HHDT	8/28/2020	10/6/2022	313	12	2020-2022	89,430	15	3.48E-05	1.64E-06
IX. Paving		3/1/2022	10/6/2022	189	12	2022	-	-	-	-
X. Architectural Coating		1/1/2021	10/6/2022	313	12	2021-2022	-	-	-	-
XI. Renovation <sup>c</sup>	HHDT	7/1/2018	8/8/2020	313	12	2018-2020	20,460	15	6.22E-05	6.70E-07

Notes:

- In order to provide a conservative emissions analysis, for modeling purposes, construction emissions were modeled with a starting time period in calendar year 2018. The Project would be expected to be fully built-out with full operation of all uses by calendar year 2023. Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. If the onset of construction is delayed to a later date than assumed in the modeling analysis, construction impacts would be less than those analyzed, because a more energy-efficient and cleaner burning construction equipment and vehicle fleet mix would be expected in the future, pursuant to State regulations that require construction equipment fleet operators to phase-in less polluting heavy-duty equipment. As a result, should the Project commence construction on a later date than modeled in this air quality impact analysis, air quality impacts would be less than the impacts disclosed herein.
- California Air Resources Board, EMFAC2014 on-road vehicle emissions model. Exhaust PM10 is used as a surrogate for diesel particulate matter.
- Renovation activity could occur at a later time. In order to provide a conservative assessment, renovation activity was modeled at the earliest possible time since emission factors are higher in earlier years compared to later years.

Source: ESA 2019

**Times Mirror Square Project  
Air Quality Assessment  
Construction Health Risk Assessment**

**AERMOD Source Characteristics**

Emission Source	Source Type	Number of Sources	Length of Line (m)	Source Group Unitized Emission Rate (g/s)	Release Height (m)	Length of Side X (m)	Length of Side Y (m)	Initial Lateral (m)	Initial Vertical (m)	Plume Height (m)	Plume Width (m)	Exit Temp (°F)	Inside Diameter (ft)	Exit Flow Rate (ft <sup>3</sup> /s)
SRCGP01: Demo and New Construction Off-Road Construction Equipment, VOL1-20	VOLUME	20		0.0500	4.15	20	20	4.65	1.93					
SRCGP02: Renovation Activity Off-Road Construction Equipment, RVOL21-36	VOLUME	16		0.0625	4.15	20	20	4.65	1.93					
SRCGP03: On-Road Truck Travel On-Road Trucks														
SLINE1	LINE VOLUME	1	297.1	0.1165	4.15					8.3	15			
SLINE2	LINE VOLUME	1	124.1	0.0487	4.15					8.3	24			
SLINE3	LINE VOLUME	1	617.1	0.2421	4.15					8.3	24			
SLINE4	LINE VOLUME	1	628.3	0.2465	4.15					8.3	15			
SLINE5	LINE VOLUME	1	882.7	0.3463	4.15					8.3	10			
SRCGP04: On-Road Truck Idling On-Road Trucks, IVOL37-43	VOLUME	7		0.1429	4.15	20	20	4.65	1.93					

Notes:

Assumes construction equipment activity totalling 12 hours per weekday (Mon-Fri) and 8 hours on Saturday.

Source: ESA 2019.

**Times Mirror Square Project  
 Air Quality Assessment  
 Construction Health Risk Assessment**

**AERMOD Results**

Source Group	Source Type	Unitized Max AERMOD Concentration (Annual Average) ( $\mu\text{g}/\text{m}^3$ )	
		Residential (South of Site) UTM: 385080.00, 3768530.00	Workplace (West of Site) UTM: 385000.00, 3768770.00
SRCGP01: Demo and New Construction	<i>Volume</i>	4.28	36.18
SRCGP02: Renovation Activity	<i>Volume</i>	7.59	11.02
SRCGP03: On-Road Truck Travel	<i>Line Volume</i>	9.35	10.15
SRCGP04: On-Road Truck Idling	<i>Volume</i>	5.83	30.17

Source: Lakes Environmental, AERMOD View 9.8.1 (Version 19191) 2019; ESA 2019.

Times Mirror Square Project  
 Air Quality Assessment  
 Construction Health Risk Assessment

Maximum Individual Cancer Risk Calculations - Maximum Impacted Residential Receptor  
 (OEHHA 2003 Parameters)

Concentrations by Emissions Group (Emissions Rate × AERMOD Concentration Results)

Construction Phase/Equipment		Emissions Group		
		1 (0.25 years)	2 (2 years)	3 (67.75 years)
Days	Demolition	78	106	
CONC	Off-Road Equipment	1.08E-02	1.08E-02	
	On-Road Trucks	8.07E-05	8.07E-05	
	Idling Trucks	1.52E-06	1.52E-06	
Days	Site Preparation		24	
CONC	Off-Road Equipment		9.40E-03	
	On-Road Trucks		-	
	Idling Trucks		-	
Days	Grading		183	
CONC	Off-Road Equipment		1.15E-02	
	On-Road Trucks		1.04E-03	
	Idling Trucks		1.99E-05	
Days	Foundation (North Tower)		2	
CONC	Off-Road Equipment		8.54E-03	
	On-Road Trucks		3.50E-03	
	Idling Trucks		6.66E-05	
Days	Foundation (South Tower)		2	
CONC	Off-Road Equipment		8.54E-03	
	On-Road Trucks		2.92E-03	
	Idling Trucks		5.56E-05	
Days	Subterranean Parking Structure		230	
CONC	Off-Road Equipment		1.80E-02	
	On-Road Trucks		7.97E-04	
	Idling Trucks		1.66E-05	
Days	Podium Construction		53	
CONC	Off-Road Equipment		1.71E-02	
	On-Road Trucks		7.75E-04	
	Idling Trucks		1.26E-05	
Days	Building Construction		28	632
CONC	Off-Road Equipment		1.41E-02	1.41E-02
	On-Road Trucks		5.88E-04	5.88E-04
	Idling Trucks		9.55E-06	9.55E-06
Days	Paving (Overlapping)			189
CONC	Off-Road Equipment			5.18E-03
	On-Road Trucks			-
	Idling Trucks			-
Days	Architectural Coating (Overlapping)			552
CONC	Off-Road Equipment			-
	On-Road Trucks			-
	Idling Trucks			-
Days	Renovation (Overlapping)	78	582	
CONC	Off-Road Equipment	3.20E-03	3.20E-03	
	On-Road Trucks	1.79E-04	1.79E-04	
	Idling Trucks	3.90E-06	3.90E-06	
Work Days in Emissions Group (6 work days/week)		78	626	21,206
Average Annual Concentration over Emissions Group		1.22E-02	1.56E-02	4.15E-04

Project Risk Calculations

Parameter		Emissions Group			Total
		1 (0.25 years)	2 (2 years)	3 (67.75 years)	
DBR	Daily Breathing Rate (L/kg (body weight) per day)	302	302	302	70
A	Inhalation absorption factor (default = 1).	1	1	1	
EF	Exposure Frequency (days/year)	350	350	350	
ED	Exposure Duration (years)	0.25	2	67.75	
FAH	Fraction of Time at Home	1.0	1.0	1.0	
AT	Averaged Exposure Time Period (days)	25550	25550	25550	
CONC	Toxic Air Contaminant Concentration ( $\mu\text{g}/\text{m}^3$ )	1.22E-02	1.56E-02	4.15E-04	
DOSE	$[= \text{CONC} \times \text{DBR} \times \text{A} \times \text{EF} \times \text{ED} \times \text{FAH} / \text{AT}]$ (mg/kg-d)	1.26E-02	1.29E-01	1.16E-01	
CPF	Cancer Potency Factor ( $\text{mg}/\text{kg-d}$ ) <sup>-1</sup> Diesel Particulate Matter	1.1	1.1	1.1	
RISK	Cancer Risk (in one million) $[= \text{DOSE} \times \text{CPF}]$	1.38E-02	1.42E-01	1.28E-01	0.28

Sources:

- OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, 2003.
- SCAQMD, Risk Assessment Procedures for Rules 1401 and 212, Appendix L, Version 7.0, 2012.
- ESA, 2019

Times Mirror Square Project  
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Maximum Individual Cancer Risk Calculations - Maximum Impacted Workplace Receptor  
(OEHHA 2003 Parameters)

Concentrations by Emissions Group (Emissions Rate × AERMOD Concentration Results)

Construction Phase/Equipment		Emissions Group	
		1 (40 years)	
Days	Demolition		184
CONC	Off-Road Equipment		9.10E-02
	On-Road Trucks		8.76E-05
	Idling Trucks		7.84E-06
Days	Site Preparation		24
CONC	Off-Road Equipment		7.95E-02
	On-Road Trucks		0.00E+00
	Idling Trucks		0.00E+00
Days	Grading		183
CONC	Off-Road Equipment		9.72E-02
	On-Road Trucks		1.13E-03
	Idling Trucks		1.03E-04
Days	Foundation (North Tower)		2
CONC	Off-Road Equipment		7.22E-02
	On-Road Trucks		3.80E-03
	Idling Trucks		3.45E-04
Days	Foundation (South Tower)		2
CONC	Off-Road Equipment		7.22E-02
	On-Road Trucks		3.17E-03
	Idling Trucks		2.88E-04
Days	Subterranean Parking Structure		230
CONC	Off-Road Equipment		1.52E-01
	On-Road Trucks		8.66E-04
	Idling Trucks		8.59E-05
Days	Podium Construction		53
CONC	Off-Road Equipment		1.45E-01
	On-Road Trucks		8.41E-04
	Idling Trucks		6.51E-05
Days	Building Construction		660
CONC	Off-Road Equipment		1.19E-01
	On-Road Trucks		6.38E-04
	Idling Trucks		4.94E-05
Days	Paving (Overlapping)		189
CONC	Off-Road Equipment		4.38E-02
	On-Road Trucks		-
	Idling Trucks		-
Days	Architectural Coating (Overlapping)		552
CONC	Off-Road Equipment		-
	On-Road Trucks		-
	Idling Trucks		-
Days	Renovation (Overlapping)		660
CONC	Off-Road Equipment		4.65E-03
	On-Road Trucks		1.94E-04
	Idling Trucks		2.02E-05
Work Days in Emissions Group (6 work days/week)			12,520
Average Annual Concentration over Emissions Group			1.17E-02

Project Risk Calculations

Parameter		Emissions Group		Total
		1 (40 years)		
DBR	Daily Breathing Rate (L/kg (body weight) per day)		149	40
A	Inhalation absorption factor (default = 1).		1	
EF	Exposure Frequency (days/year)		245	
ED	Exposure Duration (years)		40	
FAH	Fraction of Time at Home		1.0	
AT	Averaged Exposure Time Period (days)		25550	
CONC	Toxic Air Contaminant Concentration ( $\mu\text{g}/\text{m}^3$ )		1.17E-02	
DOSE	$[= \text{CONC} \times \text{DBR} \times \text{A} \times \text{EF} \times \text{ED} \times \text{FAH} / \text{AT}]$ (mg/kg-d)		6.67E-01	
CPF	Cancer Potency Factor (mg/kg-d) <sup>-1</sup> Diesel Particulate Matter		1.1	
RISK	Cancer Risk (in one million) $[= \text{DOSE} \times \text{CPF}]$		7.34E-01	0.73

Note:

Conservatively assumes workplace receptors are exposed to Project construction diesel emissions 6 days per week instead of 5 days per week.

Sources:

OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, 2003.

SCAQMD, Risk Assessment Procedures for Rules 1401 and 212, Appendix L, Version 7.0, 2012.

ESA, 2019

Times Mirror Square Project  
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Maximum Non-cancer Chronic Hazards / Toxicological Endpoints\*

Receptor Group	Pollutant	CREL <sup>1</sup>	CONC <sup>2</sup>	WFrac	CONC <sub>WF</sub>	HI	ALIM	BN	CVS	DEV	ENDC	EYE	HEM	IMMUN	KIDN	NS	REPRO	RESP	SK	Threshold	Over?	
<b>Project:</b>																						
MEI - Residential	DPM	5.00E+00	2.12E-02	1.00E+00	2.12E-02	4.24E-03	-	-	-	-	-	-	-	-	-	-	-	-	4.24E-03	-	1.0	NO
MEI - Workplace	DPM	5.00E+00	1.51E-01	1.00E+00	1.51E-01	3.03E-02	-	-	-	-	-	-	-	-	-	-	-	-	3.03E-02	-	1.0	NO

Notes:

- California Air Resources Board, "Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values" and "OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs," <http://www.arb.ca.gov/toxics/healthval/healthval.htm>.  
Tables last updated: February 23, 2017.
- Calculated as follows: (Maximum 12 Month Emission Rate × AERMOD Concentration Results) and summed for each source [off-road, on-road truck travel, on-road truck idling].

Source: ESA 2019

Where:

CONC<sub>WF</sub> Pollutant Concentration (µg/m<sup>3</sup>) multiplied by the weight fraction  
 CREL Chronic Reference Exposure Level  
 HI Hazard Index  
 MEI Maximally Exposed Individual  
 WFrac Weight fraction of speciated component

\* Key to Toxicological Endpoints

ALIM	Alimentary Tract	EYE	Eye	NS	Nervous System
BN	Bone	HEM	Hematologic System	REPRO	Reproductive System
CVS	Cardiovascular System	IMMUN	Immune System	RESP	Respiratory System
DEV	Developmental System	KIDN	Kidney	SK	Skin
ENDC	Endocrine System				

**Haul Truck Running Emission Factors (Aggregate Model Year, Aggregate Speeds)  
(for On-Road T7 single construction Trucks)**

EMFAC2014 (v1.0.7) Emission Rates

Region Type: Air District

Region: South Coast AQMD

Calendar Year: 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Region	CalYr	VehClass	MdYr	Speed	Fuel	Population	VMT	Trips	PM10_RUNEX	PM10_IDLEX
South Coast A	2018	T7 single construction	Aggregated	Aggregated	DSL	4396.386309	401621.3552	0	0.037330204	0.113361608
South Coast A	2019	T7 single construction	Aggregated	Aggregated	DSL	4462.332416	415992.0795	0	0.032858685	0.101169812
South Coast A	2020	T7 single construction	Aggregated	Aggregated	DSL	4520.415865	430328.0015	0	0.018978917	0.013495901
South Coast A	2021	T7 single construction	Aggregated	Aggregated	DSL	4574.52748	437040.1234	0	0.01689274	0.011847817
South Coast A	2022	T7 single construction	Aggregated	Aggregated	DSL	4614.345784	443212.0116	0	0.014398408	0.010205559
South Coast A	2023	T7 single construction	Aggregated	Aggregated	DSL	4626.753607	448843.666	0	0.004553343	0.00156215
South Coast A	2024	T7 single construction	Aggregated	Aggregated	DSL	4682.575441	453935.0868	0	0.004527229	0.001509032
South Coast A	2025	T7 single construction	Aggregated	Aggregated	DSL	4705.218537	450249.238	0	0.004495066	0.001461622

**Vendor Truck Running Emission Factors (Aggregate Model Year, Aggregate Speeds)  
(for On-Road HHDT Trucks)**

EMFAC2014 (v1.0.7) Emission Rates

Region Type: Air District

Region: South Coast AQMD

Calendar Year: 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Region	CalYr	VehClass	MdYr	Speed	Fuel	Population	VMT	Trips	PM10_RUNEX	PM10_IDLEX
South Coast A	2018	HHDT	Aggregated	Aggregated	DSL	88602.97312	12283354.82	0	0.025416678	0.089581448
South Coast A	2019	HHDT	Aggregated	Aggregated	DSL	91454.70427	12784867.43	0	0.023248792	0.07816253
South Coast A	2020	HHDT	Aggregated	Aggregated	DSL	94066.79161	13265170	0	0.019106692	0.050157115
South Coast A	2021	HHDT	Aggregated	Aggregated	DSL	96532.34077	13754182.38	0	0.017119468	0.042588648
South Coast A	2022	HHDT	Aggregated	Aggregated	DSL	98579.16255	14203074.76	0	0.014761136	0.034588987
South Coast A	2023	HHDT	Aggregated	Aggregated	DSL	98621.23896	14635626.85	0	0.00598536	0.023566334
South Coast A	2024	HHDT	Aggregated	Aggregated	DSL	101363.7548	14948001.72	0	0.005977319	0.021069318
South Coast A	2025	HHDT	Aggregated	Aggregated	DSL	103677.305	15242668.08	0	0.005927949	0.018912696

# **Operational Health Risk Assessment Calculation Files**



Times Mirror Square Project  
 Air Quality Assessment  
 Operational Health Risk Assessment

**On-Road Diesel-Fueled Vehicle Emission Rates**

Operational Activity	Equipment Type	Days per Year (days/year)	Hours per Day (hours/day)	Emission Factor Year	Daily One-Way Vehicle Trips	One-Way Trip Distance per Day <sup>a</sup> (miles)	DPM Running Emissions Factor <sup>b</sup> (grams/mile)	Emissions Rate (grams/second)
I. Diesel-fuel motor vehicles	Motor Vehicle Fleet	365	24	2023	294	0.590	1.24E-02	2.49E-05

Notes:

- a. The portion of the on-road trip length within a 1/4 mile of the Project Site. Based on a one-way travel distance towards or away from the Project Site conservatively assuming travel occurs on a north-south street (for ~500 meters) and an east-west street (for ~450 meters).
- b. California Air Resources Board, EMFAC on-road vehicle emissions model.

Source: ESA 2019

**Idling On-Road Diesel-Fueled Vehicle Emission Rates**

Operational Activity	Equipment Type	Days per Year (days/year)	Hours per Day (hours/day)	Emission Factor Year	Daily Number of Vehicles	Idling Time per Vehicle (minutes)	DPM Idling Emissions Factor <sup>a</sup> (grams/min)	Emissions Rate (grams/second)
I. Diesel-fuel motor vehicles	Motor Vehicle Fleet	365	24	2023	147	15	8.28E-06	2.11E-07

Notes:

- a. California Air Resources Board, EMFAC on-road vehicle emissions model.

Source: ESA 2019.

**Times Mirror Square Project**  
**Air Quality Assessment**  
**Operational Health Risk Assessment**

**AERMOD Source Characteristics**

Emission Source	Source Type	Number of Sources	Length of Line (m)	Source Group Unitized Emission Rate (g/s)	Release Height (m)	Length of Side X (m)	Length of Side Y (m)	Initial Lateral (m)	Initial Vertical (m)	Plume Height (m)	Plume Width (m)	Exit Temp (°F)	Inside Diameter (ft)	Exit Flow Rate (ft <sup>3</sup> /s)
<b>Source Group 1</b>														
Diesel-fueled motor vehicles (SLINE01)	Line-Volume	1	832.1	0.0949	4.15	n/a	n/a	n/a	n/a	8.3	24.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE02)	Line-Volume	1	893.2	0.1018	4.15	n/a	n/a	n/a	n/a	8.3	28.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE03)	Line-Volume	1	891.6	0.1016	4.15	n/a	n/a	n/a	n/a	8.3	18.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE04)	Line-Volume	1	678.1	0.0773	4.15	n/a	n/a	n/a	n/a	8.3	20.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE05)	Line-Volume	1	574.9	0.0655	4.15	n/a	n/a	n/a	n/a	8.3	26.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE06)	Line-Volume	1	990.1	0.1129	4.15	n/a	n/a	n/a	n/a	8.3	26.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE07)	Line-Volume	1	1002.2	0.1143	4.15	n/a	n/a	n/a	n/a	8.3	24.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE08)	Line-Volume	1	996.9	0.1136	4.15	n/a	n/a	n/a	n/a	8.3	24.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE09)	Line-Volume	1	988.9	0.1127	4.15	n/a	n/a	n/a	n/a	8.3	24.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE10)	Line-Volume	1	923.7	0.1053	4.15	n/a	n/a	n/a	n/a	8.3	26.0	n/a	n/a	n/a
<b>Source Group 2</b>														
Idling diesel-fueled motor vehicles (VOL1-2)	Volume	2	n/a	0.5000	4.15	40	40	9.30	1.93	n/a	n/a	n/a	n/a	n/a

Source: ESA 2019.

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**AERMOD Results**

Emission Source	Source Type	Unitized Max AERMOD Concentration ( $\mu\text{g}/\text{m}^3$ )	
		Workplace (East of Site) UTM: 383335.00, 3767720.00	Residential (Northeast of Site) UTM: 383470.00, 3767970.00
<b>Source Group 1</b> <i>Diesel-fueled motor vehicles (SLINE01)</i> <i>Diesel-fueled motor vehicles (SLINE02)</i> <i>Diesel-fueled motor vehicles (SLINE03)</i> <i>Diesel-fueled motor vehicles (SLINE04)</i> <i>Diesel-fueled motor vehicles (SLINE05)</i> <i>Diesel-fueled motor vehicles (SLINE06)</i> <i>Diesel-fueled motor vehicles (SLINE07)</i> <i>Diesel-fueled motor vehicles (SLINE08)</i> <i>Diesel-fueled motor vehicles (SLINE09)</i> <i>Diesel-fueled motor vehicles (SLINE10)</i>	<i>Line-Volume</i> <i>Line-Volume</i> <i>Line-Volume</i> <i>Line-Volume</i> <i>Line-Volume</i> <i>Line-Volume</i> <i>Line-Volume</i> <i>Line-Volume</i> <i>Line-Volume</i> <i>Line-Volume</i>	24.38	24.38
<b>Source Group 2</b> <i>Idling diesel-fueled motor vehicles (VOL1-2)</i>	<i>Volume</i>	153.03	17.01

Source: Lakes Environmental, AERMOD View 9.8.1 (Version 19191) 2019; ESA 2019.

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Maximum Individual Cancer Risk Calculations - Sensitive Receptors (Maximum Impacted Residential Receptor)  
 (OEHHA 2003 Parameters)

Concentrations by Emissions Group (Emissions Rate × AERMOD Concentration Results)

Operational Equipment		Emissions Group		
		1 (0.25 years)	2 (2 years)	3 (67.75 years)
Days	Diesel-fuel motor vehicles	91	730	24728.75
CONC	Off-Road Equipment	0.00E+00	0.00E+00	0.00E+00
	On-Road Diesel-Fueled Vehicles	6.07E-04	6.07E-04	6.07E-04
	Idling Diesel-Fueled Vehicles	3.59E-06	3.59E-06	3.59E-06
Operational Days in Emissions Group (7 days/week)		91	730	24,729
Average Annual Concentration over Emissions Group		6.11E-04	6.11E-04	6.11E-04

Cancer Risk Calculations

Parameter		Emissions Group			Total 30 Year Exposure
		1 (0.25 years)	2 (2 years)	3 (67.75 years)	
DBR	Daily Breathing Rate (L/kg (body weight) per day)	302	302	302	70
A	Inhalation absorption factor (default = 1).	1	1	1	
EF	Exposure Frequency (days/year)	350	350	350	
ED	Exposure Duration (years)	0.25	2	67.75	
FAH	Fraction of Time at Home <sup>a</sup>	1.00	1.00	1.00	
AT	Averaged Exposure Time Period (days)	25550	25550	25550	
CONC	Toxic Air Contaminant Concentration ( $\mu\text{g}/\text{m}^3$ )	6.11E-04	6.11E-04	6.11E-04	
DOSE	$[= \text{CONC} \times \text{DBR} \times \text{A} \times \text{EF} \times \text{ED} \times \text{FAH} / \text{AT}]$ (mg/kg-d)	6.32E-04	5.06E-03	1.71E-01	
CPF	Cancer Potency Factor ( $\text{mg}/\text{kg}\cdot\text{d}$ ) <sup>-1</sup> Diesel Particulate Matter	1.1	1.1	1.1	
RISK	Cancer Risk (in one million) $[= \text{DOSE} \times \text{CPF}]$	6.95E-04	5.56E-03	1.88E-01	0.19

Note:

- a. FAH value of 1.0 is conservatively used.

Sources:

OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, 2003.

SCAQMD, Risk Assessment Procedures for Rules 1401 and 212, Appendix L, Version 7.0, 2012.

ESA, 2019

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Maximum Individual Cancer Risk Calculations - Sensitive Receptors (Maximum Impacted Residential Receptor)  
**COMBINED CONSTRUCTION+OPERATIONAL IMPACTS**  
 (OEHHA 2003 Parameters)

Concentrations by Emissions Group (Emissions Rate × AERMOD Concentration Results)

Operational Equipment		Emissions Group		
		1 (0.25 years)	2 (2 years)	3 (67.75 years)
Days	Diesel-fuel motor vehicles	91	730	24728.75
CONC	Off-Road Equipment	0.00E+00	0.00E+00	0.00E+00
	On-Road Diesel-Fueled Vehicles	6.07E-04	6.07E-04	6.07E-04
	Idling Diesel-Fueled Vehicles	3.59E-06	3.59E-06	3.59E-06
Operational Days in Emissions Group (7 days/week)		91	730	24,729
Average Annual Concentration over Emissions Group		6.11E-04	6.11E-04	6.11E-04

Cancer Risk Calculations

Parameter		Emissions Group			Total 30 Year Exposure
		1 (0.25 years)	2 (2 years)	3 (67.75 years)	
DBR	Daily Breathing Rate (L/kg (body weight) per day)	302	302	302	70
A	Inhalation absorption factor (default = 1).	1	1	1	
EF	Exposure Frequency (days/year)	350	350	350	
ED	Exposure Duration (years)	0.25	2	67.75	
FAH	Fraction of Time at Home <sup>a</sup>	1.00	1.00	1.00	
AT	Averaged Exposure Time Period (days)	25550	25550	25550	
CONC	Toxic Air Contaminant Concentration ( $\mu\text{g}/\text{m}^3$ )	0.00E+00	0.00E+00	6.11E-04	
DOSE	$[= \text{CONC} \times \text{DBR} \times \text{A} \times \text{EF} \times \text{ED} \times \text{FAH} / \text{AT}]$ (mg/kg-d)	0.00E+00	0.00E+00	1.71E-01	
CPF	Cancer Potency Factor (mg/kg-d) <sup>-1</sup> Diesel Particulate Matter	1.1	1.1	1.1	
RISK	Cancer Risk (in one million) $[= \text{DOSE} \times \text{CPF}]$	0.00E+00	0.00E+00	1.88E-01	0.19
<b>Construction-period Risk</b>					<b>0.28</b>
<b>Total Construction + Operational Risk</b>					<b>0.47</b>

Note:

a. FAH value of 1.0 is conservatively used.

Sources:

OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, 2003.

SCAQMD, Risk Assessment Procedures for Rules 1401 and 212, Appendix L, Version 7.0, 2012.

ESA, 2019

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Maximum Individual Cancer Risk Calculations - Sensitive Receptors (Maximum Impacted Workplace)  
**COMBINED CONSTRUCTION+OPERATIONAL IMPACTS**

(OEHHA 2003 Parameters)

**Concentrations by Emissions Group (Emissions Rate × AERMOD Concentration Results)**

Operational Equipment		Emissions Group	
		1 (40 years)	
Days	Diesel-fuel motor vehicles		14600
CONC	Off-Road Equipment		0.00E+00
	On-Road Diesel-Fueled Vehicles		6.07E-04
	Idling Diesel-Fueled Vehicles		3.23E-05
Operational Days in Emissions Group (7 days/week)			14,600
Average Annual Concentration over Emissions Group			6.40E-04

**Cancer Risk Calculations**

Parameter		Emissions Group		Total
		1 (40 years)		
DBR	Daily Breathing Rate (L/kg (body weight) per day)		149	40
A	Inhalation absorption factor (default = 1).		1	
EF	Exposure Frequency (days/year)		245	
ED	Exposure Duration (years)		40	
FAH	Fraction of Time at Home (or Location) <sup>a</sup>		1.00	
AT	Averaged Exposure Time Period (days)		25550	
CONC	Toxic Air Contaminant Concentration ( $\mu\text{g}/\text{m}^3$ )		6.40E-04	
DOSE	$[= \text{CONC} \times \text{DBR} \times \text{A} \times \text{EF} \times \text{ED} \times \text{FAH} / \text{AT}]$ (mg/kg-d)		3.66E-02	
CPF	Cancer Potency Factor (mg/kg-d) <sup>-1</sup> Diesel Particulate Matter		1.1	
RISK	Cancer Risk (in one million) $[= \text{DOSE} \times \text{CPF}]$		4.02E-02	0.04
		<b>Construction-period Risk</b>		<b>0.73</b>
		<b>Total Construction + Operational Risk</b>		<b>0.77</b>

Note:

- a. For evaluating impacts at the workplace receptor, it was conservatively assumed that workplace receptors would be exposed to the total operational emissions; therefore, this factor was increased to 1.0.

Sources:

OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, 2003.  
 SCAQMD, Risk Assessment Procedures for Rules 1401 and 212, Appendix L, Version 7.0, 2012.  
 ESA, 2019

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Maximum Non-cancer Chronic Hazards / Toxicological Endpoints\*

Receptor Group	Pollutant	CREL <sup>1</sup>	CONC	WFrac	CONC <sub>WF</sub>	HI	ALIM	BN	CVS	DEV	ENDC	EYE	HEM	IMMUN	KIDN	NS	REPRO	RESP	SK	Threshold	Over?
<b>Project:</b>																					
MEI - Workplace	DPM	5.00E+00	6.40E-04	1.00E+00	6.40E-04	1.28E-04	-	-	-	-	-	-	-	-	-	-	-	1.28E-04	-	1.0	NO
MEI - Residential	DPM	5.00E+00	6.11E-04	1.00E+00	6.11E-04	1.22E-04	-	-	-	-	-	-	-	-	-	-	-	1.22E-04	-	1.0	NO

Sources:

- California Air Resources Board, "Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values" and "OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs," <http://www.arb.ca.gov/toxics/healthval/healthval.htm>.  
 Tables last updated: September 9, 2016 and March 30, 2016. Downloaded 02/10/2017.

Where:

CONC<sub>WF</sub> Pollutant Concentration (µg/m<sup>3</sup>) multiplied by the weight fraction  
 CREL Chronic Reference Exposure Level  
 HI Hazard Index  
 MEI Maximally Exposed Individual  
 WFrac Weight fraction of speciated component

\* Key to Toxicological Endpoints

ALIM	Alimentary Tract	EYE	Eye	NS	Nervous System
BN	Bone	HEM	Hematologic System	REPRO	Reproductive System
CVS	Cardiovascular System	IMMUN	Immune System	RESP	Respiratory System
DEV	Developmental System	KIDN	Kidney	SK	Skin
ENDC	Endocrine System				

EMFAC2014 (v1.0.7) Emission Rates

Region Type: Air Basin

Region: South Coast

Calendar Year: 2023

Season: Annual

Vehicle Classification: EMFAC2011 Categories

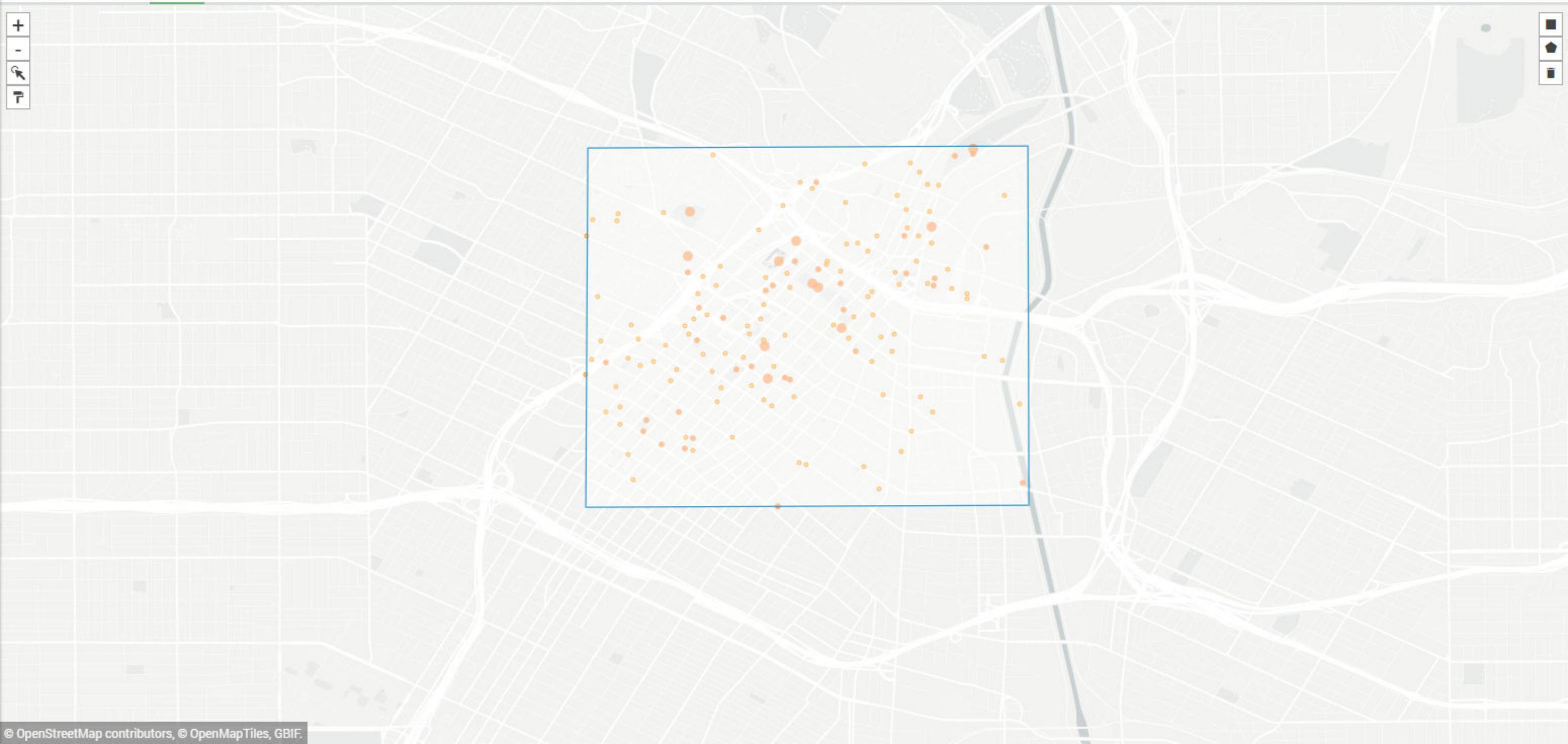
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Vehicle Type (diesel only)	PM10 RunEx	PM10 IdleEx	Population	Weighted Average Emission Factor	
				PM10 RunEx	PM10 IdleEx
All Other Buses	3.16E-03	1.32E-04	4.51E+03	2.88E-05	1.21E-06
LDA	1.04E-02	0.00E+00	6.82E+04	1.43E-03	0.00E+00
LDT1	9.73E-02	0.00E+00	5.67E+02	1.12E-04	0.00E+00
LDT2	5.16E-03	0.00E+00	4.46E+03	4.65E-05	0.00E+00
LHD1	1.70E-02	2.45E-02	9.61E+04	3.30E-03	4.76E-03
LHD2	1.29E-02	2.42E-02	4.21E+04	1.10E-03	2.06E-03
MDV	5.47E-03	0.00E+00	2.78E+04	3.08E-04	0.00E+00
MH	9.78E-02	0.00E+00	9.35E+03	1.85E-03	0.00E+00
Motor Coach	5.03E-02	2.53E-03	1.10E+03	1.12E-05	5.61E-06
PTO	5.75E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SBUS	3.13E-02	3.65E-02	5.20E+03	3.29E-04	3.83E-04
T6 Ag	3.62E-03	1.32E-04	2.62E+02	1.92E-06	7.01E-08
T6 CAIRP heavy	2.79E-03	1.32E-04	2.25E+02	1.27E-06	6.03E-08
T6 CAIRP small	2.48E-03	1.32E-04	5.67E+02	2.85E-06	1.52E-07
T6 instate construction heavy	3.31E-03	1.78E-04	2.99E+03	2.00E-05	1.07E-06
T6 instate construction small	2.83E-03	1.76E-04	1.03E+04	5.91E-05	3.68E-06
T6 instate heavy	3.17E-03	1.32E-04	3.83E+04	2.46E-04	1.03E-05
T6 instate small	2.73E-03	1.32E-04	8.07E+04	4.45E-04	2.16E-05
T6 OOS heavy	2.81E-03	1.32E-04	1.31E+02	7.44E-07	3.51E-08
T6 OOS small	2.48E-03	1.32E-04	3.25E+02	1.63E-06	8.71E-08
T6 Public	1.72E-02	9.74E-03	5.77E+03	2.01E-04	1.14E-04
T6 utility	1.95E-03	1.32E-04	1.49E+03	5.86E-06	3.98E-07
T7 Ag	6.07E-03	1.19E-03	1.92E+02	2.36E-06	4.62E-07
T7 CAIRP	6.05E-03	6.60E-03	7.98E+03	9.77E-05	1.06E-04
T7 CAIRP construction	5.88E-03	7.64E-03	6.66E+02	7.92E-06	1.03E-05
T7 NNOOS	4.63E-03	8.19E-03	8.79E+03	8.24E-05	1.46E-04
T7 NOOS	6.07E-03	8.19E-03	3.20E+03	3.93E-05	5.30E-05
T7 POLA	6.39E-03	2.07E-03	1.53E+04	1.98E-04	6.40E-05
T7 Public	4.15E-02	1.67E-01	7.38E+03	6.19E-04	2.50E-03
T7 Single	3.97E-03	1.19E-03	1.12E+04	9.01E-05	2.69E-05
T7 single construction	4.58E-03	1.56E-03	4.30E+03	3.98E-05	1.36E-05
T7 SWCV	7.75E-03	1.10E-01	7.12E+03	1.12E-04	1.58E-03
T7 tractor	6.00E-03	1.19E-03	1.93E+04	2.35E-04	4.65E-05
T7 tractor construction	6.44E-03	1.41E-03	3.46E+03	4.51E-05	9.91E-06
T7 utility	2.96E-03	1.80E-03	6.31E+02	3.78E-06	2.30E-06
UBUS	1.59E-01	0.00E+00	4.12E+03	1.33E-03	0.00E+00
<b>Vehicle Fleet</b>			<b>4.94E+05</b>	<b>1.24E-02</b>	<b>1.19E-02</b>
				<b>grams/vehicle/mile</b>	<b>grams/vehicle/day</b>

VTT-74761-1A  
Exhibit E

Appendix B  
**eBird Database Results**





Occurrences within 1-mile

Occurrence #	Scientific Name	Common name
464	<i>Columba livia</i>	Rock Pigeon
326	<i>Passer domesticus</i>	House sparrow
261	<i>Brotogeris chiriri</i>	yellow-chevroned parakeet
242	<i>Haemorhous mexicanus</i>	house finch
215	<i>Corvus brachyrhynchos</i>	American crow
214	<i>Corvus corax</i>	common raven
210	<i>Sturnus vulgaris</i>	European starling
201	<i>Mimus polyglottos</i>	Northern mockingbird
192	<i>Aeronautes saxatalis</i>	white-throated swift
184	<i>Setophaga coronata</i>	yellow-rumped warbler
162	<i>Zenaida macroura</i>	mourning dove
148	<i>Buteo jamaicensis</i>	red-tailed hawk
140	<i>Chaetura vauxi</i>	Vaux's swift
136	<i>Larus occidentalis</i>	western gull
121	<i>Calypte anna</i>	Anna's hummingbird
111	<i>Selasphorus sasin</i>	Allen's humminbird
105	<i>Sayornis nigricans</i>	black phoebe
90	<i>Melospiza crissalis</i>	California towhee
90	<i>Psaltiriparus minimus</i>	bush tit
69	<i>Falco peregrinus</i>	Peregrine Falcon
68	<i>Aphelocoma californica</i>	California scrub-jay
67	<i>Patagioenas fasciata</i>	band-tailed pigeon
56	<i>Spinus psaltria</i>	lesser goldfinch
51	<i>Zonotrichia leucophrys</i>	white-crowned sparrow
47	<i>Leiothlypis celata</i>	orange-crowned warbler
47	<i>Accipiter cooperii</i>	Cooper's hawk
39	<i>Larus californicus</i>	California gull
34	<i>Tyrannus vociferans</i>	Cassin's kingbird
33	<i>Bombycilla cedrorum</i>	cedar waxwing
30	<i>Regulus calendula</i>	ruby-crowned kinglet
28	<i>Icterus cucullatus</i>	hooded oriole
28	<i>Falco sparverius</i>	American kestrel
22	<i>Anas platyrhynchos</i>	mallard
18	<i>Setophaga townsendi</i>	Townsend's warbler
17	<i>Euphagus cyanocephalus</i>	Brewer's blackbird
16	<i>Poliophtila caerulea</i>	blue-gray gnatcatcher
14	<i>Cathartes aura</i>	turkey vulture
13	<i>Petrochelidon pyrrhonota</i>	Cliff swallow
13	<i>Catharus guttatus</i>	hermit thrush
13	<i>Phalacrocorax auritus</i>	double-crested cormorant
12	<i>Troglodytes aedon</i>	house wren
11	<i>Passerculus sandwichensis</i>	Savannah sparrow
11	<i>Sayornis saya</i>	Say's phoebe
11	<i>Buteo lineatus</i>	red-shouldered hawk
11	<i>Piranga ludoviciana</i>	western tanager
11	<i>Protonotaria citrea</i>	Prothonotary warbler
11	<i>Cardellina pusilla</i>	Wilson's warbler
11	<i>Setophaga nigrescens</i>	Black-throated gray warbler
11	<i>Quiscalus mexicanus</i>	Great-tailed grackle
11	<i>Turdus migratorius</i>	American robin
11	<i>Stelgidopteryx serripennis</i>	Northern rough-winged swallow
10	<i>Streptopelia chinensis</i>	Spotted dove
10	<i>Hirundo rustica</i>	barn swallow
9	<i>Melospiza lincolnii</i>	Lincoln's Sparrow
9	<i>Myiarchus cinerascens</i>	Ash-throated flycatcher

9	<i>Chaetura pelagica</i>	Chimney Swift
9	<i>Streptopelia decaocto</i>	Eurasian collared dove
8	<i>Melospiza melodia</i>	Song sparrow
8	<i>Geothlypis trichas</i>	Common yellowthroat
8	<i>Sturnella neglecta</i>	Western meadowlark
8	<i>Setophaga ruticilla</i>	American Redstart
8	<i>Spinus tristis</i>	American goldfinch
7	<i>Passerella iliaca</i>	Fox Sparrow
7	<i>Icterus bullockii</i>	Bullock's Oriole
7	<i>Branta canadensis</i>	Canada goose
7	<i>Setophaga petechia</i>	Yellow warbler
7	<i>Pipilo maculatus</i>	Spotted towhee
7	<i>Colaptes auratus</i>	Northern Flicker
7	<i>Sialia mexicana</i>	Western Bluebird
7	<i>Ardea herodias</i>	Great Blue Heron
7	<i>Lonchura punctulata</i>	Scaly-breasted munia
6	<i>Junco hyemalis</i>	Dark-eyed Junco
6	<i>Setophaga palmarum</i>	Palm Warbler
5	<i>Charadrius vociferus</i>	Killdeer
5	<i>Larus delawarensis</i>	Ring-billed gull
5	<i>Himantopus mexicanus</i>	Black-necked stilt
5	<i>Larus argentatus</i>	Herring gull
5	<i>Baeolophus inornatus</i>	Oak Titmouse
5	<i>Phainopepla nitens</i>	Phainopepla
5	<i>Tyto alba</i>	Barn Owl
5	<i>Psittacara mitratus</i>	Mitred parakeet
5	<i>Dryobates nuttallii</i>	Nuttall's woodpecker
5	<i>Ardea alba</i>	Great Egret
4	<i>Fulica americana</i>	American coot
4	<i>Anthus rubescens</i>	American Pipit
4	<i>Egretta thula</i>	Snowy Egret
4	<i>Molothrus ater</i>	Brown-headed cowbird
4	<i>Accipiter striatus</i>	Sharp-shinned hawk
4	<i>Amazona viridigenalis</i>	Red-crowned Amazon
4	<i>Lanius ludovicianus</i>	Loggerhead Shrike
3	<i>Pandion haliaetus</i>	Osprey
3	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron
3	<i>Poecile gambeli</i>	Mountain Chickadee
3	<i>Pheucticus melanocephalus</i>	Black-headed grosbek
3	<i>Archilochus alexandri</i>	Black-chinned hummingbird
3	<i>Leiothlypis ruficapilla</i>	Nashville Warbler
3	<i>Psittacara erythrogenys</i>	red-masked parakeet
3	<i>Vireo huttoni</i>	Hutton's vireo
3	<i>Melanerpes formicivorus</i>	Acorn woodpecker
3	<i>Euplectes franciscanus</i>	Northern Red Bishop
2	<i>Anas americana</i>	American wigeon
2	<i>Tyrannus verticalis</i>	Western Kingbird
2	<i>Calypte costae</i>	Costa's hummingbird
2	<i>Selasphorus rufus</i>	Rufous hummingbird
2	<i>Dendrocopos pubescens</i>	Downy woodpecker
2	<i>Larus glaucescens</i>	Glaucous-winged gull
2	<i>Calidris mauri</i>	Western sandpiper
2	<i>Catoptrophorus semipalmatus</i>	Willet
2	<i>Pycnonotus jocosus</i>	Red-whiskered Bulbul
2	<i>Vireo gilvus</i>	Warbling Vireo
2	<i>Aimophila ruficeps</i>	Rufous-crowned Sparrow

2	<i>Thryomanes bewickii</i>	Bewick's Wren
2	<i>Oxyura jamaicensis</i>	Ruddy Duck
2	<i>Bucephala albeola</i>	Bufflehead
2	<i>Sterna forsteri</i>	Forster's tern
2	<i>Contopus sordidulus</i>	Western wood pewee
2	<i>Passerina amoena</i>	Lazuli bunting
2	<i>Toxostoma redivivum</i>	California thrasher
2	<i>Geothlypis tolmiei</i>	MacGillivray's warbler
2	<i>Setophaga occidentalis</i>	Hermit Warbler
2	<i>Setophaga magnolia</i>	Magnolia Warbler
2	<i>Agelaius phoeniceus</i>	Red-winged blackbird
2	<i>Empidonax difficilis</i>	Pacific-slope flycatcher
2	<i>Athene cucularia</i>	Burrowing Owl
2	<i>Tachycineta thalassina</i>	Violet-green Swallow
1	<i>Megaceryle alcyon</i>	Belted kingfisher
1	<i>Cypseloides niger</i>	Black Swift
1	<i>Picoides villosus</i>	Hairy Woodpecker
1	<i>Amazona finschi</i>	Lilac-crowned parrot
1	<i>Charadrius semipalmatus</i>	Semipalmated plover
1	<i>Elanus leucurus</i>	White-tailed Kite
1	<i>Hydroprogne caspia</i>	Caspian tern
1	<i>Limnodromus scolopaceus</i>	Long-billed Dowitcher
1	<i>Limosa fedoa</i>	Marbled Godwit
1	<i>Tringa melanoleuca</i>	Greater Yellowlegs
1	<i>Calidris minutilla</i>	Least sandpiper
1	<i>Calidris alpina</i>	Dunlin
1	<i>Numenius americanus</i>	Long-billed Curlew
1	<i>Gallinago delicata</i>	Wilson's Snipe
1	<i>Aechmophorus clarkii</i>	Clark's grebe
1	<i>Podiceps nigricollis</i>	Eared Grebe
1	<i>Podilymbus podiceps</i>	Pied-billed Grebe
1	<i>Cyanocitta stelleri</i>	Steller's Jay
1	<i>Empidonax oberholseri</i>	Dusky Flycatcher
1	<i>Tachycineta bicolor</i>	Tree Swallow
1	<i>Cardinalis cardinalis</i>	Northern Cardinal
1	<i>Catharus ustulatus</i>	Swainson's Thrush
1	<i>Spizella pallida</i>	Clay-colored Sparrow
1	<i>Spizella passerina</i>	Chipping Sparrow
1	<i>Chamaea fasciata</i>	Wrentit
1	<i>Anas cyanoptera</i>	Cinnamon teal
1	<i>Chen caerulescens</i>	Snow Goose
1	<i>Mergus serrator</i>	Red-breasted Merganser
1	<i>Lophodytes cucullatus</i>	Hooded Merganser
1	<i>Callipepla californica</i>	California Quail
1	<i>Pelecanus erythrorhynchos</i>	American White Pelican
1	<i>Contopus cooperi</i>	Olive-sided Flycatcher
1	<i>Passerina caerulea</i>	Blue Grosbeak
1	<i>Zonotrichia atricapilla</i>	Golden-crowned Sparrow
1	<i>Spinus pinus</i>	Pine Siskin
1	<i>Spinus lawrencei</i>	Lawrence's Goldfinch
1	<i>Bubo virginianus</i>	Great Horned Owl
1	<i>Thectocercus acuticaudatus</i>	Blue-crowned Parakeet
1	<i>Plegadis chihi</i>	White-faced Ibis
1	<i>Falco columbarius</i>	Merlin

VTT-74761-1A  
Exhibit E

Appendix C  
**Transportation Memorandum**





## MEMORANDUM

Date: January 10, 2020  
To: Kimberly Comacho, ESA  
From: Tom Gaul, Fehr & Peers

**Subject: Responses to Comments from Smith Engineering & Management on the Final Environmental Impact Report for the Times Mirror Square Project**

Ref: LA17-2909

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This memorandum provides responses to the comments submitted by Daniel T. Smith of Smith Engineering & Management dated October 11, 2019, attached to the letter from Richard Toshiyuki Drury of Lozeau Drury dated October 16, 2019, commenting on the Final Environmental Impact Report for the Times Mirror Square Project.

### **Comment Smith-1**

*At your request, I have reviewed the Draft Environmental Impact Report (hereinafter the "DEIR") for the Times Mirror Square Project (the "Project") in the City of Los Angeles (the "City"). My review is specific to the Traffic and Circulation sections of that document and related appendices.*

*My qualifications to perform this review include registration as a Civil and Traffic Engineer in California and over 50 years professional consulting engineering practice in the traffic and transportation industry. I have both prepared and performed adequacy reviews of numerous transportation and circulation sections of environmental impact reports prepared under the California Environmental Quality Act (CEQA) including residential and mixed use complexes. My professional resume is attached. Findings of my review are summarized below.*

### **Overview**

*The DEIR discloses that the Project would have significant traffic impact in the Existing + Project condition at the intersection of Broadway with W. 2<sup>nd</sup> and in the Future (2023 + Project condition at six intersections:*

- 1. S. Figueroa Street & W. 2nd Street (PM peak hour)*
- 5. Hill Street & W. 1st Street (AM peak hour)*
- 10. Broadway & W. 1st Street (both peak hours)*
- 11. S. Broadway & W 2nd Street (both peak hours)*
- 12. S. Broadway & W. 3rd Street (AM peak hour)*
- 17. S. Spring Street & W. 2nd Street (AM peak hour).*

*It is critical that the severity of impact at these locations be accurately disclosed since the DEIR finds that physical improvements at these locations are infeasible. As a consequence, in order to approve this Project,*



*findings of overriding considerations will have to be made. To make such findings, public policy-makers and the public must have confidence that the severity of impacts that are overridden are accurately disclosed.*

### **Response to Comment Smith-1**

These are introductory remarks introducing the remainder of the letter. See the Responses to Comments Smith-2 through Smith-12 below for responses to the specific comments in the letter.

### **Comment Smith-2**

*There are reasons why the true severity of the Project's impacts have not been disclosed. One of these is that with the significant impacts at the intersections disclosed as noted above, it is highly likely that there would be queuing impacts at those locations. Yet the DEIR fails to consider queues at those locations. It only analyzes queues at the Project driveways.*

### **Response to Comment Smith-2**

The transportation impact analysis provided in Section IV.P, *Transportation and Traffic*, of the Draft EIR and Appendix L-1 of the Draft EIR was conducted in accordance with the methodology and criteria specified in the Los Angeles Department of Transportation's (LADOT's) *Transportation Impact Study Guidelines* in force at the time of the analysis. This methodology and criteria do not require any queuing analysis. The Draft EIR's traffic analysis was confirmed and accepted by LADOT in their traffic study assessment letter dated May 21, 2018, and included in Appendix L to the DEIR. The City of Los Angeles, as lead agency, has the discretion to determine the appropriate methodology and significance thresholds for assessing traffic impacts. The City has never established any methodology or impact criteria based on queuing. Rather, the City established and historically utilized the Critical Movement Analysis (CMA) methodology, which assesses traffic impacts based on changes in volume to capacity ratios and levels of service (LOS). The Project traffic analysis appropriately used this established methodology. Moreover, LOS is related to queuing, in that there are greater levels of queuing at worse levels of service. As acknowledged by the commenter in Comment Smith-1, the Draft EIR did find that the Project would have significant impacts at six intersections. This finding was based on LADOT's impact criteria for level of service. Level of service is a measure of the operating condition of an intersection and inherently reflects queuing in that there are greater levels of queuing at worse levels of service.

### **Comment Smith-3**

*Another reason is because the DEIR analysis distained to consider the traffic consequences of the Downtown Streetcar operation. This streetcar would operate in street-running configuration southbound on Broadway and northbound on Hill Street in the Project vicinity. Seven of the DEIR's study intersections and four of the intersections disclosed to be significantly impacted by the subject Project would be on the streetcar route. The operations and/or lane reservations for the streetcar would inevitably have deleterious effects on traffic that could only intensify the severity of the Projects traffic impacts that have been disclosed. Also, the traffic impacts of the Project could have deleterious effect on streetcar operations.*

### **Response to Comment Smith-3**

As discussed on page II-15 of the DEIR, the Downtown Streetcar is not currently funded. Metro's Measure M funding plan does not allocated funds to the Downtown Streetcar project until fiscal year 2053, much



later than the Project's buildout year of 2023. As such, consideration of the Downtown Streetcar as a related project in the DEIR would be speculative. Also see the Response to Comment Smith-8.

**Comment Smith-4**

*Another reason is the trip generation analysis applies an obsolete basic trip generation data resource and applies trip generation adjustment factors in ways that are inconsistent with the timing of certain transit improvements and the characteristics of the setting of the Project. As a consequence, the Project's contribution of net new trips is understated.*

**Response to Comment Smith-4**

See the Responses to Comments Smith-9 and Smith-10.

**Comment Smith-5**

*Yet another reason is that the traffic analysis assumes that 35 percent of the Project's vehicle trips will originate or be destined within a roughly circular area of the downtown ranging in radius from about 0.75 to 0.85 miles from the intersection of W. 2<sup>nd</sup> and Broadway. While this percentage is likely true of the total person-trips generated by the Project, most of the vehicle trips generated are likely to originate or be destined outside of this circle. As a consequence, the Project's contribution of traffic to critical gateway intersections at and near freeway ramps serving the downtown is understated.*

**Response to Comment Smith-5**

The commenter agrees that this percentage is likely true of the person-trips generated by the Project. Since most of these trips could be made by walking, bicycling or transit, assigning these trips as vehicle trips is in fact a conservative assumption.

**Comment Smith-6**

*Finally, the analysis fails to consider the impacts of increasing reliance on Transportation Network Companies (TNCs or ridesharing).*

**Response to Comment Smith-6**

See the Response to Comment Smith-12.

**Comment Smith-7**

***Failure to Consider Queuing***

*As noted above, the DEIR discloses that the Project would have significant traffic impacts at 6 intersections in the 2023 project completion scenario. At 4 of these locations the impacts involve operations in the Level-of-Service (LOS) E or F. Locations experiencing LOS E or F operations are highly likely to have queuing problems which further degrade conditions. Yet the DEIR performed no queue analysis at these obvious locations.*

**Response to Comment Smith-7**

See Response to Comment Smith-2.



### **Comment Smith-8**

#### ***Failure to Consider the Effects of the Downtown Streetcar***

*As noted above, the City has approved plans for a downtown streetcar operation that would run by the Project site southbound on Broadway and close to the Project site on Hill Street. It would run through 4 of the intersections where the DEIR discloses the Project would have significant traffic impacts. The DEIR dismisses consideration of the streetcar project in the traffic analysis of the subject Project, Citing the fact that as of August 3, 2018 the Streetcar Project was not fully funded.<sup>1</sup> However, the Notice of Preparation ("NOP") on the subject Project was not issued until June 30, 2017. By that date the LA Bureau of Engineering published a CEQA FEIR on the Streetcar on October 24, 2016 and it was certified by the City Council on November 29, 2016. The LA City Council also approved the streetcar route on November 29, 2016. Hence, the streetcar project was reasonably foreseeable at the time of the NOP for the Times-Mirror EIR and its design was defined at a level of detail sufficient for traffic impact analysis.*

*Disregarding the streetcar based on funding status is inconsistent with the City's treatment of other developments contained in the list of Related Projects LADOT provides as input to the cumulative analysis. There is no evidence of consideration whether a project is fully funded to be entered onto the related projects list. The only criterion seems to be that a project has formally filed for planning, zoning and environmental approvals.*

### **Response to Comment Smith-8**

As noted in the Response to Comment 4 and in the comment itself, the Downtown Streetcar is not currently funded. Metro's Measure M funding plan does not allocated funds to the Downtown Streetcar project until fiscal year 2053, much later than the Project's buildout year of 2023. As such, consideration of the Downtown Streetcar as a related project in the DEIR would be speculative. This is consistent with the City's standard approach and applicable case law, under which transportation improvement projects without funding are not considered as related projects. The City has no reason to believe that development projects that have filed for approvals are not funded.

### **Comment Smith-9**

#### ***Obsolete Trip Generation Data Resource, Adjustments Inconsistent With Timing of Transit Improvements and Adjustments Inconsistent With the Nature of Project Components***

*The DEIR's transportation impact analysis relies on basic trip generation rates from the Institute of Transportation Engineers publication, Trip Generation, 9<sup>th</sup> Edition, released in 2012. The subsequent 10<sup>th</sup> Edition was released in late 2017. A significant improvement of the 10<sup>th</sup> Edition over the 9<sup>th</sup> Edition is a focus on data for high rise residential and mixed use developments in dense urban settings. Even though the 10<sup>th</sup> Edition was released a few months later than the date of the NOP, the EIR traffic impact analysis, which was not completed until early May, 2018,<sup>2</sup> could easily have relied on the superior edition of the data source.*

*Because of the limitations of early editions of Trip Generation, which focused on sites involving single land use types which were most easily countable in suburban settings where transit and pedestrian activity tended to be minimal as opposed to dense urban, well-transit-served, highly pedestrianized areas with mixed use developments, and also did not distinguish between new trips generated by the project as differentiated from trips attracted from existing traffic (passers-by), adjustment factors were developed to*



*take account of these considerations. However, in the subject DEIR some adjustments seem to have been misapplied.*

#### **Response to Comment Smith-9**

The ITE 9<sup>th</sup> Edition trip generation manual was the most up-to-date source available at the time the transportation impact analysis was conducted for the Project. The data from this source was the basis for the trip generation estimates approved by LADOT in the traffic study MOU for the Project, which was signed in March 2017 prior to release of the ITE 10<sup>th</sup> Edition manual.

The ITE 10<sup>th</sup> Edition trip generation manual provides more current trip generation rates for Center City Core areas that were not available in the ITE 9<sup>th</sup> Edition manual and are lower than trip generation rates for more suburban locations. If the analysis were to be updated to utilize the more recently available data from the ITE 10<sup>th</sup> Edition trip general manual, the estimated trip generation for the Project would be lower than that estimated in the DEIR. Therefore, the transportation impact analysis presented in the DEIR is conservative.

#### **Comment Smith-10**

*In specific, the DEIR analysis takes a 25 percent peak hour transit credit on the trips of the Project's non-residential components based on the assumed 2023 completion of the of the 2<sup>nd</sup> St./Broadway Regional Connector Station immediately adjacent to the Project site (same completion year as the Project). This is fine for the 2023 analysis. However, for the Existing + Project analysis those Project components should only get the 15 percent transit credit the analysis assumes for the existing uses of the site since that adjacent station did not exist in 2017.*

*Also, the analysis assumes a 40 percent attracted passer-by discount on trips to/from the supermarket component of the Project. However, this is a passer-by attraction rate generally only achieved in supermarkets located along suburban arterials in centers with copious surface parking. This is not even close to realistic when people are already encased in their vehicles on urban streets in a dense urban downtown trying to get somewhere else and where they would have to enter and exit a multi-level parking garage or hunt for scarce street parking.*

*Reasonable changes to both of these adjustment factors could significantly alter the severity of the impacts disclosed and might result in impacts at other locations. In particular, at intersection 7, Hill Street with W. 3<sup>rd</sup>, which is on the cusp of the Project causing sufficient volume/capacity (V/C) change<sup>3</sup> to be found to be significantly impactful (and is also on the route of the downtown streetcar) appropriate changes to these adjustment factors would certainly result in findings of significant impact.*

#### **Response to Comment Smith-10**

The transit credit taken in the transportation impact analysis is consistent with guidance in the LADOT *Transportation Impact Study Guidelines* in force at the time of the analysis. The LADOT guidance provides for a 25% credit for projects adjacent to a rail transit station. The 2<sup>nd</sup> Street/Broadway Regional Connector Station is currently under construction and will be open prior to the Project completion in 2023. Therefore, it is appropriate to consider this as an adjusted baseline condition in both the existing plus project and future Project impact analyses. Furthermore, the existing plus project scenario is a hypothetical scenario as the Project will not be operational until 2023/2024. As it was included for comparison purposes, the same trip generation assumptions were made as for the future scenario.



Regarding the 40 percent discount applied to the supermarket, traditional pass-by trips are vehicle trips attracted from an adjacent suburban arterial. In the case of a supermarket located in a dense urban center, however, many patrons will likely walk from nearby locations and the pass-by discount was used as a surrogate for these trips. It is unlikely that a supermarket in this location would attract vehicle trips at the level that a supermarket in a suburban setting would attract; however, the available trip generation rates (in both the ITE 9<sup>th</sup> and ITE 10<sup>th</sup> Editions) are for supermarkets in suburban locations. Therefore, the 40 percent discount is appropriate. LADOT reviewed and approved the trip generation estimates and trip reduction credits in the traffic study MOU for the Project.

### **Comment Smith-11**

#### ***The Project Trip Distribution Understates Traffic at Critical Locations***

*The DEIR traffic analysis assumes that 35 percent of the Project's vehicle trips will originate or be destined within a roughly circular area of the downtown ranging in radius from about 0.75 to 0.85 miles from the intersection of W. 2<sup>nd</sup> and Broadway. It is understood that the City of Los Angeles Travel Demand Model, the reported basis for the 35 percent local trips assumption, is a person- trip mode. While this percentage is likely true of the total person-trips generated by the Project, most of the vehicle trips generated are likely to originate or be destined outside of this circle. As a consequence, the Project's contribution of traffic to critical gateway intersections at and near freeway ramps serving the downtown is understated.*

### **Response to Comment Smith-11**

See the Response to Comment Smith-5.

### **Comment Smith-12**

#### ***Lack of Consideration of Transportation Network Companies (Ridesharing) Effects on Tripmaking and Mode Choice***

*The rise of Transportation Network Companies (ridesharing operations like Uber and Lyft) has dramatically changed the way people travel in urban areas in recent years. Recent studies have found that TNCs have cut into transit, walk and bike shares of trip-making and caused induced trips (trips that would not otherwise be made) and, due to the recirculation to access new rides and careless loading and unloading, caused an approximate doubling in congestion and vehicle miles traveled (VMT) over that which would be ordinarily be accounted for by land use development in dense urban areas.<sup>4</sup> The DEIR has made no effort to estimate traffic due to TNC use due to the Project. This is a critical flaw.*

### **Response to Comment Smith-12**

To date, research data into mode shares for transportation network company (TNC) use is limited and LADOT has not established a methodology for considering their use. Anecdotal evidence suggests that TNCs are used more for occasional discretionary trips (such as to restaurants) rather than for daily trips (such as most trips generated by residential or office uses) due to their higher cost. While the proposed Project does contain supermarket and restaurant uses, the majority of the Project is residential and office.



### **Comment Smith-13**

#### **Conclusion**

*This concludes my comments on the Times-Mirror Project DEIR transportation element. Given the foregoing, I conclude that the DEIR transportation analysis must be revised and recirculated in draft status.*

#### **Response to Comment Smith-13**

This comment is a conclusion to the commenter's letter. Responses to these comments are provided in Responses to Comments Smith 2-2 through Smith-12.

As stated in the memorandum from LADOT to the Department of City Planning dated May 21, 2018, reproduced in Appendix L-2 to the Draft EIR approving the transportation impact analysis for the Project, "The results of the transportation impact analysis, which adequately accounted for the other known development projects in evaluating potential cumulative impacts, adequately evaluated the project's traffic impacts on the surrounding community ..."

VTT-74761-1A  
Exhibit E

Appendix D  
**Memorandum on Feasibility of  
Trucks**



Attention: Ben Spector  
Development Manager  
ONNI GROUP  
315 West 9th Street, Suite 801  
Los Angeles, CA 90015

Re: Times Mirror Square Project

Dear Ben

As you know, we are one of Southern California's leading ready-mix concrete suppliers. You are considering hiring us for the concrete pours for the Times Mirror Square Project in Downtown Los Angeles. You have asked us whether it would be feasible to implement a mitigation measure requiring the concrete truck operators to use only zero-emission (ZE) and/or near-zero emission (NZE) concrete trucks to reduce such impacts.

We will need to use multiple concrete suppliers during the two continuous concrete pouring foundation phases to provide the requisite amount of trucks. We currently anticipate using Associated RMC and A&A Ready Mix. However, it is not possible to commit to these companies so far in advance of the job.

Regardless, neither of these suppliers that we would use have fleets that include any ZE or NZE concrete trucks. Therefore, neither we nor our sub-subcontractors can commit to using ZE or NZE concrete trucks for the project's concrete pouring phases.

Based on our extensive experience with building highrise projects in and around Los Angeles, we conclude that the above measure would not be feasible. Please note, however, that given the one year delay in the commencement of project construction, we can now commit to using only concrete trucks that are compliant with the California Air Resources Board's 2010 engine emissions standards.

Very truly yours,  
*Brandon M. Mosavian*  
Sales Representative, Associated RMC

# INITIAL SUBMISSIONS

The following submissions by the public are in compliance with the Commission Rules and Operating Procedures (ROPs), Rule 4.3a. The Commission's ROPs can be accessed at <http://planning.lacity.org>, by selecting "Commissions, Boards & Hearings" and selecting the specific Commission.

The following submissions are not integrated or addressed in the Staff Report but have been distributed to the Commission.

Material which does not comply with the submission rules is not distributed to the Commission.

ENABLE BOOKMARKS ONLINE:

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If you have any questions, please contact the Commission Office at (213) 978-1300.



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May 4, 2020

*Via E-Mail*

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**Re: Comment on Final Environmental Impact Report, Times Mirror Square Project (Case No: VTT-74761, ENV-2016-4676-EIR, CPC-2016-4675-TDR-VCU-MCUP, and SCH No. 2017061083)**

Dear Honorable Members of the Los Angeles City Planning Commission and Mr. Lamborn:

I am writing on behalf of the Supporters Alliance for Environmental Responsibility (“SAFER”) and its members living and/or working in or around the City of Los Angeles (“City”) regarding the Final Environmental Impact Report (“FEIR”) prepared for the Times Mirror Square Project (VTT-74761, ENV-2016-4676-EIR, CPC-2016-4675-TDR-VCU-MCUP, and SCH No. 2017061083) (the “Project”).

After reviewing the FEIR, SAFER is concerned that the FEIR fails to adequately respond to comments, fails to adequately analyze significant environmental impacts, and fails to mitigate significant impacts that will occur as a result of the Project. Accordingly, SAFER respectfully requests the City to address these shortcomings in a revised draft environmental impact report (“RDEIR”) and recirculate the RDEIR prior to considering approvals for the Project. We hereby incorporate by reference in their entirety all of our prior comments that have been filed

concerning this matter.

## I. PROJECT DESCRIPTION

The Project proposes to rehabilitate the Times, Plant, and Mirror Buildings and build a mixed-use development on 3.6 acres of land bounded by W. 1st Street, S. Spring Street, W. 2nd Street, and S. Broadway Street in the Central City Plan Area of the City of Los Angeles. The Project would demolish the existing Executive Building at the corner of W. 1st Street and S. Broadway and parking garage at the corner of W. 2nd Street and S. Broadway to allow for the development of the Project's mixed-use component. The Project will contain up to 1,127 residential units, and approximately 34,572 square feet of commercial space among the 37-story "North Tower" and 53-story "South Tower" constructed above a five-story parking podium. The space below the podium would contain an additional nine levels of subterranean parking. In total, the Project proposes up to 1,511,908 square feet of floor area.

## II. LEGAL BACKGROUND

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an environmental impact report ("EIR") (except in certain limited circumstances). See, e.g., Pub. Res. Code § 21100. The EIR is the very heart of CEQA. *Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652. "The 'foremost principle' in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." *Communities for a Better Environment v. Calif. Resources Agency* (2002) 103 Cal. App. 4th 98, 109.

CEQA has two primary purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. 14 Cal. Code Regs. ("CEQA Guidelines") § 15002(a)(1). "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR 'protects not only the environment but also informed self-government.'" *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 564. The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return." *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal. App. 4th 1344, 1354 ("*Berkeley Jets*"); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.

Second, CEQA requires public agencies to avoid or reduce environmental damage when

“feasible” by requiring “environmentally superior” alternatives and all feasible mitigation measures. CEQA Guidelines § 15002(a)(2) and (3); see also, *Berkeley Jets*, 91 Cal. App. 4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564. The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to “identify ways that environmental damage can be avoided or significantly reduced.” CEQA Guidelines § 15002(a)(2). If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has “eliminated or substantially lessened all significant effects on the environment where feasible” and that any unavoidable significant effects on the environment are “acceptable due to overriding concerns.” Pub. Res. Code § 21081; CEQA Guidelines § 15092(b)(2)(A) & (B). The lead agency may deem a particular impact to be insignificant only if it produces rigorous analysis and concrete substantial evidence justifying the finding. *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 732 (1990).

The EIR is the very heart of CEQA “and the integrity of the process is dependent on the adequacy of the EIR.” *Berkeley Jets*, 91 Cal. App. 4th 1109, 1355. CEQA requires that a lead agency analyze all potentially significant environmental impacts of its proposed actions in an EIR. Pub. Res. Code § 21100(b)(1); Guidelines § 15126(a); *Berkeley Jets*, 91 Cal.App.4th 1344, 1354. The EIR must not only identify the impacts, but must also provide “information about how adverse the impacts will be.” *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 831. The lead agency may deem a particular impact to be insignificant only if it produces rigorous analysis and concrete substantial evidence justifying the finding. *Kings County Farm Bureau*, 221 Cal.App.3d 692, 732. “The ‘foremost principle’ in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.” *Communities for a Better Env’t*, 103 Cal.App.4th 98, 109.

While the courts review an EIR using an “abuse of discretion” standard, “the reviewing court is not to ‘uncritically rely on every study or analysis presented by a project proponent in support of its position. A ‘clearly inadequate or unsupported study is entitled to no judicial deference.’” *Berkeley Jets*, 91 Cal. App. 4th 1344, 1355 (emphasis added), quoting, *Laurel Heights Improvement Assn. v. Regents of University of California*, 47 Cal. 3d 376, 391 409, fn. 12 (1988). A prejudicial abuse of discretion occurs “if the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process.” *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal. App. 4th 713, 722; *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal. App. 4th 1109, 1117; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal. App. 4th 931, 946. As discussed below, and in the attached expert

comment letters of expert wildlife biologist Dr. Shawn Smallwood, expert consulting firm SWAPE, and traffic engineer Mr. Daniel T. Smith, PE, the EIR for this Project fails to adequately analyze and mitigate the Project's impacts.

The lead agency must evaluate comments on the draft EIR and prepare written responses in the final EIR ("FEIR"). Pub. Res. Code § 21091(d). The FEIR must include a "detailed" written response to all "significant environmental issues" raised by commenters. As the court stated in *City of Long Beach v. LA USD* (2009) 176 Cal.App.4th 889, 904:

The requirement of a detailed written response to comments helps to ensure that the lead agency will fully consider the environmental consequences of a decision before it is made, that the decision is well informed and open to public scrutiny, and that public participation in the environmental review process is meaningful.

The FEIR's responses to comments must be detailed and must provide a reasoned, good faith analysis. CEQA Guidelines § 15088(c). Failure to provide a substantive response to a comment renders the EIR legally inadequate. *Rural Land Owners Assoc. v. City Council* (1983) 143 Cal.App.3d 1013, 1020.

The responses to comments on a draft EIR must state reasons for rejecting suggested mitigation measures and comments on significant environmental issues. "Conclusory statements unsupported by factual information" are not an adequate response. CEQA Guidelines §§ 15088(b), (c); *Cleary v. County of Stanislaus* (1981) 118 Cal.App.3d 348. The need for a substantive, detailed response is particularly appropriate when comments have been raised by experts or other agencies. *Berkeley Keep Jets*, 91 Cal.App.4th at 1367; *People v. County of Kern* (1976) 62 Cal.App.3d 761. A reasoned analysis of the issue and references to supporting evidence are required for substantive comments raised. *Calif. Oak Found. v. Santa Clarita* (2005) 133 Cal.App.4th 1219.

### **III. DISCUSSION**

#### **A. The EIR Unduly Restrains the Project's Alternatives and Their Implementation.**

An overly narrow definition of project objectives renders the alternatives analysis inadequate. To narrowly define the primary "objective" of the proposed project itself constitutes a violation of CEQA since such a restrictive formulation would improperly foreclose consideration of alternatives. See, *City of Santee v. County of San Diego* (1989) 214 Cal.App.3d

1438, holding that when project objectives are defined too narrowly an EIR's treatment of analysis may also be inadequate. As a leading treatise on CEQA compliance cautions, "[t]he case law makes clear that...overly narrow objectives may unduly circumscribe the agency's consideration of project alternatives." Remy, Thomas, Moose & Manley, *Guide to CEQA* (Solano Books, 2007), p. 589.

CEQA prohibits a project sponsor from limiting its ability to implement the project in a way that precludes it from implementing reasonable alternatives to the project. *See Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 736 (alternatives may not be artificially limited by applicant's prior contractual commitments that would prevent sponsor from implementing reasonable alternative). The fact that a proposed alternative does not meet all of the Project Objectives is not an appropriate basis to eliminate impact-reducing project alternatives from analysis in an EIR. (14 Cal. Code Regs § 15126.6(c), (f)).

The EIR identifies several significant environmental impacts the Project will have, as well as the project alternatives that alleviate these impacts. Yet the City failed to impose a project alternative that would reduce environmental impacts because they do not meet all of the Project's stringent objectives. For example, Alternative 5 would avoid the Project's significant and unavoidable impacts to historical resources, associated with air quality standards, and related to construction noise. DEIR, p. V-205. However, this alternative was not selected in part because it did not meet all of the uses identified in the Project's objectives, and would not meet the objective to restore portions of the existing buildings "to the same extent as under the Project." DEIR, p. V-206. Additionally, Alternative 4 was not selected, although it would lessen or reduce the significant and unavoidable impacts to historical resources, air quality standards, and construction noise, because while it "would meet the Project's underlying purpose and primary objective . . . it would not *fully meet* the Objective's intent to provide publicly accessible open space and amenities *to the same extent* as the Project . . . ." DEIR, p. V-166–V-167.

By refusing to select a Project alternative that mitigates or reduces the Project's significant environmental impacts simply because the alternative does not entirely meet the narrowly defined Project objectives, the City has violated CEQA.

## **B. The EIR Fails to Adequately Analyze Historic and Cultural Aesthetic Impacts.**

The site of the proposed Project includes five historical resources, including the Times, Plant, Mirror, and Executive buildings, as well as the parking structure. Despite these resources, the City asserts Senate Bill (SB) 743 applies to the Project and therefore the Project's aesthetic

impacts are not considered significant impacts on the environment. DEIR, p. II-13–14. It makes this finding despite a subsection of SB 743 that excludes impacts to historical resources from this aesthetic exemption.

Codified within CEQA section 21099 et seq., SB 743 states “[a]esthetic . . . impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment.” Pub. Res. Code § 21099(d)(1). However, the City is incorrect in concluding it is exempt from analyzing all aesthetic impacts caused by the Project because SB 743 goes on to state that for the purposes of this section, “aesthetic impacts do not include impacts on historical or cultural resources.” Pub. Res. Code § 21099(d)(2)(B). Therefore, the impacts on historical and cultural resources must be considered separately from aesthetic impacts. In relying on SB 743, the City incorrectly assumes that since aesthetic impacts in a transit priority area are not considered significant as a matter of law, there will be no impacts on historical or cultural resources. However, the City cannot use SB 743 as an excuse to not mitigate aesthetic impacts to historical resources that are significant.

CEQA gives historic resources special recognition. *See Friends of Sierra Madre v. City of Sierra Madre* (2001) 25 C4th 165, 186; *Citizens for a Sustainable Treasure Island v. City & County of San Francisco* (2014) 227 Cal. App. 4th 1036, 1065. Objects of historical significance fall within CEQA’s definition of “environment.” Pub. Res. Code § 21060.5. Therefore, if a project has significant impacts on a historical resource, it has significant environmental impacts.

A substantial adverse change of a historical resource is considered a significant impact on the environment. CEQA Guidelines § 15064.5(b). Substantial adverse changes include “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings” resulting in the significance of the resource being “materially impaired.” CEQA Guidelines § 15064.5(b)(1). Material impairments of historical resources occur when the project demolishes or adversely materially alters the physical characteristics of the historical resource that either conveys its historical significance and that justify its inclusion in or eligibility for inclusion in the California Register of Historical Resources or the local register of historical resources. *Id.* §§ 15064.5(b)(2)(A)–(C). These material impairments clearly include aesthetic changes to historical resources because physical characteristics of historical resources encompass the façade and structural design of these resources.

Here, the Project proposes to demolish the Executive Building and the accompanying parking structure. Since both structures are eligible for inclusion in the California Register of Historic Resources and their physical characteristics that make them eligible for such listing will be demolished, the Project will result in a material impairment of these historical resources.

Additionally the Times, Plant, and Mirror Buildings are included in the local register of historic resources and are in the immediate surroundings of the Executive Building and parking structure. If the Project moves forward as planned, the impacts on the aesthetic quality of these buildings will be significant because the demolition of the Executive Building and parking structure will make room for two very large apartment buildings that will dwarf the Times, Plant, and Mirror Buildings and minimize the visibility of these historic resources. Although the aesthetic impacts to a mixed-use project in a transit priority area are not significant as a matter of law, impacts to historic resources are not considered aesthetic impacts under SB 743. Therefore, while the Project will have aesthetic impacts on historical resources, those historical impacts are significant and the City must analyze these impacts separately from merely aesthetic impacts and mitigate these significant impacts.

**C. The EIR Failed to Make Full and Accurate Responses to Comments Concerning Aesthetic Impacts to Historical Resources.**

While public participation is an essential part of the CEQA process, so is an agency's evaluation and response to public comments. Failure to comply with the requirement can lead to disapproval of a project. CEQA Guidelines Discussion, § 15088. An agency's responses to comments must specifically explain the reasons for rejecting suggestions received in comments and for proceeding with a project despite its environmental impacts. Such explanations must be fully supported with specific references to empirical information, scientific authority, and/or explanatory information. *Cleary v. County of Stanislaus* (1981) 118 Cal.App.3d 348, 357. The responses, moreover, must manifest a good faith, reasoned analysis; conclusory statements unsupported by factual information will not suffice. *People v. County of Kern* (1974) 39 Cal.App.3d 830, 841.

Here, the City continued to hide behind SB 743 when it responded in a cursory and inadequate way to a comment regarding the inadequacy of the EIR's analysis of aesthetic impacts on historical resources. *See* FEIR, p. 2-80–2-81. The City again pointed to SB 743 to assert that “the Project would result in the removal of the existing Executive Building and the parking structure, which are historic resources and, as such, may be considered to contribute to the aesthetic character under the [Los Angeles CEQA] Thresholds Guide. However, per ZI No. 2452 [which adopted SB 743], aesthetic impacts shall not be considered a significant impact for a qualifying mixed-use project in a Transit Priority Area, such as the Project.” FEIR, p. 2-81. This response, as identified in the section above, is incorrect and erroneous because the City's reliance on SB 743 is inappropriate given the reading of the entire section, which requires agency's to still consider aesthetic impacts to historical resources.

The City's response is legally inadequate because its analysis is based on an erroneous reading of SB 743 and ignores the rest of the statute excluding historical resources from the aesthetic impact exemption. This inadequate and conclusory response to a comment fails to meet CEQA's requirements. Responses such as this require the City to revise its EIR so that it fully evaluates and responds to public comments.

**D. The EIR Fails to Adequately Analyze Impacts on Biological Resources.**

SAFER previously submitted comments on the City's failure to adequately analyze the Project's impacts on biological resources and the potential significant impact on birds resulting from collisions with the Project's windows. *See* SAFER Comment dated October 16, 2019 ("SAFER FEIR Comment").

SAFER's concerns regarding the Project's impacts on biological resources are based on the expert analysis and opinions of ecologist Dr. Shawn Smallwood. *See* Biological Resources Comment dated October 13, 2019 (October 2019 Smallwood Comment). Based on project-specific information, Dr. Smallwood predicted the Project would result in significant impacts to birds colliding with the Project's clear glass windows. *See* October 2019 Smallwood Comment, p. 8. Specifically, Dr. Smallwood predicted there would be 2,310 bird deaths per year due to the Project. *Id.* In order to assess the Project's impacts on biological resources, Dr. Smallwood determined that, based on eBird records, "43 special-status species of birds occur near the site of the [Project], 14 of which were seen on property immediately adjacent to the site. Fifteen species have been known to collide with windows." *Id.*, p. 2. Dr. Smallwood also noted that the EIR was not prepared with the benefit of survey visits by wildlife biologists, so it inadequately informed the public about the avian use of the area. *Id.* Dr. Smallwood cited many sources in making his scientific prediction of the Project's impacts to birds from window collisions, as well as to identify bird-window collision factors. *See id.*, pp. 2–12.

Despite the City's duty to investigate issues relating to a project's potential environmental impacts, the City and the EIR have, thus far, attempted to deny Dr. Smallwood's expert analysis and refuse to consider with any informed expertise the likely impacts of window collisions on birds posed by the Project. *See County Sanitation Dist. No. 2 v. County of Kern* (2005) 127 Cal.App.4th 1544, 1597–98 ("[U]nder CEQA, the lead agency bears the burden to investigate potential environmental impacts."). Rather than objectively study this serious impact to birds, staff attempted to critique Dr. Smallwood's expert analysis without itself bringing any expertise to bear on the Project's impacts to biological resources from window collisions. *See City of Los Angeles Responses to Lozeau Drury LLP Letter, March 2020, pp. 2-21–2-36.* Dr.

Smallwood has reviewed the City's comments and prepared a response, which is attached as Exhibit A to these comments.

The City first attempts to fault Dr. Smallwood's eBird record search to identify the species of birds that occur near the site of the Project. *See* City of Los Angeles Responses to Lozeau Drury LLP Letter, March 2020, p. 2-22. The City claims that Dr. Smallwood failed to identify a radius for the eBird record search, and that a 1-mile radius is typically applied because it includes the immediate vicinity of the Project site and the surrounding area that supports the same habitat type. *Id.* The City further asserts that the Project site and immediate vicinity are not known to be wildlife or migratory corridors or within a special-status species critical habitat in order to claim that Dr. Smallwood has failed to provide credible evidence to support the assertion that special-status avian species identified by his eBird record search are dying as a result of window collisions in downtown Los Angeles. However, Dr. Smallwood notes that eBird is a volunteer reporting system, with some birds more detectable by volunteer observers than others, and that the number of records detected of each species near the Project site is of no more value than the simple fact of detection. Ex. A, p. 1. Dr. Smallwood goes on to state that the City's eBird review in fact revealed a very long list of bird species within 1 mile, most of which are unlikely to spend time on the ground or on a perch in the area, which would be put at risk of collision by the Project. *Id.* Half of these species have been documented as window collision victims in scientific literature. *Id.* Further, the City's 1-mile search radius is not a standard measurement for assessing avian occurrence likelihood or for analyzing collision risk with a proposed building as volant wildlife species cover great distances. *Id.*, p. 4. Lastly, Dr. Smallwood points out that the City's claim that special-status species are only those listed by state or federal governments as Candidate, Threatened, or Endangered species is incorrect because it is at odds with earlier standards adopted by both ESA and the City. *See id.*, p. 6. The City's claim that Dr. Smallwood has failed to provide credible evidence to support his assertions is meritless.

The City next attempts to fault Dr. Smallwood's expert comments by critiquing the studies Dr. Smallwood relied upon to analyze the Project's window collision impacts on birds, and focused on one study cited by Dr. Smallwood that less than 1% of bird fatalities are attributed to high-rise buildings. *See* City of Los Angeles Responses to Lozeau Drury LLP Letter, March 2020, p. 2-27. In response, Dr. Smallwood states that the City does not understand the significance of the percentages of bird fatalities attributed to high rises versus low-rise buildings from that study. *See* Ex. A, p. 10.

There are about 140 million homes in the USA . . . , about 15 million low-rise buildings, and about 21,000 high-rises (Loss et al. 2014). High-rises therefore

compose 0.0135% of building structures in the USA, and yet Loss et al. (2014) credited them for 0.14% of USA's bird-window collision mortality. One can divide 0.14% of fatalities attributed to high-rises by the 0.0135% of structures that are high-rises to reveal that high-rises pose 10.4 times more collision hazard to birds than do other structures.

*Id.* The City also critiqued Dr. Smallwood's collision fatality analysis by stating that none of the sources referenced by Dr. Smallwood contain specific information regarding the Project or its vicinity. *See* City of Los Angeles Responses to Lozeau Drury LLP Letter, March 2020, p. 2-26. However, as Dr. Smallwood notes, "an impact prediction does not require specific information regarding a site or project to which scientific inference is being extended." Ex. A, p. 9. Dr. Smallwood cited many sources involving 181 buildings or facades in order to use all the variation in collision rates that was available and this variation contributed to a robust bird-window collision rate represented by a wide 95% confidence interval. *Id.* However, the City continues to assert that since the Project site is urbanized, there is less likelihood for special-status avian species to be present. *See* City of Los Angeles Responses to Lozeau Drury LLP Letter, March 2020, p. 2-27. Dr. Smallwood again points out that his comments do not apply to ground conditions but rather to the airspace that birds use and into which the Project's glass facades are proposed to intrude upwards of 53 stories. Ex. A, p. 9. Birds moving east and west and north and south use the Project's airspace, and is habitat for many special-status species and for all birds now protected under California's version of the Migratory Bird Treaty Act. *Id.* The City's own eBird review supports Dr. Smallwood's argument that many species of birds are seen within the vicinity of the Project site.

The City once again attempts to fault Dr. Smallwood's prediction of the Project's impact on birds from window collisions by claiming it is anecdotal, speculative, and uncertain. City of Los Angeles Responses to Lozeau Drury LLP Letter, March 2020, p. 2-29. Dr. Smallwood admits his prediction is uncertain, as it is "characterized by a wide confidence interval, the lower bound of which would still predict a great many bird fatalities caused by collisions with the buildings. Contrary to the responder's implication that uncertainty connotes ignorance or confusion, scientific uncertainty is managed error, where error expresses variation in the data." Ex. A, p. 10. Nor is Dr. Smallwood's prediction speculative or anecdotal because it is empirically founded from all of the available source data across the North American continent and Dr. Smallwood used all of the available data in a scientific process to make a careful prediction that is likely biased low. Nowhere in Dr. Smallwood's scientific process was there any use of anecdotes or speculation.

Dr. Smallwood has provided ample evidence that the Project will result in significant impacts to birds due to window collisions and the City has a duty to investigate these impacts, which they have thus far failed to do. Additionally, the EIR provides no analysis of cumulative impacts on birds caused by window collisions in the City, nor any analysis of the proposed project's contribution to cumulative impacts of window collisions. An RDEIR is required to fully analyze and mitigate these impacts.

**E. The EIR Fails to Impose All Feasible Mitigation Measures to Reduce the Project's Impacts on Biological Resources.**

In Dr. Smallwood's previous comments on the Project, he compiled a list of bird-window collision factors from scientific literature and his own experience for the City to consider in addressing the Project's potentially significant impact to birds he identified. *See* October 2019 Smallwood Comment, pp. 8–12. Dr. Smallwood also included a comprehensive list of mitigation measures the City could implement to bring the Project's impacts on birds to a less than significant level. *Id.*, pp. 12–14. However, the City does not consider these comments or mitigation measures because the Final EIR alleges that Dr. Smallwood “provides no credible evidence to support his assertion that the Project could cause collision fatalities of birds” and “there would be less-than-significant impacts on special-status avian species, mitigation beyond what was provided in the Initial Study is not warranted.” City of Los Angeles Responses to Lozeau Drury LLP Letter, March 2020, pp. 2-34, 2-35.

As addressed above, Dr. Smallwood has provided credible evidence of the Project's significant impacts on birds. Dr. Smallwood specifically identified available guidelines on building design intended to minimize collision hazards to birds, including the American Bird Conservancy, City of San Francisco, and New York City Audubon Society building guidance documents. *See* October 2019 Smallwood Comment, pp. 13–14; American Bird Conservancy, Bird-Friendly Building Design, available at: [https://abcbirds.org/wp-content/uploads/2015/05/Bird-friendly-Building-Guide\\_2015.pdf](https://abcbirds.org/wp-content/uploads/2015/05/Bird-friendly-Building-Guide_2015.pdf); Standards for Bird-Safe Buildings, San Francisco Planning Department, July 14, 2011, available at: [https://sfplanning.org/sites/default/files/documents/reports/bird\\_safe\\_bldgs/Standards%20for%20Bird%20Safe%20Buildings%20-%202011-30-11.pdf](https://sfplanning.org/sites/default/files/documents/reports/bird_safe_bldgs/Standards%20for%20Bird%20Safe%20Buildings%20-%202011-30-11.pdf); New York City Audubon, Bird-Safe Building Guidelines, available at: <http://www.nycaudubon.org/pdf/BirdSafeBuildingGuidelines.pdf>.

CEQA requires the City to implement all feasible mitigation measures that would avoid or reduce the Project's environmental impacts. *See* Pub. Res. Code § 21002. The City may only

reject a mitigation measure if it finds it is infeasible. *Id.*, § 21081. Dr. Smallwood identified several feasible mitigation measures the City could adopt to lessen the Project’s significant impacts on birds, including the American Bird Conservancy, City of San Francisco, and New York City Audubon bird-safe building guidelines, yet the City made no attempt to show that these guidance documents and the additional mitigation measures Dr. Smallwood identified would not be feasible. While Los Angeles has not adopted bird-safe building standards like San Francisco, the City cannot claim the San Francisco standards are not applicable to the Project simply because they were not designed for Los Angeles. *Covington v. Great Basin Unified Air Pollution Control Dist.*, 43 Cal. App. 5th 867 (2019) (The court rejected the District’s argument that the Bay Area Air Quality Management District’s requirements for equipment leaks are not applicable because those requirements are for petroleum refineries and chemical plants, not geothermal plants like the one at issue, because the equipment leak requirements were equally feasible for geothermal plants.). San Francisco’s bird-safe buildings standards are equally feasible for a high-rise building in Los Angeles, and the City has failed to show otherwise. By failing to adopt the feasible mitigation measures Dr. Smallwood identified that would lessen the Project’s significant impacts on birds, the City violates CEQA’s requirements.

**F. The EIR Fails to Adequately Analyze the Project’s Air Quality Impacts.**

SAFER previously submitted comments on the Project’s potential air quality impacts. *See* SAFER FEIR Comment. SAFER’s concerns regarding the Project’s air quality impacts are based on the expert analysis and opinions of environmental consulting firm SWAPE. SWAPE’s comments identified errors in the City’s air quality modeling, the City’s failure to implement all feasible mitigation measures to reduce the Project’s emissions, the City’s failure to adequately evaluate the Project’s diesel particulate matter health risk emissions, and a potentially significant health risk impact to nearby sensitive receptors. *See* environmental consultant SWAPE Comment dated October 15, 2019 (“October 15 SWAPE Comment”). SWAPE has reviewed the City’s responses to their comments and prepared a response, which is attached as Exhibit B to these comments.

**i. Unsubstantiated Input Parameters Used to Estimate Emissions.**

SWAPE previously identified several issues with the City’s air model, which artificially reduced the Project’s construction and operational emissions. *See* October 15 SWAPE Comment, pp. 1–10. After reviewing the City’s responses to SWAPE’s previous comments, SWAPE maintains that the analysis fails to address their concerns regarding the Project’s flawed California Emissions Estimator Model “CalEEMod” air model and fails to accurately estimate the Project’s criteria air pollutant emissions. *See* Ex. B, p. 1.

a. Unsubstantiated application of fuel type mitigation measure.

The EIR's CalEEMod model included an unsubstantiated change to the fuel type of two pieces of off-road construction equipment, from diesel to electrical. SWAPE's review of the City's responses regarding SWAPE's October comment demonstrates that the City again failed to justify these fuel type changes. *See id.*, p. 2. SWAPE finds the City's responses to their comments regarding this mitigation measure insufficient for three reasons.

First, while MM-AQ-1 requires tower cranes and signal boards to use electricity, MM-AQ-1 fails to specify how many pieces of off-road construction equipment would utilize electricity instead of diesel. *Id.* Appendix C-2 demonstrates that construction assumptions indicate that 11 pieces of off-road construction equipment would be electric, but it does not provide adequate justification. *Id.* The City and Project documents need to substantiate the construction assumptions inputted into the model because an assumption by the model that 11 pieces of off-road construction equipment would be electric, it does not demonstrate that the Project has committed to the implementation and enforcement of the measure. *Id.*

Second, the CalEEMod output files demonstrate that the fuel type for 16 pieces of construction, instead of 11 as indicated by the City's responses, were manually changed from diesel to electric. *Id.*

Third, the City's response claims that "[e]lectric tower cranes and signal boards are available and are commonly used types of construction equipment," but fails to provide a citation for this claim. *Id.*, p. 3; *see* City of Los Angeles Responses to Lozeau Drury LLP Letter, March 2020, p. 2-50. Simply stating that these pieces of equipment are available and commonly used does not demonstrate feasibility. Ex. B, p. 3. Therefore, the City's response is insufficient and SWAPE maintains that the fuel type changes are unjustified.

b. Unsubstantiated changes to indoor and outdoor water use rates.

The EIR's CalEEMod model included several unsubstantiated changes to the Project's indoor and outdoor water use rates. SWAPE's review of the City's responses to this comment demonstrates that the City again failed to justify these changes.

In SWAPE's October comment, they revealed that the Project's CalEEMod output files demonstrate that numerous indoor water use rates were manually changed from their default values, for a total of 78,679,733.31 gallons per year. *Id.*, p. 4. Review of the WSA's Estimated

Project Water Demand demonstrates this value is underestimated. *Id.* The total demand for the Project is 256,069 gallons per day, or 93,465,185 gallons per year. *Id.* The 78,679,733.31 gallons per year included in the model is underestimated by 14,785,452 gallons per year. *Id.* Also to note, the WSA calculations already included a reduction to the Project's water use to account for conservation, contrary to the City's claim otherwise. *Id.*

Additionally, the City's calculations in response to SWAPE's comments are incorrect for two reasons. First, the WSA's estimated Project Water Demand already included a conservation reduction. *Id.* Second, a daily water demand of 116,446 gallons per day correlates to a yearly demand of 42,502,790 gallons per year. *Id.* Therefore, the residential water demand in the model is underestimated by approximately 1,131,971 gallons per year, contrary to the City's claims made in response to SWAPE's comments.

Since the Project's CalEEMod underestimates the anticipated Project's water demand by over 14 million gallons per year, the model should not be relied upon to determine the Project's significance.

ii. Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated.

SWAPE previously commented on the EIR's incorrect conclusion that the Project would have a less than significant health risk impact without conducting a quantified construction and operational health risk assessment ("HRA"). *See* October 15 SWAPE Comment, pp. 12–14. SWAPE prepared a screening level HRA in an effort to demonstrate the potential risk posed by the Project construction and operation to nearby sensitive receptors, finding substantial evidence that the Project's construction and operational DPM emissions may result in a potentially significant health risk impact not previously identified in the EIR. *See id.*, pp. 14–18; *see* Ex. B. In response to SWAPE's comments, the City prepared construction and operational HRAs, and the City's responses to SWAPE's comments conclude that the maximum combined construction and operational cancer risk would be 0.47 in one million. *See* City of Los Angeles Responses to Lozeau Drury LLP Letter, March 2020, p. 2-74. However, SWAPE finds the City's construction and operational HRAs for the Project to be incorrect for three reasons.

First, the construction and operational HRAs both rely on an incorrect and underestimated daily breathing rates. Ex. B, p. 5. The Project's construction and operational HRAs demonstrate that the excess cancer risk posed to nearby receptors was calculated assuming a daily breathing rate of 302 L/kg per day for all age groups. *See* Appendix A, p. 7. However, this is inconsistent with SCAQMD guidance, which states that:

For residential exposures, the breathing rates are determined for specific age groups (i.e., third trimester, 0-2, 2-16, and 16-30 years). CARB is developing an updated Risk Management Policy (RMP) that includes recommendations for inhalation exposures. Information regarding CARB's RMP can be located at: <http://www.arb.ca.gov/toxics/toxics.htm>. For residential exposures, CARB's RMP recommends using the high end DBR (e.g., 95th percentile) for children from the third trimester through age 2, and 80th percentile DBR for all other ages.

Risk Assessment Procedures for Rules 1401, 1401.1 and 212, SCAQMD, September 2017, available at: <http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12>, p. 6. Thus, the Project's construction and operational HRA should have used 361 L/kg per day for the third trimester of pregnancy, 1,090 L/kg per day for the infantile stages of life, 572 L/kg per day for the child stages of life, and 261 L/kg per day and 233 L/kg per day for the adult stages of life. Ex. B, pp. 5–6. By failing to use the correct breathing rates, the EIR is inconsistent with SCAQMD guidance and underestimates the Project's health risk impact, and the Project's construction and operational HRAs should not be relied upon to determine the significance of the Project's health risk impact. *Id.*, p. 6.

Second, while the City conducted an HRA for the increased cancer risk due to operational diesel mobile-source emissions, the HRA failed to include the Project's entire operational emissions. *Id.* According to the CalEEMod User's Guide, a Project's operational emissions include the following sources: on-road mobile vehicle traffic, off-road equipment used during operation, landscaping equipment, emergency generators, fire pumps, process boilers, consumer products, parking lot degreasers, fertilizers/pesticides, cleaning supplies, wood stoves and hearth usage, electricity usage in buildings, electricity usage from lighting in parking lots and lighting, ventilation and elevators for parking, water usage, and solid waste disposal. *Id.*; see Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments, OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf>. By only conducting an HRA for the Project's operational mobile emissions, the model underestimates the Project's operational emissions and excess cancer risk to nearby receptors. Ex. B, p. 6. Therefore, the EIR cannot conclude less than significant health risk impacts resulting from the Project without quantifying emissions and the excess cancer risk to nearby sensitive receptors resulting from the Project's entire operational emissions. *Id.*

Third, the operational HRA relies on an unsubstantiated and underestimated number of diesel motor vehicle trips. SWAPE's review of the operational HRA reveals that the emission rates were calculated assuming 294 daily one-way trips. See Appendix A, p. 12. However, this is

incorrect. The Project's Vehicle Trip Generation Estimate demonstrates that the Project is expected to generate 10,817 daily trips. *See* DEIR, p. IV.P-48-49, Table IV.P-8. Assuming a truck fleet mix of 44%, consistent with the fleet mix utilized in the Project's CalEEMod model, the Project would be expected to generate 4,759.48 daily truck trips, which is 4,465.8 more trips than the 294 trips assumed by the City's operational HRA. Ex. B, pp. 7–8. Since the City fails to provide a citation or explain how the value of 294 daily one-way trips was calculated, SWAPE finds that the operational HRA may significantly underestimate the Project's mobile-related operational health risk. *Id.*, p. 8.

For these reasons, SWAPE finds the Project's construction and operational HRAs insufficient and maintain that the Project's health risk impact has not been adequately evaluated.

#### **G. The EIR Fails to Adequately Analyze the Project's Greenhouse Gas Impacts.**

SAFER previously submitted comments on the Project's potential greenhouse gas ("GHG") impacts. SAFER's concerns regarding the Project's GHG impacts are also based on the expert analysis and opinions of environmental consulting firm SWAPE. *See* October 15 SWAPE Comment, pp. 23–33. In reviewing the EIR, SWAPE found that the EIR incorrectly relied upon CARB's 2017 Scoping Plan, SCAG's 2016 RTP/SCS, the City's *LA Green Plan*, and Sustainable City pLAN to determine Project significance. SWAPE also found that while the City quantified the Project's GHG emissions, it failed to compare the Project's emissions to the appropriate SCAQMD bright-line and service population efficiency thresholds. SWAPE conducted an updated GHG analysis, which demonstrated that the Project's emissions significantly exceeded the applicable SCAQMD bright-line and efficiency thresholds. *See* October 15 SWAPE Comment, pp. 30–33. Thus, SWAPE's analysis provided substantial evidence that the Project's GHG emissions would result in a potentially significant impact, but the City's responses to SWAPE's prior comments continue to claim that the Project's GHG impact will be less than significant without providing an adequate analysis to make that claim.

SWAPE claims that the City's responses regarding the Project's GHG emissions and continued insistence that the Project will have less than significant GHG impacts is incorrect for several reasons. First, the City's *LA Green Plan* and Sustainable City pLAN fail to qualify as plans for the reduction of GHG emissions. Ex. B, p. 9. As previously stated by SWAPE, the Project documents fail to prove that the City's *LA Green Plan* and Sustainable City pLAN contain the features as required by CEQA to qualify as GHG reduction plans. *Id.* As such, the City again leaves an analytical gap in the EIR showing that compliance with these plans can be used for use in project-level GHG analysis. *Id.* Therefore, consistency with these plans should not be used to determine the significance of the Project's GHG impact.

Second, the City relies on the Project's consistency with the City's LA Green Plan, Sustainable City pLAN, CARB's 2017 Scoping Plan, and SCAG's 2016-2040 RTP/SCS to determine the significance of the Project's GHG impact. However, review of these different plans demonstrates that the measures discussed are predominantly city-level, state-level or program-level actions or measures and not project-level measures, and all fail to include performance standards to be implemented on a project-by-project basis. *Id.*, pp. 9–12. Further, several of these plans are outdated or have been superseded and should not be relied upon for those reasons as well. *Id.*

Third, the City fails to demonstrate that the Project is consistent with CARB's Climate Change Scoping Plan and SCAG's 2016-2040 RTP/SCS in order to demonstrate the Project will result in less than significant GHG impacts. *Id.*, p. 12. However, SWAPE's review of these plans also reveals that the Project is inconsistent with several of the plans' goals and policies. *Id.* Despite the fact that these plans are not project-level plans, the City claims the Project to be consistent with the measures outlined in them. However, SWAPE identifies many measures that the Project is not consistent with. *See id.*, pp. 12–21. As a result of these inconsistencies, the City cannot rely on these plans to claim the Project will have less than significant GHG impacts.

Fourth, the City fails to apply the SCAQMD bright-line and efficiency thresholds to the Project's emissions. Although the City is correct in stating that the SCAQMD's Interim Thresholds were never adopted, this does not mean that they are inapplicable to the Project or otherwise can be ignored. *Id.*, p. 22. SWAPE asserts that consistent with CEQA Guidelines, the SCAQMD's interim thresholds should have been used. *Id.* Given the cumulative nature of GHG emissions and consistent with CEQA Guidelines section 15064.7(c), these recommended thresholds are appropriate for projects in the SCAQMD regions. *See id.*, pp. 23–24. Even though the SCAQMD's interim thresholds may be outdated and may not be adopted, they are consistent with the methods of analysis that is regularly practiced by other air districts and furthers CEQA's demand for conservative analysis to afford the fullest possible protection of the environment. *Id.*, p. 25. Therefore, the City's GHG analysis is not consistent with evolving standards, nor is the conclusion that the Project has a less than significant GHG impact supported by substantial evidence.

Lastly, as discussed in SWAPE's previous comment, the Project's GHG emissions exceed the SCAQMD bright-line and service population efficiency thresholds, which indicates a potentially significant GHG impact not previously addressed by the EIR. *Id.* The City refuses to rely on the SCAQMD's bright-line and efficiency thresholds despite SWAPE's assertion that it should. As a result, SWAPE maintains that the EIR's GHG impact significant determination is

unsubstantiated based on its October 15th analysis, which utilizes the EIR’s air modeling. *Id.* When the Project’s mitigated GHG emissions are compared to the 3,000 MT CO<sub>2</sub>e/year threshold, SWAPE finds that the Project’s GHG emissions exceed the SCAQMD’s mixed-use threshold. *Id.*, p. 26.

<b>DEIR Annual Greenhouse Gas Emissions</b>	
<b>Project Phase</b>	<b>Proposed Project (MT CO<sub>2</sub>e/year)</b>
On-Road Mobile Sources	11,800
Stationary (Emergency Generators)	27
Area	20
Electricity	6,862
Natural Gas	1,846
Water Conveyance and Wastewater	
Treatment	505
Solid Waste	242
Construction (Amortized)	745
Proposed Subtotal	22,047
Percent Reduction (Project Only)	28%
<b>Net Operational (Proposed – Existing)</b>	<b>14,922</b>
SCAQMD Significance Threshold	3,000
<b>Exceed?</b>	<b>Yes</b>

The Project will generate approximately 14,922 MT CO<sub>2</sub>e/year, which significantly exceeds the 3,000 MT CO<sub>2</sub>e/year mixed-use project screening threshold. *Id.* When emissions exceed the screening level threshold, SCAQMD guidance states a more details review of the project’s GHG emissions is warranted. *Id.* SCAQMD proposed a 2020 efficiency target of 4.8 MTCO<sub>2</sub>e/SP/year for project-level analyses, but since this threshold was developed almost ten years ago, SWAPE relies on the SCAQMD’s 2035 efficiency threshold of 3.0 MT CO<sub>2</sub>e/SP/year. *Id.* Since the Project exceeds the 3,000 MT CO<sub>2</sub>e/year mixed-use project screening threshold, SWAPE compared the Project’s emissions to the 2035 efficiency target of 3.0 MT CO<sub>2</sub>e/SP/year and concluded the Project would emit approximately 5.1 MT CO<sub>2</sub>e/SP/year, exceeding the target. *Id.*, pp. 26–27. This results in a potentially significant impact that was not previously identified or addressed in the EIR.

## **H. The EIR Fails to Accurately Disclose and Analyze Traffic Impacts.**

SAFER previously submitted comments on the EIR's failure to adequately disclose and analyze the Project's traffic impacts. *See* SAFER FEIR Comment. SAFER's concerns regarding the Project's traffic impacts are based on the expert analysis and opinions of civil and traffic engineer Daniel T. Smith Jr., P.E. *See* Dan Smith's Comment dated October 11, 2019 ("October 11 Smith Comment"). Mr. Smith has reviewed the City's responses to their comments and prepared a response, which is attached as Exhibit C to these comments.

Mr. Smith first critiqued the EIR's failure to disclose the queuing impacts to other locations beyond the queues at the Project's driveways. The City's response to Mr. Smith's comment indicates that since "the Critical Movement Analysis methodology that the City relies on estimates volume to capacity ratios and levels of service (LOS), and because LOS definitions include reference to queues, by implication the analysis the DEIR did perform already considers queues. This response is a preposterous evasion and misrepresentation." Ex. C, p. 2. As Mr. Smith notes, the LOS definitions are non-specific to queue length and provide limited crude information regarding the actual consequences of queue formation and queue length, and the Critical Movement Analysis procedure was devised 40 years ago as an interim procedure only to be used until the next edition of the Highway Capacity Manual ("HCM") was completed. *Id.* The City is among the decreasing number of jurisdictions that still rely on it. *Id.* However, it fails to give any indication of queue length, and for that, other commonly used and more modern methods of analysis are required. *Id.*, p. 3.

Second, the City rejected Mr. Smith's argument that the streetcar operation needs to be included in the traffic and circulation analysis by claiming it is not fully funded and a distant priority for regional transportation funding. Despite this, Mr. Smith notes that the streetcar project is an adopted plan of the City, and as such, under CEQA, the EIR must consider the consequences of the Project's access and circulation on that plan and the consequences of that plan on the Project's access and circulation. *Id.* The streetcar operations and/or lane reservations for it would "inevitably have deleterious effects on traffic that could only intensify the severity of the Project's traffic impacts that have been disclosed." *Id.*

Third, the City responded to Mr. Smith's comment that the Project's trip distribution understates traffic at critical locations by asserting the City's transportation model on which the short-trip assumption is based is a person trip model and the 35 percent short trip statistic represents almost entirely walk, bike, local transit, taxi and TNC trips, not private auto trips. *Id.*, pp. 3-4. Mr. Smith claims this does not reflect the true situation and is completely misleading,

resulting in an understatement of the amount of the Project and concurrent development traffic that would reach and impact the gateway intersections to downtown and the freeway system. *See id.*, p. 4.

Fourth, Mr. Smith rejects the City's use of a 25 percent peak hour transit credit on the trips of the Project's non-residential components based on the assumed 2023 completion of a transit station immediately adjacent to the Project. *Id.*, p. 5. The City conducted its 2017 Existing + Project analysis with a trip discount for a transit station that did not exist in 2017. *Id.* CEQA Guidelines section 15125(a) provides that the ordinary baseline for measurement of environmental impacts is the environment that existed at the time of issuance of the NOP, so it is wholly improper for the EIR to apply the Project in the Existing + Project analysis a trip discount for a transit station that did not exist in 2017. *Id.*, pp. 5–6.

Lastly, Mr. Smith notes that the City continues to reject analyzing the extra traffic and traffic congestion generated by the increased use of TNC services like Uber and Lyft. *Id.*, p. 6. The City claims that research is limited and that LADOT has not established a methodology for considering their use, yet opines that TNCs are used more for occasional discretionary trips rather than for daily trips without substantiation. The City's failure to analyze this impact on traffic and its response to Mr. Smith's comment on it are inadequate.

As Mr. Smith concludes, the City continues to fail to adequately analyze the Project's traffic and circulation impacts.

**I. The EIR Fails to Address or Adequately Analyze the Potential Significant Indoor Air Quality Impacts on the Health of Future Residents and Employees of the Project.**

SAFER previously submitted comments on the Project's potential significant health impacts on future residents and employees from formaldehyde emissions that will be emitted by finishing materials used to construct interiors of the residential units and office buildings as well as the reasonably foreseeable emissions of formaldehyde from furniture and other materials that will be brought into the residences and office buildings. *See* SAFER FEIR Comment.

SAFER's concerns regarding health risks posed by the Project's formaldehyde emissions are based on a 2019 study conducted by Chan et al. which measured formaldehyde levels in new structures constructed after the 2009 California Air Resources Board's rules went into effect. The study found that new homes with CARB Phase 2 Formaldehyde ATCM materials had elevated indoor formaldehyde concentrations, with a median concentration of 22.4  $\mu\text{g}/\text{m}^3$  (18.2 ppb). This

study showed that formaldehyde concentrations in new California homes built with CARB Phase 2 composite wood products posed cancer risks greater than 100 in one million. Given the prominence of materials with formaldehyde-based resins that will be used in constructing the Project and the residential buildings, there is a significant likelihood that the Project's emissions of formaldehyde to air will result in very significant cancer risks to future residents and workers in the buildings.

Despite the City's duty to investigate issues relating to a project's potential environmental impacts, the City and the EIR have, thus far, attempted to deny the indoor air quality analysis and refuse to consider with any informed expertise the likely impacts of indoor formaldehyde emissions posed by the Project to future residents and employees. The City asserts that SAFER provided "no credible evidence that the Project will be constructed with building materials with significant amounts of formaldehyde, citing only an unsubstantiated, general article," and that "[t]here are no requirements or guidance from SCAQMD or relevant agencies to evaluate such a risk." City of Los Angeles Responses to Lozeau Drury LLP Letter, March 2020, p. 2-18. The City claims that the Project will comply with existing codes and regulations in California, which will adequately address the potential emissions and risks from building materials. *Id.*

Certified Industrial Hygienist Francis Offermann, PE CIH, reviewed the City's comments and Project documents and prepared a response, which is attached as Exhibit D to these comments. In response to the City's comments, Mr. Offermann first notes that the Chan et al. study "unequivocally shows that formaldehyde concentrations in new California homes built with CARB Phase 2 composite wood products posed cancer risks greater than 100 in one million." Ex. D, p. 2. Mr. Offermann explains that the Project's buildings will consist of residential and commercial retail spaces, and residential occupants of the Project will potentially have continuous exposure, which is anticipated to result in significant cancer risks resulting from exposures to formaldehyde released by the building materials and furnishings commonly found in residential construction. *Id.*

Since these residences will be constructed with CARB Phase 2 Formaldehyde ATCM materials, and will be ventilated with the minimum code required amount of outdoor air, "the indoor residential formaldehyde concentrations are likely similar to those concentrations observed in residences built with CARB Phase 2 Formaldehyde ATCM materials, which has a median of 22.4  $\mu\text{g}/\text{m}^3$  (Chan et. al., 2019)." *Id.* Based on this information, Mr. Offermann calculates that residents' continuous exposure represents a cancer risk of 112 per million, which is more than 11 times greater than the South Coast Air Quality Management District's CEQA cancer risk threshold of 10 per million. *Id.*, p. 3. For occupants that do not have continuous

exposure, the cancer risk will be less but still substantially over the CEQA cancer risk threshold of 10 per million. *Id.* For employees of the commercial spaces, the expected exposure represents a cancer risk of 16.4 per million, which is more than 1.64 times the SCAQMD's CEQA cancer risk threshold of 10 per million. These are significant impacts that the City has failed and refused to analyze.

Mr. Offermann next responds to the City's claim that since the Project will comply with the existing codes and regulations in California, the Project's potential emissions and risks from building materials are adequately addressed. Mr. Offermann notes that Title 24, to which the City cites to, does not speak at all about formaldehyde emissions from composite wood products so it cannot ensure safe practices and healthy indoor as the City claims with respect to formaldehyde emissions from composite wood materials. *Id.*, p. 4. The City also cites to CAL Green and the CARB ATCM as codes and regulations that the Project will comply with which adequately address potential emissions and risks from building materials. However, with respect to formaldehyde emissions from composite wood products, "CAL Green simply requires compliance with the CARB ATCM." *Id.* With respect to the CARB ATCM regulations of formaldehyde emission from composite wood products, the City's states "The control measure assures that all building materials and furnishings manufactured, distributed, imported and used in new construction in California meet the maximum allowable concentrations that assure healthful indoor air quality." City of Los Angeles Responses to Lozeau Drury LLP Letter, March 2020, p. 2-19. However, Mr. Offermann states this is not true, "[t]his response more accurately states the intent of the control measure when they quote the stated purpose of the CARB ATCM regulation." Ex. D, p. 4. The CARB ATCM regulations do not assure healthful indoor air quality as the City claims, but rather reduces formaldehyde emissions from composite wood products. *Id.* As shown in the Chan et al. study referred to in SAFER's October 2019 comment, the median indoor formaldehyde concentration when CARB Phase 2 formaldehyde products are used was  $22.4 \mu\text{g}/\text{m}^3$  (18.2 ppb), which corresponds to a cancer risk of 112 per million for occupants with continuous exposure, which is more than 11 times the SCAQMD's CEQA cancer risk of 10 per million. *Id.*, pp. 4-5.

The City's efforts to invalidate the evidence SAFER provided in its October 2019 comment do not stand-in as a sufficient analysis in the EIR of this potentially significant environmental impact of the Project. It is now up to the City to correct its EIR to sufficiently disclose and analyze this impact, and identify and adopt appropriate and feasible mitigation measures.

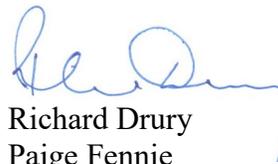
## **II. THE CITY SHOULD PREPARE AND RECIRCULATE A REVISED DEIR**

A revised draft environmental impact report (“RDEIR”) should be prepared and circulated for full public review to address the impacts identified above and to propose feasible mitigation measures. CEQA requires re-circulation of an EIR when significant new information is added to the EIR following public review but before certification. Pub. Res. Code § 21092.1. The CEQA Guidelines clarify that new information is significant if “the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project” including, for example, “a disclosure showing that . . . [a] new significant environmental impact would result from the project.” CEQA Guidelines § 15088.5. The above significant environmental impacts have not been analyzed in the EIR and must be addressed in an RDEIR that is re-circulated for public review.

## **III. CONCLUSION**

In light of the above comments, SAFER respectfully requests that the City address these shortcomings in a revised draft environmental impact report (“RDEIR”) and recirculate the RDEIR prior to considering approvals for the Project. Thank you for considering these comments.

Sincerely,



Richard Drury  
Paige Fennie  
Lozeau | Drury LLP

# Exhibit A

Shawn Smallwood, PhD  
3108 Finch Street  
Davis, CA 95616

William Lamborn  
City of Los Angeles  
Department of City Planning  
221 N. Figueroa St., Room 1350  
Los Angeles, CA 90012

26 April 2020

RE: Times Mirror Square Project

Dear Mr. Lamborn,

I write to reply to responses to comments I provided to you in my letter of 13 October 2019 regarding the proposed Times Mirror Square Project. My expert qualifications and CV were provided with my earlier letter. Below I reply in the order of the responses.

### **Response 2-18**

I commend the City of Los Angeles for checking eBird records around the site of the proposed project. The response presents the City's review of eBird as Appendix B. It supports my point that many species of birds rely on the airspace above Los Angeles.

The number of records detected of each species within one mile of the project site is, however, of no more value than the simple fact of detection. eBird is a volunteer reporting system, and some birds are more detectable by volunteer observers than others. Larger birds such as rock pigeons are more readily detected, whereas birds flying at night are typically absent from eBird. In another example, the 140 records of Vaux's swift do not inform of the thousands of Vaux's swifts – a California Species of Special Concern Priority 2 – stopping annually to roost in the Chester Building only 3 blocks southwest of the project site. These swifts migrate to Guatemala, and apparently need the brick chimney of the Chester Building to rest along the way. Their arrivals at the Chester Building draw many City residents who wish to view the swifts. The project would likely impose a substantial collision risk to Vaux's swift, a special-status species and a favorite attraction of birders.

The City's eBird review revealed a very long list of bird species that would be put at risk of collision by the proposed project (Table 1). The City found records of 165 bird species within one mile, which goes to show how many species of birds travel through the airspace over Los Angeles. Most of these species were unlikely to spend much time on the ground or on a perch in the area. Most of the birds representing these species were migrants. Eighty (48%) of these species have been documented as window collision victims in the scientific literature. Many of these species are special-status species, as can be cross-checked against Table 1 of my original comment letter.

**Table 1.** Species found as eBird records within 1 miles of the site of the proposed project, according to City of Los Angeles (Response to comments Appendix B), and whether documented as window collision victims in the scientific literature.

Species	Window victims?	Species	Window victims?	Species	Window victims?
Acorn woodpecker		Downy woodpecker	yes	Palm warbler	yes
Allen's hummingbird	yes	Dunlin		Peregrine falcon	yes
American coot	yes	Dusky flycatcher		Phainopepla	
American crow	yes	Eared grebe		Pied-billed grebe	yes
American goldfinch	yes	Eurasian collared-dove	yes	Pine siskin	yes
American kestrel	yes	European starling	yes	Prothonotary warbler	
American pipit	yes	Forster's tern		Red-breasted merganser	
American redstart	yes	Fox sparrow	yes	Red-crowned amazon	
American robin	yes	Glaucous-winged gull		Red-masked parakeet	
American white pelican		Golden-crowned sparrow	yes	Red-shouldered hawk	yes
American wigeon		Great blue heron		Red-tailed hawk	yes
Anna's hummingbird	yes	Great egret		Red-whiskered bulbul	
Ash-throated flycatcher		Great horned owl		Red-winged blackbird	yes
Band-tailed pigeon		Greater yellowlegs		Ring-billed gull	yes
Barn owl		Great-tailed grackle		Rock pigeon	yes
Barn swallow	yes	Hairy woodpecker	yes	Ruby-crowned kinglet	yes
Belted kingfisher	yes	Hermit thrush	yes	Ruddy duck	
Bewick's wren		Hermit warbler		Rufous hummingbird	yes
Black phoebe	yes	Herring gull	yes	Rufous-crowned sparrow	
Black swift		Hooded merganser		Savannah sparrow	yes
Black-chinned hummingbird		Hooded oriole		Say's phoebe	
Black-crowned night-heron		House finch	yes	Scaly-breasted munia	
Black-headed grosbeak	yes	House sparrow	yes	Semipalmated plover	
Black-necked stilt		House wren	yes	Sharp-shinned hawk	yes
Black-throated gray warbler		Hutton's vireo		Snow goose	
Blue grosbeak		Killdeer	yes	Snowy egret	

<b>Species</b>	<b>Window victims?</b>	<b>Species</b>	<b>Window victims?</b>	<b>Species</b>	<b>Window victims?</b>
Blue-crowned parakeet		Lawrence's goldfinch		Song sparrow	yes
Blue-gray gnatcatcher	yes	Lazuli bunting	yes	Spotted dove	
Brewer's blackbird	yes	Least sandpiper		Spotted towhee	yes
Brown-headed cowbird	yes	Lesser goldfinch	yes	Steller's jay	
Bufflehead		Lilac-crowned parrot		Swainson's thrush	yes
Bullock's oriole		Lincoln's sparrow	yes	Townsend's warbler	yes
Burrowing owl		Loggerhead shrike		Tree swallow	yes
Bushtit	yes	Long-billed curlew		Turkey vulture	
California gull		Long-billed dowitcher		Vaux's swift	
California quail		MacGillivray's warbler	yes	Violet-green swallow	
California scrub-jay		Magnolia warbler	yes	Warbling vireo	yes
California thrasher		Mallard	yes	Western bluebird	
California towhee	yes	Marbled godwit		Western gull	
Canada goose		Merlin	yes	Western kingbird	
Caspian tern		Mitred parakeet		Western meadowlark	
Cassin's kingbird		Mountain chickadee	yes	Western sandpiper	
Cedar waxwing	yes	Mourning dove	yes	Western tanager	yes
Chimney swift	yes	Nashville warbler	yes	Western wood-pewee	
Chipping sparrow	yes	Northern cardinal	yes	White-crowned sparrow	yes
Cinnamon teal		Northern flicker	yes	White-throated swift	
Clark's grebe		Northern mockingbird	yes	White-faced ibis	
Clay-colored sparrow	yes	Northern red bishop		White-tailed kite	
Cliff swallow	yes	Northern rough-winged swallow	yes	Willet	
Common raven		Nuttall's woodpecker		Wilson's snipe	
Common yellowthroat	yes	Oak titmouse	yes	Wilson's warbler	yes
Cooper's hawk	yes	Olive-sided flycatcher		Wrentit	
Costa's hummingbird	yes	Orange-crowned warbler	yes	Yellow warbler	yes
Dark-eyed junco	yes	Osprey		Yellow-chevroned parakeet	
Double-crested cormorant		Pacific-slope flycatcher	yes	Yellow-rumped warbler	yes

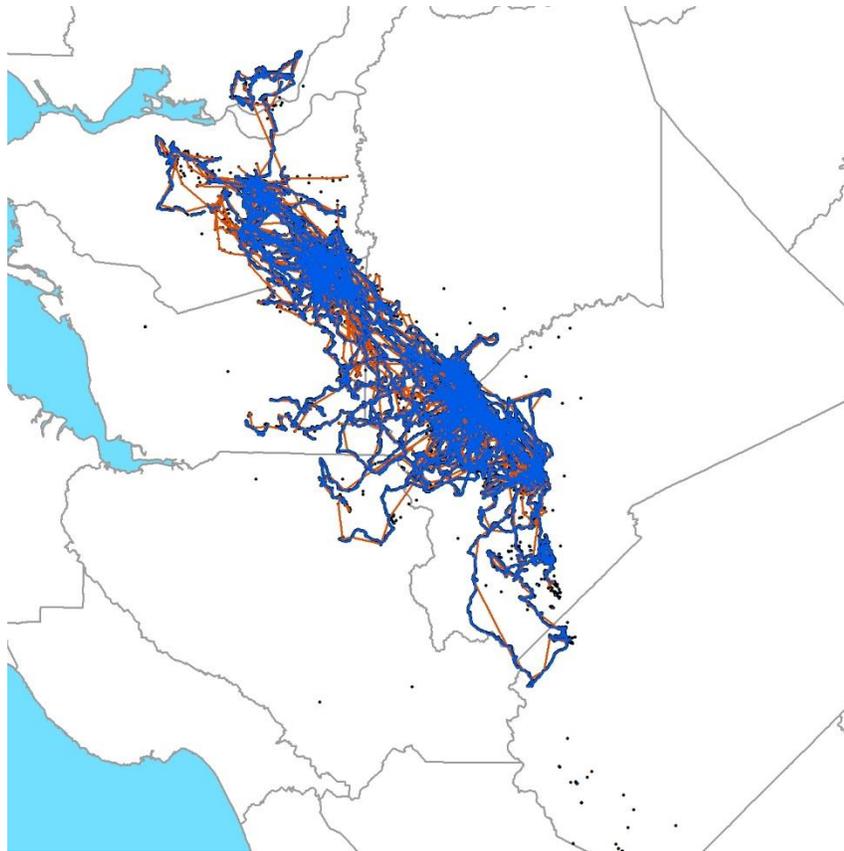
The response introduces a 1-mile search radius as the standard for assessing avian occurrence likelihood and for analyzing collision risk with a proposed building. I am unaware of this standard having been applied to migrating birds anywhere, and otherwise it looks to me like an uncommon practice in project impact assessment of wildlife. The standard is inappropriate for determining occurrence likelihoods of migrating birds; and this, coupled with the response's claim of no wildlife corridor having been confirmed in the area, implies a false precision associated with the one-mile radius standard. Based on my 995 hours behind a thermal-imaging camera to observe nocturnally migrating birds across a 10-mile wide mountain pass, I could not resolve migratory bird traffic to any particular path that was discernable with a spatial grain of one mile. The only situation where a one-mile resolution would make sense is where terrain forces birds to travel within a path less than one mile wide, but no such situation occurs in Los Angeles.

The response questions my standards by pointing out that I did not identify the distance radii used in my occurrence likelihood determinations in Table 1. To clarify, 'adjacent' referred to eBird records within 1 block of the site of the proposed project, 'nearby' referred to within a few miles, and 'regional' referred to the LA Basin. But these nearness distinctions are not very relevant for birds likely to encounter a new high-rise in Los Angeles, because members of any of the species in Table 1 would have in the past flown through the airspace that would be occupied by the project's buildings, and will likely attempt to do so again in the future. Worse, interior lighting is likely to attract birds that might have otherwise flown a mile or more distant from the airspace that would be occupied by the building. Lit buildings are suspected to attract birds just as lit communication towers have been found to do so (see citations in my 13 October 2019 letter).

The one-mile distance standard that is argued in the response might apply to non-volant species of wildlife, but species that fly can cover great distances quickly. In a GPS telemetry study of golden eagles, for example, a single bird can cover so much airspace that a printing of the point-to-point flight-lines crowds out most of the underlying map (Figure 1). Had the project's buildings been constructed anywhere within the 5-County span of this eagle's territory, the eagle would have encountered the buildings multiple times. In another example, I could select a location anywhere in a study area where for 8 years I repeatedly visited 71 stations to perform visual scans for birds across an area of about 15,000 ha, and I could ask whether birds seen farther than one mile away would have been seen at the location I selected. In other words, would the one-mile radius used by City of Los Angeles (or ESA) suitably inform me of the occurrence likelihood of a bird species at a particular place? In my first round of surveys I detected a northern harrier at station 8, but not at my selected location nearly 4 miles away at station 1. According to the City's standard, I should conclude that northern harriers are unlikely to occur at station 1 because I did not see a northern harrier during my first visit to station 1 and the northern harrier I saw at station 8 was 4 times as far away as the one-mile radius relied upon by the City. But instead, I not only saw a northern harrier during a later survey at station 1, but I saw the species there 7 times during subsequent surveys. Nearly every bird species I detected in my large study area would eventually be detected at nearly every station. This same pattern is being revealed by eBird as eBird

accumulates more observation records. Birds get around because they can fly, which means that any of the bird species listed in Table 1 of my 13 October 2019 letter are likely at some point to encounter the airspace proposed for the project's buildings.

*Figure 1. GPS telemetry tracks (dark blue and red) of a single golden eagle during a study in a portion of the northern Diablo Range spanning, from north to south, Solano, Contra Costa, Alameda, San Joaquin and Santa Clara Counties (unpublished data from D. Bell, K.S. Smallwood, and L. Neher).*



According to the response, “based on studies conducted on the East Coast, migrant passerine species are the most likely species to experience window collisions.” It is unclear why the response refers to studies on the East Coast, as studies on bird collisions with windows have been performed all over North America, and include the West Coast studies I cited in my comment letter. By numbers alone, it is true that songbirds are killed by window collisions more often than are larger birds such as hawks and waterfowl. And based on this fact, City of Los Angeles ought to be deeply concerned about the long list of 103 songbirds (Passerines, and I included hummingbirds and woodpeckers) it found as eBird records within one mile of the project site. Sixty-two percent of the species the City found on eBird are known to be more vulnerable to window collisions based on the numbers. However, impacts to larger birds are not necessarily smaller due to lower numbers of collisions. Impacts must be assessed relative to the species’ abundance, longevity, and productivity. Losing a raptor to a window collision is usually more significant than losing a passerine, the exceptions being threatened or endangered species of passerines. The City ought to seriously address the issue.

Another false standard introduced by the response is that special-status species are only those listed by state or federal governments as Candidate, Threatened or Endangered species, although later in the same response the term ‘sensitive’ was included but with no effect. Every one of the species listed in Table 1 of my 13 October 2019 comment letter are special-status species, having been designated with the status indicated in Table 1 after serious deliberations by resource agencies and informed members of the public. The listings provided in my Table 1 were supported by ample evidence, much of which can be inspected by a reading of Shuford and Gardali (2008), which is a book I cited and referenced in my comment letter. Furthermore, and as I noted in my comment letter, all of California’s bird species are now protected under Fish and Game Code section 3513 as amended by AB 454 to reinstate as state law the recently repealed federal Migratory Bird Treaty Act. All of these bird species have been thus afforded special status.

The response’s claim that special-status species are only those listed as Candidate, Threatened or Endangered is at odds with earlier standards adopted by both ESA and the City. In an earlier environmental review document (ESA’s EIR prepared for Imperial County Planning & Development Services Department regarding the Solar Gen II project), ESA provided the following, more expansive definition of special-status species:

- “Listed, proposed, or candidate for listing under the California Endangered Species Act (CESA) or federal Endangered Species Act (ESA);
- Protected under other federal, state or local regulations (e.g., Migratory Bird Treaty Act (MBTA), state ordinance or other local policies);
- CDFG’s Species of Special Concern (SSC) and California Fully Protected Species;
- Listed as species of concern (List 1B, 2, or 3 plants) by CNPS; or
- Species that receive consideration during environmental review under the CEQA.”

In response to my comments, ESA, acting on behalf of the City, narrows their standard to the first bulleted clause above. The standard used in the response is also narrower than that of City of Los Angeles’s L.A. CEQA Thresholds Guide 2006 (<https://planning.lacity.org/eir/CrossroadsHwd/deir/files/references/A07.pdf>), which defines a “sensitive biological resource ... as follows:

- A plant or animal that is currently listed by a state or federal agency(ies) as endangered, threatened, rare, protected, sensitive or a Species of Special Concern or federally listed critical habitat;

- A plant or animal that is currently listed by a state or federal agency(ies) as a candidate species or proposed for state or federal listing; or
- A locally designated or recognized species or habitat.”

The term “sensitive” applies broadly to species with special status other than Candidate, Threatened and Endangered, and includes California Species of Special Concern (see <https://wildlife.ca.gov/Conservation/SSC> for a definition), US Fish and Wildlife Service’s Birds of Conservation Concern, California Fully Protected species, species protected under the ‘birds of prey’ code, and others. Whereas the response did mention the term ‘sensitive,’ it did not include the term in its definition of special-status species. The species I listed as special-status species in Table 1 of my comment letter were consistent with ESA’s previously used standard and the standard adopted by City of Los Angeles.

The response asserts a burden of evidence that I am supposed to meet and which City of Los Angeles is not. According to the response, I failed to “*provide credible evidence to support the assertion that the special-status avian species identified in Table 1 are dying from window collisions in downtown Los Angeles or even in southern California.*” What does the response mean by *credible evidence*? If the intended meaning is that I showed no record of bird collisions with buildings that have yet to be constructed, then the response is absurd on its face. If the intended meaning is that I showed no record of bird collisions with glass façades of existing buildings in Los Angeles, then the shortfall is the City’s. As far as I can determine, City of Los Angeles has done nothing to monitor for potential window collision impacts, nor has it cited any studies or implemented any of the mitigation measures advocated by other U.S. cities. The one sure way to deny the existence of evidence is to collect none.

But perhaps the response meant to suggest that the evidence is credible due to some flaw in logical reasoning, the scientific process I used, or in my status as an expert on the subject of bird-window collisions. The response does not specify the nature of the alleged credibility shortfall.

The bird-window collision issue has many times been characterized by scientists as a worldwide problem, and one of the top two anthropogenic causes of bird mortality. The very reason this conclusion has been reached so consistently is because of overwhelming evidence where studies have been performed. At the many places where studies have been performed, some might have likewise argued that evidence was lacking that birds collide with windows at the proposed study sites; that is, until the studies were performed. And even as early as 1989, the first paper that presented a nationwide estimate of bird fatalities caused by window collisions pointed out “*Approximately 25% (225/917) of the avian species in the United States and Canada have been documented striking windows*” (Klem 1989). That number of species was much longer than the one I presented in Table 1 of my 13 October 2019 comment letter, and the number of species has undoubtedly lengthened since 1989. But I was addressing only special-status species in Table 1. Klem (1989) also noted that “*Sex, age, or residency status have little influence on vulnerability to collision.*” In other words, regardless of whether birds are

resident or migratory, they are all vulnerable to colliding with windows inserted into their airspaces.

The evidence I brought was the collective results from studies across North America. It was the same evidence City of Los Angeles relies upon in another of its responses to my comments; that is, the response that high-rises have caused only an estimated <1% of collision fatalities in the USA (more on this percentage later). For this <1% value, the City relies on Loss et al. (2014), who relied on the same evidence I did, and the principal investigator of which has collaborated with me to use the same scientific approach to predict fatalities caused by wind energy projects (Johnson et al. 2015). Both Scott Loss (Loss et al. 2013) and I (Smallwood et al. 2013, 2020) have applied well-accepted scientific methods to collect data from available reports, process the data to adjust for known biases, and make national-level estimates. Our work was peer-reviewed and published, and our findings are transparent, repeatable, and falsifiable. My use of the national-level estimate to predict fatalities at particular buildings is a simple extension of the national-level estimate, applying the same mean and the same error.

The missing evidence argument – the claim that I failed to bring forth convincing evidence that birds collide with building windows in Los Angeles – is more suitably applied to responder’s assertion that birds will not collide with the proposed buildings because no wildlife corridor exists there. Where is the evidence that wildlife corridors are prerequisites for bird-window collisions? The response pointed to none of the studies I cited as having characterized a wildlife corridor where the studies were performed. Had wildlife corridors been the underlying reason for bird collisions in the many studies I cited, the investigators surely would have pointed that out.

The response finishes by arguing, “...an isolated death of a sensitive species would not be sufficient to “have a substantial adverse effect . . . on any species identified as a candidate, sensitive, or special-status species ...” which is the significance threshold for biological resources under Appendix G.” In addition to its speculative basis, this argument conflicts with City of Los Angeles’s own standards for determining significant biological impacts. According to the City’s standards (<https://planning.lacity.org/eir/CrossroadsHwd/deir/files/references/A07.pdf>), a project would have significant impacts by causing:

- “The loss of individuals, or the reduction of existing habitat, of a state or federal listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or federally listed critical habitat;
- The loss of individuals or the reduction of existing habitat of a locally designated species or a reduction in a locally designated natural habitat or plant community;
- Interference with wildlife movement/migration corridors that may diminish the chances for long-term survival of a sensitive species; ...”

The isolated death does indeed qualify as a significant impact under some circumstances, as defined by the City’s own standards.

Of course, The City's argument regarding the isolated death narrowly interprets the CEQA standard, as well. If an individual of a rare species is killed by human action, the impact can indeed qualify as significant. But what is more significant are the cumulative impacts of many bird-window collisions. In my comment letter, I did not use the available data to predict an isolated death. The data, which came from many studies across North America, predicted **2,310 bird deaths per year (95% CI: 1,200-3,300)** at the proposed project, and that's not including all the ongoing collision fatalities at Los Angeles's building windows or the collisions that could be caused by future building projects. The response does not address the nature of the impacts I discussed in my comment letter.

### **Response 2-19**

According to the response, "*...the commenter provides several sources regarding bird collisions and fatalities; however, not [sic] of these sources contain specific information regarding the Project or its vicinity.*" However, I cited many sources involving 181 buildings or façades, not "several," and an impact prediction does not require specific information regarding a site or project to which scientific inference is being extended. The reason my prediction relied on many sources was provided in my comment letter, but I will repeat it here for convenience. I aimed to use "*all the variation in collision rates that was available and which resulted from a wide range in building height, type of glass, indoor and outdoor landscaping, interior light management, window to wall ratio, and structural context of the façade. This variation contributed to a robust bird-window collision rate represented by a wide 95% confidence interval*" (Page 8 in 13 October 2019 K. S. Smallwood letter to William Lamborn). My confidence interval was appropriately large, given the founding variation in the data and the extension of the prediction to a site yet to be measured for its impacts. But throughout that large confidence interval, the impact prediction is for a large number of collision fatalities.

The next paragraph of the response argues that the project site is urbanized and therefore of low likelihood for supporting special-status species of birds. But again, my comments do not apply to ground conditions, such as how far away the concrete-channeled Los Angeles river is located, but rather to the airspace into which glass façades are proposed to intrude upwards of 53 stories. That airspace is still used by birds moving east and west and north and south; that airspace is habitat for many special-status species and for all birds now protected by California's version of the Migratory Bird Treaty Act. The City's own eBird review supports my argument with Appendix B. Even without recording birds flying at night, App. B of the City's response reveals 165 species of birds seen within one mile of the proposed project site.

In the third and final paragraph, the response cites a US Fish and Wildlife Service passage in support of the responder's conclusion that "*the analysis provided by the commenter does not support the commenter's claim that there is ample evidence that the Project would result in many collision fatalities of birds or special-status avian specie [sic].*" Given our current state of knowledge on bird-window collisions, I concur

with the US Fish and Wildlife Service passage cited by in the response. It is, in fact, the reason I took the approach that I did. My prediction of collision fatalities was drawn from source data that varied greatly in settings and structures, and which appropriately generates a large confidence interval.

The above said, however, the responder appears to not understand the significance of the percentages of bird fatalities Loss et al. (2014) attributed to high rises versus low-rise buildings and urban structures (homes, mostly). There are about 140 million homes in the USA (a number which I updated from Loss et al. 2014), about 15 million low-rise buildings, and about 21,000 high-rises (Loss et al. 2014). High-rises therefore compose 0.0135% of building structures in the USA, and yet Loss et al. (2014) credited them for 0.14% of USA's bird-window collision mortality. One can divide 0.14% of fatalities attributed to high-rises by the 0.0135% of structures that are high-rises to reveal that high-rises pose 10.4 times more collision hazard to birds than do other structures. The response seized on the <1% of fatalities attributed to high-rises without considering that high-rises compose a very small fraction of building structures in the USA, and that even with this apparently small percentage, millions of birds are killed by high-rises each year.

Another outcome of the above analysis is the reinforcement that, although intentional, my prediction of collision impacts posed by the project are conservative up to an order of magnitude. That is, I applied a national average based on all structures to make a prediction for a project composed of high-rises. I did this knowing full well that I likely biased my prediction low, but I also assessed that the confidence interval was sufficiently large to include an outcome that exceeded my prediction if it turned out to be biased low.

## **Response 2-20**

The first paragraph of the response repeats response 2-19, so I will not reply to it. The second paragraph characterizes my prediction as anecdotal, speculative and uncertain. Uncertainty is stated clearly in my prediction; it is characterized by a wide confidence interval, the lower bound of which would still predict a great many bird fatalities caused by collisions with the buildings. Contrary to the responder's implication that uncertainty connotes ignorance or confusion, scientific uncertainty is managed error, where error expresses variation in the data. As Francis Bacon wrote hundreds of years ago, "*Truth emerges more readily from error than from confusion.*" My prediction is not speculative or anecdotal, nor does the responder identify exactly where in my prediction I relied on anecdotes or speculation. My prediction is empirically founded from all of the available source data across the North American continent. I used all of the available data in a scientific process to make a careful prediction that is likely biased low, and nowhere in this process was there any use of anecdotes or speculation.

The response highlights my admission that study of window collisions remains in its early stages, and in doing so the response casts doubt upon my predicted fatality rate. Of course, to be consistent, the response ought to cast the same doubt on respondent's citation of Loss et al. (2014) for their estimated <1% of bird fatalities attributed to high-

risers. The Loss et al. (2014) finding was based on an even earlier stage of investigation. This said, however, our stage of investigation of the bird-window collision issue is reflected in the confidence interval. The national-level estimates made by Loss et al. (2014) and myself are both credible, but at the same time both can be improved through more investigation. In particular, we have much to learn about relative collision risk posed by building height, orientation, position on the landscape, levels of escaping interior light, landscaping, window extents, and types of glass, among other factors. As I noted in my comment letter, I am concerned that many of the studies might have been performed where bird-window collisions were more likely. If my concern bears out through a study design that randomizes selection of buildings for inclusion in a study, then current national-level estimates of fatalities will be revealed to be biased on the high side. But as I also noted in my comment letter, I am concerned about the short search radius used around buildings to find collision victims, and I am also concerned about the rare use carcass detection trials in bird-window collision studies. I am also concerned that the relatively long interval of time between searches in some studies would have missed many of the collision fatalities as well as multiple species represented by the fatalities (Smallwood 2017). If more careful studies bear out my concerns about insufficient accounting for the proportion of collision fatalities not found during searches (see Smallwood 2007 and Smallwood et al. 2018 for more discussion on these issues), then national-level estimates of fatalities will be revealed as biased on the low side.

### **Response 2-21**

According to the response, “*the comment does not explain why or how these factors [hypothesized collision risk factors] are relevant to the Project This comment does not specifically contain any environmental issues contained in the EIR.*” However, I did explain why I listed hypothesized collision factors. I preceded the list with the introductory statement, “*Below I will discuss hypothesized bird-window collision factors, and I will recommend mitigation measures.*” The hypothesized factors formed the basis of my recommended solutions and mitigation measures.

### **Response 2-22**

The response repeats the earlier response that my comments provided no credible evidence in support of my fatality prediction. The response falsely implies that scientific prediction lacks credibility until the predicted impact is actually measured. It falsely implies that scientific inference lacks credibility. It might also imply that I lack credibility. Whereas validation can certainly increase the credibility of scientific predictions as evidence, unvalidated or yet-to-be-validated scientific predictions, which are made by experts, have often served as credible evidence in the eyes of juries, judges, decision-makers and scientific peer-reviewers. Examples include predicted risk of extinction using Population Viability Analysis, predicted wind energy project impacts on birds and bats based on what happened at other wind energy projects, predicted lateral and vertical movement of radionuclides dumped into or onto soil as industrial waste, toxic dose reconstruction, predicted numbers of animals of a species within a certain area based on density estimates from other studies, and sea-level change from climate

data. A recent example has included scientific predictions of the progress of COVID-19 epidemics. These empirically founded predictions have been regarded as credible evidence of potential impacts. This said, their credibility always improves when validated by outcomes.

Even in the absence of data, scientific predictions are often made and often deemed credible as evidence, such as simulation models that rely on point values or ranges that are assumed rather than empirically based. It is not uncommon for scientific predictions to be made and to be regarded as credible evidence. Credibility in these cases is afforded by the expertise of the author of the predictions.

### **Response 2-23**

The response repeats the earlier response that special-status species would suffer no significant impacts from the project. I disagree.

### **Response 2-24**

The response repeats the earlier claim that my comments provide no credible evidence of project-level impacts, and then goes on to argue that cumulative impacts would be less than significant in the absence of project-level impacts. I have already replied to the response regarding credibility of evidence, so I will not reply to it again. The second point is also flawed by implying that cumulative impacts are nothing more than residual impacts of project impacts that are not fully mitigated. If this were the case, CEQA would not require a cumulative effects analysis. There is no CEQA standard of which I am aware that exempts cumulative effects analysis when project-specific impacts are determined to have been reduced by mitigation to less than significant levels.

### **Response 2-25**

The response inadequately addresses my comment. The surveys for bird nests proposed by the City are not the same type of surveys I recommended for understanding and mitigating avian collision risk. Surveys for bird nests do not collect the same information, and do not inform of which types of birds are using the proposed buildings' airspace, how high birds are flying, from what directions they are coming, and at what times of day or night they are flying.

### **Response 2-26**

The response again repeats the claim that my comments provided no credible evidence. I have already replied to this response and will refrain from repeating myself.

Thank you for your attention,



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Shawn Smallwood, Ph.D.

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# Kenneth Shawn Smallwood

## Curriculum Vitae

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Born May 3, 1963 in  
Sacramento, California.  
Married, father of two.

### Ecologist

#### Expertise

- Finding solutions to controversial problems related to wildlife interactions with human industry, infrastructure, and activities;
- Using systems analysis and experimental design principles to identify meaningful ecological patterns that can inform management decisions.

#### Education

Ph.D. Ecology, University of California, Davis. September 1990.  
M.S. Ecology, University of California, Davis. June 1987.  
B.S. Anthropology, University of California, Davis. June 1985.  
Corcoran High School, Corcoran, California. June 1981.

#### Experience

- 443 professional publications, including:
  - 80 peer reviewed publications
  - 24 in non-reviewed proceedings
- 337 reports, declarations, posters and book reviews
- 8 in mass media outlets
- 84 public presentations of research results at meetings
- Reviewed many professional papers and reports
- Testified in 4 court cases.

Editing for scientific journals: Guest Editor, *Wildlife Society Bulletin*, 2012-2013, of invited papers representing international views on the impacts of wind energy on wildlife and how to mitigate the impacts. Associate Editor, *Journal of Wildlife Management*, March 2004 to 30 June 2007. Editorial Board Member, *Environmental Management*, 10/1999 to 8/2004. Associate Editor, *Biological Conservation*, 9/1994 to 9/1995.

Member, Alameda County Scientific Review Committee (SRC), August 2006 to April 2011. The five-member committee investigated the causes of bird and bat collisions in the Altamont Pass Wind Resource Area, and recommended mitigation and monitoring measures. The SRC

reviewed the science underlying the Alameda County Avian Protection Program, and advised the County on how to reduce wildlife fatalities.

Consulting Ecologist, 2004-2007, California Energy Commission (CEC). Provided consulting services as needed to the CEC on renewable energy impacts, monitoring and research, and produced several reports. Also collaborated with Lawrence-Livermore National Lab on research to understand and reduce wind turbine impacts on wildlife.

Consulting Ecologist, 1999-2013, U.S. Navy. Performed endangered species surveys, hazardous waste site monitoring, and habitat restoration for the endangered San Joaquin kangaroo rat, California tiger salamander, California red-legged frog, California clapper rail, western burrowing owl, salt marsh harvest mouse, and other species at Naval Air Station Lemoore; Naval Weapons Station, Seal Beach, Detachment Concord; Naval Security Group Activity, Skaggs Island; National Radio Transmitter Facility, Dixon; and, Naval Outlying Landing Field Imperial Beach.

Part-time Lecturer, 1998-2005, California State University, Sacramento. Taught Contemporary Environmental Issues, Natural Resources Conservation (twice), Mammalogy, Behavioral Ecology, and Ornithology Lab.

Senior Ecologist, 1999-2005, BioResource Consultants. Designed and implemented research and monitoring studies related to avian fatalities at wind turbines, avian electrocutions on electric distribution poles across California, and avian fatalities at transmission lines.

Systems Ecologist, 1996 to present, Consulting in the Public Interest, [www.cipi.com](http://www.cipi.com). Member of a multi-disciplinary consortium of scientists facilitating large-scale, environmental planning projects and litigation. We provide risk assessments, assessments of management practices, and expert witness testimony.

Chairman, Conservation Affairs Committee, The Wildlife Society--Western Section, 1999-2001. Prepared position statements and led efforts directed toward conservation issues, including travel to Washington, D.C. to lobby Congress for more wildlife conservation funding.

Systems Ecologist, 1995-2000, Institute for Sustainable Development. Headed ISD's program on integrated resources management. Developed indicators of ecological integrity for large areas, using remotely sensed data, local community involvement and GIS.

Associate, 1997-1998, Department of Agronomy and Range Science, University of California, Davis. Worked with Shu Geng and Mingua Zhang on several studies related to wildlife interactions with agriculture and patterns of fertilizer and pesticide residues in groundwater across a large landscape.

Lead Scientist, 1996-1999, National Endangered Species Network. Headed NESN's efforts to inform academic scientists and environmental activists about emerging issues regarding the Endangered Species Act and other environmental laws pertaining to special-status species. Also testified at public hearings on behalf of environmental groups and endangered species.

Ecologist, 1997-1998, Western Foundation of Vertebrate Zoology. Conducted field research to

determine the impact of past mercury mining on the status of California red-legged frogs in Santa Clara County, California.

Senior Systems Ecologist, 1994-1995, EIP Associates, Sacramento, California. Provided consulting services in environmental planning. Developed quantitative assessment of land units for their conservation and restoration opportunities, using the ecological resource requirements of 29 special-status species. Developed ecological indicators for prioritizing areas within Yolo County to receive mitigation funds for habitat easements and restoration.

Post-Graduate Researcher, 1990-1994, Department of Agronomy and Range Science, *U.C. Davis*. Under the mentorship of Dr. Shu Geng, studied landscape and management effects on temporal and spatial patterns of abundance among pocket gophers and species of Falconiformes and Carnivora in the Sacramento Valley. Also managed and analyzed a data base of energy use in California agriculture, and assisted with a landscape (GIS) study of groundwater contamination across Tulare County, California.

Work experience in graduate school: Co-taught Conservation Biology with Dr. Christine Schonewald, 1991 & 1993, UC Davis Graduate Group in Ecology; Reader for Dr. Richard Coss's course on Psychobiology in 1990, UC Davis Department of Psychology; Research Assistant to Dr. Walter E. Howard, 1988-1990, UC Davis Department of Wildlife and Fisheries Biology, testing durable baits for pocket gopher management in forest clearcuts; Research Assistant to Dr. Terrell P. Salmon, 1987-1988, UC Wildlife Extension, Department of Wildlife and Fisheries Biology, developing empirical models of mammal and bird invasions in North America, and a rating system for priority research and control of exotic species based on economic, environmental and human health hazards in California. Student Assistant to Dr. E. Lee Fitzhugh, 1985-1987, UC Cooperative Extension, Department of Wildlife and Fisheries Biology, developing and implementing a statewide mountain lion track count for long-term monitoring of numbers and distribution.

Fulbright Research Fellow, Indonesia, 1988. Tested use of new sampling methods for numerical monitoring of Sumatran tiger and six other species of endemic felids, and evaluated methods used by other researchers.

## **Projects**

Repowering wind energy projects through careful siting of new wind turbines using map-based collision hazard models to minimize impacts to volant wildlife. Funded by wind companies (principally NextEra Renewable Energy, Inc.), California Energy Commission and East Bay Regional Park District, I have collaborated with a GIS analyst and managed a crew of five field biologists performing golden eagle behavior surveys and nocturnal surveys on bats and owls. The goal is to quantify flight patterns for development of predictive models to more carefully site new wind turbines in repowering projects. Focused behavior surveys began May 2012 and continue. Collision hazard models have been prepared for seven wind projects, three of which were built. Planning for additional repowering projects is underway.

Test avian safety of new mixer-ejector wind turbine (MEWT). Designed and implemented a before-after, control-impact experimental design to test the avian safety of a new, shrouded wind turbine developed by Ogin Inc. (formerly known as FloDesign Wind Turbine Corporation). Supported by a

\$718,000 grant from the California Energy Commission's Public Interest Energy Research program and a 20% match share contribution from Ogin, I managed a crew of seven field biologists who performed periodic fatality searches and behavior surveys, carcass detection trials, nocturnal behavior surveys using a thermal camera, and spatial analyses with the collaboration of a GIS analyst. Field work began 1 April 2012 and ended 30 March 2015 without Ogin installing its MEWTs, but we still achieved multiple important scientific advances.

Reduce avian mortality due to wind turbines at Altamont Pass. Studied wildlife impacts caused by 5,400 wind turbines at the world's most notorious wind resource area. Studied how impacts are perceived by monitoring and how they are affected by terrain, wind patterns, food resources, range management practices, wind turbine operations, seasonal patterns, population cycles, infrastructure management such as electric distribution, animal behavior and social interactions.

Reduce avian mortality on electric distribution poles. Directed research toward reducing bird electrocutions on electric distribution poles, 2000-2007. Oversaw 5 founts of fatality searches at 10,000 poles from Orange County to Glenn County, California, and produced two large reports.

Cook *et al.* v. Rockwell International *et al.*, No. 90-K-181 (D. Colorado). Provided expert testimony on the role of burrowing animals in affecting the fate of buried and surface-deposited radioactive and hazardous chemical wastes at the Rocky Flats Plant, Colorado. Provided expert reports based on four site visits and an extensive document review of burrowing animals. Conducted transect surveys for evidence of burrowing animals and other wildlife on and around waste facilities. Discovered substantial intrusion of waste structures by burrowing animals. I testified in federal court in November 2005, and my clients were subsequently awarded a \$553,000,000 judgment by a jury. After appeals the award was increased to two billion dollars.

Hanford Nuclear Reservation Litigation. Provided expert testimony on the role of burrowing animals in affecting the fate of buried radioactive wastes at the Hanford Nuclear Reservation, Washington. Provided three expert reports based on three site visits and extensive document review. Predicted and verified a certain population density of pocket gophers on buried waste structures, as well as incidence of radionuclide contamination in body tissue. Conducted transect surveys for evidence of burrowing animals and other wildlife on and around waste facilities. Discovered substantial intrusion of waste structures by burrowing animals.

Expert testimony and declarations on proposed residential and commercial developments, gas-fired power plants, wind, solar and geothermal projects, water transfers and water transfer delivery systems, endangered species recovery plans, Habitat Conservation Plans and Natural Communities Conservation Programs. Testified before multiple government agencies, Tribunals, Boards of Supervisors and City Councils, and participated with press conferences and depositions. Prepared expert witness reports and court declarations, which are summarized under Reports (below).

Protocol-level surveys for special-status species. Used California Department of Fish and Wildlife and US Fish and Wildlife Service protocols to search for California red-legged frog, California tiger salamander, arroyo southwestern toad, blunt-nosed leopard lizard, western pond turtle, giant kangaroo rat, San Joaquin kangaroo rat, San Joaquin kit fox, western burrowing owl, Swainson's hawk, Valley elderberry longhorn beetle and other special-status species.

Conservation of San Joaquin kangaroo rat. Performed research to identify factors responsible for the

decline of this endangered species at Lemoore Naval Air Station, 2000-2013, and implemented habitat enhancements designed to reverse the trend and expand the population.

Impact of West Nile Virus on yellow-billed magpies. Funded by Sacramento-Yolo Mosquito and Vector Control District, 2005-2008, compared survey results pre- and post-West Nile Virus epidemic for multiple bird species in the Sacramento Valley, particularly on yellow-billed magpie and American crow due to susceptibility to WNV.

Workshops on HCPs. Assisted Dr. Michael Morrison with organizing and conducting a 2-day workshop on Habitat Conservation Plans, sponsored by Southern California Edison, and another 1-day workshop sponsored by PG&E. These Workshops were attended by academics, attorneys, and consultants with HCP experience. We guest-edited a Proceedings published in Environmental Management.

Mapping of biological resources along Highways 101, 46 and 41. Used GPS and GIS to delineate vegetation complexes and locations of special-status species along 26 miles of highway in San Luis Obispo County, 14 miles of highway and roadway in Monterey County, and in a large area north of Fresno, including within reclaimed gravel mining pits.

GPS mapping and monitoring at restoration sites and at Caltrans mitigation sites. Monitored the success of elderberry shrubs at one location, the success of willows at another location, and the response of wildlife to the succession of vegetation at both sites. Also used GPS to monitor the response of fossorial animals to yellow star-thistle eradication and natural grassland restoration efforts at Bear Valley in Colusa County and at the decommissioned Mather Air Force Base in Sacramento County.

Mercury effects on Red-legged Frog. Assisted Dr. Michael Morrison and US Fish and Wildlife Service in assessing the possible impacts of historical mercury mining on the federally listed California red-legged frog in Santa Clara County. Also measured habitat variables in streams.

Opposition to proposed No Surprises rule. Wrote a white paper and summary letter explaining scientific grounds for opposing the incidental take permit (ITP) rules providing ITP applicants and holders with general assurances they will be free of compliance with the Endangered Species Act once they adhere to the terms of a “properly functioning HCP.” Submitted 188 signatures of scientists and environmental professionals concerned about No Surprises rule US Fish and Wildlife Service, National Marine Fisheries Service, all US Senators.

Natomas Basin Habitat Conservation Plan alternative. Designed narrow channel marsh to increase the likelihood of survival and recovery in the wild of giant garter snake, Swainson’s hawk and Valley Elderberry Longhorn Beetle. The design included replication and interspersions of treatments for experimental testing of critical habitat elements. I provided a report to Northern Territories, Inc.

Assessments of agricultural production system and environmental technology transfer to China. Twice visited China and interviewed scientists, industrialists, agriculturalists, and the Directors of the Chinese Environmental Protection Agency and the Department of Agriculture to assess the need and possible pathways for environmental clean-up technologies and trade opportunities between the US and China.

Yolo County Habitat Conservation Plan. Conducted landscape ecology study of Yolo County to spatially prioritize allocation of mitigation efforts to improve ecosystem functionality within the County from the perspective of 29 special-status species of wildlife and plants. Used a hierarchically structured indicators approach to apply principles of landscape and ecosystem ecology, conservation biology, and local values in rating land units. Derived GIS maps to help guide the conservation area design, and then developed implementation strategies.

Mountain lion track count. Developed and conducted a carnivore monitoring program throughout California since 1985. Species counted include mountain lion, bobcat, black bear, coyote, red and gray fox, raccoon, striped skunk, badger, and black-tailed deer. Vegetation and land use are also monitored. Track survey transect was established on dusty, dirt roads within randomly selected quadrats.

Sumatran tiger and other felids. Upon award of Fulbright Research Fellowship, I designed and initiated track counts for seven species of wild cats in Sumatra, including Sumatran tiger, fishing cat, and golden cat. Spent four months on Sumatra and Java in 1988, and learned Bahasa Indonesia, the official Indonesian language.

Wildlife in agriculture. Beginning as post-graduate research, I studied pocket gophers and other wildlife in 40 alfalfa fields throughout the Sacramento Valley, and I surveyed for wildlife along a 200 mile road transect since 1989 with a hiatus of 1996-2004. The data are analyzed using GIS and methods from landscape ecology, and the results published and presented orally to farming groups in California and elsewhere. I also conducted the first study of wildlife in cover crops used on vineyards and orchards.

Agricultural energy use and Tulare County groundwater study. Developed and analyzed a data base of energy use in California agriculture, and collaborated on a landscape (GIS) study of groundwater contamination across Tulare County, California.

Pocket gopher damage in forest clear-cuts. Developed gopher sampling methods and tested various poison baits and baiting regimes in the largest-ever field study of pocket gopher management in forest plantations, involving 68 research plots in 55 clear-cuts among 6 National Forests in northern California.

Risk assessment of exotic species in North America. Developed empirical models of mammal and bird species invasions in North America, as well as a rating system for assigning priority research and control to exotic species in California, based on economic, environmental, and human health hazards.

## Representative Clients/Funders

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Law Offices of Stephan C. Volker	National Renewable Energy Lab
Eric K. Gillespie Professional Corporation	Altamont Winds LLC
Law Offices of Berger & Montague	Comstocks Business (magazine)
Lozeau   Drury LLP	BioResource Consultants
Law Offices of Roy Haber	Tierra Data
Law Offices of Edward MacDonald	Black and Veatch
Law Office of John Gabrielli	Terry Preston, Wildlife Ecology Research Center
Law Office of Bill Kopper	EcoStat, Inc.
Law Office of Donald B. Mooney	US Navy
Law Office of Veneruso & Moncharsh	US Department of Agriculture
Law Office of Steven Thompson	US Forest Service
Law Office of Brian Gaffney	US Fish & Wildlife Service
California Wildlife Federation	US Department of Justice
Defenders of Wildlife	California Energy Commission
Sierra Club	California Office of the Attorney General
National Endangered Species Network	California Department of Fish & Wildlife
Spirit of the Sage Council	California Department of Transportation
The Humane Society	California Department of Forestry
Hagens Berman LLP	California Department of Food & Agriculture
Environmental Protection Information Center	Ventura County Counsel
Goldberg, Kamin & Garvin, Attorneys at Law	County of Yolo
Californians for Renewable Energy (CARE)	Tahoe Regional Planning Agency
Seatuck Environmental Association	Sustainable Agriculture Research & Education Program
Friends of the Columbia Gorge, Inc.	Sacramento-Yolo Mosquito and Vector Control District
Save Our Scenic Area	East Bay Regional Park District
Alliance to Protect Nantucket Sound	County of Alameda
Friends of the Swainson's Hawk	Don & LaNelle Silverstien
Alameda Creek Alliance	Seventh Day Adventist Church
Center for Biological Diversity	Escuela de la Raza Unida
California Native Plant Society	Susan Pelican and Howard Beeman
Endangered Wildlife Trust	Residents Against Inconsistent Development, Inc.
and BirdLife South Africa	Bob Sarvey
AquAlliance	Mike Boyd
Oregon Natural Desert Association	Hillcroft Neighborhood Fund
Save Our Sound	Joint Labor Management Committee, Retail Food Industry
G3 Energy and Pattern Energy	Lisa Rocca
Emerald Farms	Kevin Jackson
Pacific Gas & Electric Co.	Dawn Stover and Jay Letto
Southern California Edison Co.	Nancy Havassy
Georgia-Pacific Timber Co.	Catherine Portman (for Brenda Cedarblade)
Northern Territories Inc.	Ventus Environmental Solutions, Inc.
David Magney Environmental Consulting	Panorama Environmental, Inc.
Wildlife History Foundation	Adams Broadwell Professional Corporation
NextEra Energy Resources, LLC	
FloDesign Wind Turbine	
EDF Renewables	

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**Representative special-status species experience**


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<b>Common name</b>	<b>Species name</b>	<b>Description</b>
<b>Field experience</b>		
California red-legged frog	<i>Rana aurora draytonii</i>	Protocol searches; Many detections
Foothill yellow-legged frog	<i>Rana boylei</i>	Presence surveys; Many detections
Western spadefoot	<i>Spea hammondi</i>	Presence surveys; Few detections
California tiger salamander	<i>Ambystoma californiense</i>	Protocol searches; Many detections
Coast range newt	<i>Taricha torosa torosa</i>	Searches and multiple detections
Blunt-nosed leopard lizard	<i>Gambelia sila</i>	Detected in San Luis Obispo County
California horned lizard	<i>Phrynosoma coronatum frontale</i>	Searches; Many detections
Western pond turtle	<i>Clemmys marmorata</i>	Searches; Many detections
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	Protocol searches; detections
Sumatran tiger	<i>Panthera tigris</i>	Research in Sumatra
Mountain lion	<i>Puma concolor californicus</i>	Research and publications
Point Arena mountain beaver	<i>Aplodontia rufa nigra</i>	Remote camera operation
Giant kangaroo rat	<i>Dipodomys ingens</i>	Detected in Cholame Valley
San Joaquin kangaroo rat	<i>Dipodomys nitratoides</i>	Research, conservation at NAS Lemoore
Monterey dusky-footed woodrat	<i>Neotoma fuscipes luciana</i>	Non-target captures and mapping of dens
Salt marsh harvest mouse	<i>Reithrodontomys raviventris</i>	Habitat assessment, monitoring
Salinas harvest mouse	<i>Reithrodontomys megalotus distichlus</i>	Captures; habitat assessment
California clapper rail	<i>Rallus longirostris</i>	Surveys and detections
Golden eagle	<i>Aquila chrysaetos</i>	Research in Altamont Pass
Swainson's hawk	<i>Buteo swainsoni</i>	Research in Sacramento Valley
Northern harrier	<i>Circus cyaneus</i>	Research and publication
White-tailed kite	<i>Elanus leucurus</i>	Research and publication
Loggerhead shrike	<i>Lanius ludovicianus</i>	Research in Sacramento Valley
Least Bell's vireo	<i>Vireo bellii pusillus</i>	Detected in Monterey County
Willow flycatcher	<i>Empidonax traillii extimus</i>	Research at Sierra Nevada breeding sites
Burrowing owl	<i>Athene cunicularia hypugia</i>	Research at multiple locations
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	Research and publication
<b>Analytical</b>		
Arroyo southwestern toad	<i>Bufo microscaphus californicus</i>	Research and report.
Giant garter snake	<i>Thamnophis gigas</i>	Research and publication
Northern goshawk	<i>Accipiter gentilis</i>	Research and publication
Northern spotted owl	<i>Strix occidentalis</i>	Research and reports
Alameda whipsnake	<i>Masticophis lateralis euryxanthus</i>	Expert testimony

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- May, R., A.B. Gill, J. Köppel, R.H.W. Langston, M. Reichenbach, M. Scheidat, S. Smallwood and C.C. Voigt. In press. Future research directions. Proceedings from the Conference on Wind Energy and Wildlife Impacts, March 2015, Berlin, Germany. Springer.
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- Smallwood, K.S., L. Neher, and D.A. Bell. 2016. Siting to Minimize Raptor Collisions: an example from the Repowering Altamont Pass Wind Resource Area. M. Perrow, Ed., Wildlife and Wind Farms: conflicts and solutions. Pelagic Publishing. In press
- Johnson, D. H., S. R. Loss, K. S. Smallwood, W. P. Erickson. 2016. Avian fatalities at wind energy facilities in North America: A comparison of recent approaches. *Human–Wildlife Interactions* 10(1): 7-18.
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### **Comments on Environmental Documents**

I was retained or commissioned to comment on environmental planning and review documents, including:

- Comments on proposed rule for incidental eagle take (2016, 49 pp);
- Revised Draft Giant Garter Snake Recovery Plan of 2015 (2016, 18 pp);
- Supplementary Reply Witness Statement Amherst Island Wind Farm, Ontario (2015, 38 pp);
- Witness Statement on Amherst Island Wind Farm, Ontario (2015, 31 pp);
- Second Reply Witness Statement on White Pines Wind Farm, Ontario (2015, 6 pp);
- Reply Witness Statement on White Pines Wind Farm, Ontario (2015, 10 pp);
- Witness Statement on White Pines Wind Farm, Ontario (2015, 9 pp);
- Proposed Section 24 Specific Plan Agua Caliente Band of Cahuilla Indians DEIS (2015, 9 pp);

- Replies to comments 24 Specific Plan Agua Caliente Band of Cahuilla Indians FEIS (2015, 6 pp);
- Sierra Lakes Commerce Center Project DEIR (2015, 9 pp);
- West Valley Logistics Center Specific Plan DEIR(2015, 10 pp);
- World Logistic Center Specific Plan FEIR (2015, 12 pp);
- Bay Delta Conservation Plan EIR/EIS (2014, 21 pp);
- Addison Wind Energy Project DEIR (2014, 32 pp);
- Response to Comments on the Addison Wind Energy Project DEIR (2014, 15 pp);
- Addison and Rising Tree Wind Energy Project FEIR (2014, 12 pp);
- Alta East Wind Energy Project FEIS (2013, 23 pp);
- Blythe Solar Power Project Staff Assessment, California Energy Commission (2013, 16 pp);
- Clearwater and Yakima Solar Projects DEIR (2013, 9 pp);
- Cuyama Solar Project DEIR (2014, 19 pp);
- Draft Desert Renewable Energy Conservation Plan (DRECP) EIR/EIS (2015, 49 pp);
- Kingbird Solar Photovoltaic Project EIR (2013, 19 pp);
- Lucerne Valley Solar Project Initial Study & Mitigated Negative Declaration (2013, 12 pp);
- Palen Solar Electric Generating System Final Staff Assessment of California Energy Commission, (2014, 20 pp);
- Rebuttal testimony on Palen Solar Energy Generating System (2014, 9 pp);
- Rising Tree Wind Energy Project DEIR (2014, 32 pp);
- Response to Comments on the Rising Tree Wind Energy Project DEIR (2014, 15 pp);
- Soitec Solar Development Project Draft PEIR (2014, 18 pp);
- Comment on the Biological Opinion (08ESMF-00-2012-F-0387) of Oakland Zoo expansion on Alameda whipsnake and California red-legged frog (2014; 3 pp);
- West Antelope Solar Energy Project Initial Study and Negative Declaration (2013, 18 pp);
- Willow Springs Solar Photovoltaic Project DEIR (2015, 28 pp);
- Alameda Creek Bridge Replacement Project DEIR (2015, 10 pp);
- Declaration on Tule Wind project FEIR/FEIS (2013; 24 pp);
- Sunlight Partners LANDPRO Solar Project Mitigated Negative Declaration (2013; 11 pp);
- Declaration in opposition to BLM fracking (2013; 5 pp);
- Rosamond Solar Project Addendum EIR (2013; 13 pp);
- Pioneer Green Solar Project EIR (2013; 13 pp);
- Reply to Staff Responses to Comments on Soccer Center Solar Project Mitigated Negative Declaration (2013; 6 pp);
- Soccer Center Solar Project Mitigated Negative Declaration (2013; 10 pp);
- Plainview Solar Works Mitigated Negative Declaration (2013; 10 pp);
- Reply to the County Staff's Responses on comments to Imperial Valley Solar Company 2 Project (2013; 10 pp);
- Imperial Valley Solar Company 2 Project (2013; 13 pp);
- FRV Orion Solar Project DEIR (PP12232) (2013; 9 pp);
- Casa Diablo IV Geothermal Development Project (3013; 6 pp);
- Reply to Staff Responses to Comments on Casa Diablo IV Geothermal Development Project (2013; 8 pp);
- FEIS prepared for Alta East Wind Project (2013; 23 pp);

- Metropolitan Air Park DEIR, City of San Diego (2013; );
- Davidon Homes Tentative Subdivision Map and Rezoning Project DEIR (2013; 9 pp);
- Analysis of Biological Assessment of Oakland Zoo Expansion Impacts on Alameda Whipsnake (2013; 10 pp);
- Declaration on Campo Verde Solar project FEIR (2013; 11pp);
- Neg Dec comments on Davis Sewer Trunk Rehabilitation (2013; 8 pp);
- Declaration on North Steens Transmission Line FEIS (2012; 62 pp);
- City of Lancaster Revised Initial Study for Conditional Use Permits 12-08 and 12-09, Summer Solar and Springtime Solar Projects (2012; 8 pp);
- J&J Ranch, 24 Adobe Lane Environmental Review (2012; 14 pp);
- Reply to the County Staff's Responses on comments to Hudson Ranch Power II Geothermal Project and the Simbol Calipatria Plant II (2012; 8 pp);
- Hudson Ranch Power II Geothermal Project and the Simbol Calipatria Plant II (2012; 9 pp);
- Desert Harvest Solar Project EIS (2012; 15 pp);
- Solar Gen 2 Array Project DEIR (2012; 16 pp);
- Ocotillo Sol Project EIS (2012; 4 pp);
- Beacon Photovoltaic Project DEIR (2012; 5 pp);
- Declaration on Initial Study and Proposed Negative Declaration for the Butte Water District 2012 Water Transfer Program (2012; 11 pp);
- Mount Signal and Calexico Solar Farm Projects DEIR (2011; 16 pp);
- City of Elk Grove Sphere of Influence EIR (2011; 28 pp);
- Comment on Sutter Landing Park Solar Photovoltaic Project MND (2011; 9 pp);
- Statement of Shawn Smallwood, Ph.D. Regarding Proposed Rabik/Gudath Project, 22611 Coleman Valley Road, Bodega Bay (CPN 10-0002) (2011; 4 pp);
- Declaration of K. Shawn Smallwood on Biological Impacts of the Ivanpah Solar Electric Generating System (ISEGS) (2011; 9 pp);
- Comments on Draft Eagle Conservation Plan Guidance (2011; 13 pp);
- Comments on Draft EIR/EA for Niles Canyon Safety Improvement Project (2011; 16 pp);
- Declaration of K. Shawn Smallwood, Ph.D., on Biological Impacts of the Route 84 Safety Improvement Project (2011; 7 pp);
- Rebuttal Testimony of Witness #22, K. Shawn Smallwood, Ph.D, on Behalf of Intervenors Friends of The Columbia Gorge & Save Our Scenic Area (2010; 6 pp);
- Prefiled Direct Testimony of Witness #22, K. Shawn Smallwood, Ph.D, on Behalf of Intervenors Friends of the Columbia Gorge & Save Our Scenic Area. Comments on Whistling Ridge Wind Energy Power Project DEIS, Skamania County, Washington (2010; 41 pp);
- Evaluation of Klickitat County's Decisions on the Windy Flats West Wind Energy Project (2010; 17 pp);
- St. John's Church Project Draft Environmental Impact Report (2010; 14 pp.);
- Initial Study/Mitigated Negative Declaration for Results Radio Zone File #2009-001 (2010; 20 pp);
- Rio del Oro Specific Plan Project Final Environmental Impact Report (2010;12 pp);
- Answers to Questions on 33% RPS Implementation Analysis Preliminary Results Report (2009; 9 pp);
- SEPA Determination of Non-significance regarding zoning adjustments for Skamania

- County, Washington. Second Declaration to Friends of the Columbia Gorge, Inc. and Save Our Scenic Area (Dec 2008; 17 pp);
- Comments on Draft 1A Summary Report to CAISO (2008; 10 pp);
  - County of Placer's Categorical Exemption of Hilton Manor Project (2009; 9 pp);
  - Protest of CARE to Amendment to the Power Purchase and Sale Agreement for Procurement of Eligible Renewable Energy Resources Between Hatchet Ridge Wind LLC and PG&E (2009; 3 pp);
  - Tehachapi Renewable Transmission Project EIR/EIS (2009; 142 pp);
  - Delta Shores Project EIR, south Sacramento (2009; 11 pp + addendum 2 pp);
  - Declaration of Shawn Smallwood in Support of Care's Petition to Modify D.07-09-040 (2008; 3 pp);
  - The Public Utility Commission's Implementation Analysis December 16 Workshop for the Governor's Executive Order S-14-08 to implement a 33% Renewable Portfolio Standard by 2020 (2008; 9 pp);
  - The Public Utility Commission's Implementation Analysis Draft Work Plan for the Governor's Executive Order S-14-08 to implement a 33% Renewable Portfolio Standard by 2020 (2008; 11 pp);
  - Draft 1A Summary Report to California Independent System Operator for Planning Reserve Margins (PRM) Study (2008; 7 pp.);
  - SEPA Determination of Non-significance regarding zoning adjustments for Skamania County, Washington. Declaration to Friends of the Columbia Gorge, Inc. and Save Our Scenic Area (Sep 2008; 16 pp);
  - California Energy Commission's Preliminary Staff Assessment of the Colusa Generating Station (2007; 24 pp);
  - Rio del Oro Specific Plan Project Recirculated Draft Environmental Impact Report (2008: 66 pp);
  - Replies to Response to Comments Re: Regional University Specific Plan Environmental Impact Report (2008; 20 pp);
  - Regional University Specific Plan Environmental Impact Report (2008: 33 pp.);
  - Clark Precast, LLC's "Sugarland" project, Negative Declaration (2008: 15 pp.);
  - Cape Wind Project Draft Environmental Impact Statement (2008; 157 pp.);
  - Yuba Highlands Specific Plan (or Area Plan) Environmental Impact Report (2006; 37 pp.);
  - Replies to responses to comments on Mitigated Negative Declaration of the proposed Mining Permit (MIN 04-01) and Modification of Use Permit 96-02 at North Table Mountain (2006; 5 pp);
  - Mitigated Negative Declaration of the proposed Mining Permit (MIN 04-01) and Modification of Use Permit 96-02 at North Table Mountain (2006; 15 pp);
  - Windy Point Wind Farm Environmental Review and EIS (2006; 14 pp and 36 Powerpoint slides in reply to responses to comments);
  - Shiloh I Wind Power Project EIR (2005; 18 pp);
  - Buena Vista Wind Energy Project Notice of Preparation of EIR (2004; 15 pp);
  - Negative Declaration of the proposed Callahan Estates Subdivision (2004; 11 pp);
  - Negative Declaration of the proposed Winters Highlands Subdivision (2004; 9 pp);
  - Negative Declaration of the proposed Winters Highlands Subdivision (2004; 13 pp);
  - Negative Declaration of the proposed Creekside Highlands Project, Tract 7270 (2004; 21

- pp);
- On the petition California Fish and Game Commission to list the Burrowing Owl as threatened or endangered (2003; 10 pp);
- Conditional Use Permit renewals from Alameda County for wind turbine operations in the Altamont Pass Wind Resource Area (2003; 41 pp);
- UC Davis Long Range Development Plan of 2003, particularly with regard to the Neighborhood Master Plan (2003; 23 pp);
- Anderson Marketplace Draft Environmental Impact Report (2003: 18 pp + 3 plates of photos);
- Negative Declaration of the proposed expansion of Temple B'nai Tikyah (2003: 6 pp);
- Antonio Mountain Ranch Specific Plan Public Draft EIR (2002: 23 pp);
- Response to testimony of experts at the East Altamont Energy Center evidentiary hearing on biological resources (2002: 9 pp);
- Revised Draft Environmental Impact Report, The Promenade (2002: 7 pp);
- Recirculated Initial Study for Calpine's proposed Pajaro Valley Energy Center (2002: 3 pp);
- UC Merced -- Declaration of Dr. Shawn Smallwood in support of petitioner's application for temporary restraining order and preliminary injunction (2002: 5 pp);
- Replies to response to comments in Final Environmental Impact Report, Atwood Ranch Unit III Subdivision (2003: 22 pp);
- Draft Environmental Impact Report, Atwood Ranch Unit III Subdivision (2002: 19 pp + 8 photos on 4 plates);
- California Energy Commission Staff Report on GWF Tracy Peaker Project (2002: 17 pp + 3 photos; follow-up report of 3 pp);
- Initial Study and Negative Declaration, Silver Bend Apartments, Placer County (2002: 13 pp);
- UC Merced Long-range Development Plan DEIR and UC Merced Community Plan DEIR (2001: 26 pp);
- Initial Study, Colusa County Power Plant (2001: 6 pp);
- Comments on Proposed Dog Park at Catlin Park, Folsom, California (2001: 5 pp + 4 photos);
- Pacific Lumber Co. (Headwaters) Habitat Conservation Plan and Environmental Impact Report (1998: 28 pp);
- Final Environmental Impact Report/Statement for Issuance of Take authorization for listed species within the MSCP planning area in San Diego County, California (Fed. Reg. 62 (60): 14938, San Diego Multi-Species Conservation Program) (1997: 10 pp);
- Permit (PRT-823773) Amendment for the Natomas Basin Habitat Conservation Plan, Sacramento, CA (Fed. Reg. 63 (101): 29020-29021) (1998);
- Draft Recovery Plan for the Giant Garter Snake (*Thamnophis gigas*). (Fed. Reg. 64(176): 49497-49498) (1999: 8 pp);
- Review of the Draft Recovery Plan for the Arroyo Southwestern Toad (*Bufo microscaphus californicus*) (1998);
- Ballona West Bluffs Project Environmental Impact Report (1999: oral presentation);
- California Board of Forestry's proposed amended Forest Practices Rules (1999);
- Negative Declaration for the Sunset Sky ranch Airport Use Permit (1999);
- Calpine and Bechtel Corporations' Biological Resources Implementation and Monitoring

- Program (BRMIMP) for the Metcalf Energy Center (2000: 10 pp);
- California Energy Commission’s Final Staff Assessment of the proposed Metcalf Energy Center (2000);
- US Fish and Wildlife Service Section 7 consultation with the California Energy Commission regarding Calpine and Bechtel Corporations’ Metcalf Energy Center (2000: 4 pp);
- California Energy Commission’s Preliminary Staff Assessment of the proposed Metcalf Energy Center (2000: 11 pp);
- Site-specific management plans for the Natomas Basin Conservancy’s mitigation lands, prepared by Wildlands, Inc. (2000: 7 pp);
- Affidavit of K. Shawn Smallwood in Spirit of the Sage Council, et al. (Plaintiffs) vs. Bruce Babbitt, Secretary, U.S. Department of the Interior, et al. (Defendants), Injuries caused by the No Surprises policy and final rule which codifies that policy (1999: 9 pp).

**Comments on other Environmental Review Documents:**

- Proposed Regulation for California Fish and Game Code Section 3503.5 (2015: 12 pp);
- Statement of Overriding Considerations related to extending Altamont Winds, Inc.’s Conditional Use Permit PLN2014-00028 (2015; 8 pp);
- Draft Program Level EIR for Covell Village (2005; 19 pp);
- Bureau of Land Management Wind Energy Programmatic EIS Scoping document (2003: 7 pp.);
- NEPA Environmental Analysis for Biosafety Level 4 National Biocontainment Laboratory (NBL) at UC Davis (2003: 7 pp);
- Notice of Preparation of UC Merced Community and Area Plan EIR, on behalf of The Wildlife Society—Western Section (2001: 8 pp.);
- Preliminary Draft Yolo County Habitat Conservation Plan (2001; 2 letters totaling 35 pp.);
- Merced County General Plan Revision, notice of Negative Declaration (2001: 2 pp.);
- Notice of Preparation of Campus Parkway EIR/EIS (2001: 7 pp.);
- Draft Recovery Plan for the bighorn sheep in the Peninsular Range (*Ovis candensis*) (2000);
- Draft Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*), on behalf of The Wildlife Society—Western Section (2000: 10 pp.);
- Sierra Nevada Forest Plan Amendment Draft Environmental Impact Statement, on behalf of The Wildlife Society—Western Section (2000: 7 pp.);
- State Water Project Supplemental Water Purchase Program, Draft Program EIR (1997);
- Davis General Plan Update EIR (2000);
- Turn of the Century EIR (1999: 10 pp);
- Proposed termination of Critical Habitat Designation under the Endangered Species Act (Fed. Reg. 64(113): 31871-31874) (1999);
- NOA Draft Addendum to the Final Handbook for Habitat Conservation Planning and Incidental Take Permitting Process, termed the HCP 5-Point Policy Plan (Fed. Reg. 64(45): 11485 - 11490) (1999; 2 pp + attachments);
- Covell Center Project EIR and EIR Supplement (1997).

**Position Statements** I prepared the following position statements for the Western Section of The Wildlife Society, and one for nearly 200 scientists:

- Recommended that the California Department of Fish and Game prioritize the extermination of the introduced southern water snake in northern California. The Wildlife Society--Western Section (2001);
- Recommended that The Wildlife Society—Western Section appoint or recommend members of the independent scientific review panel for the UC Merced environmental review process (2001);
- Opposed the siting of the University of California's 10th campus on a sensitive vernal pool/grassland complex east of Merced. The Wildlife Society--Western Section (2000);
- Opposed the legalization of ferret ownership in California. The Wildlife Society--Western Section (2000);
- Opposed the Proposed “No Surprises,” “Safe Harbor,” and “Candidate Conservation Agreement” rules, including permit-shield protection provisions (Fed. Reg. Vol. 62, No. 103, pp. 29091-29098 and No. 113, pp. 32189-32194). This statement was signed by 188 scientists and went to the responsible federal agencies, as well as to the U.S. Senate and House of Representatives.

### **Posters at Professional Meetings**

Leyvas, E. and K. S. Smallwood. 2015. Rehabilitating injured animals to offset and rectify wind project impacts. Conference on Wind Energy and Wildlife Impacts, Berlin, Germany, 9-12 March 2015.

Smallwood, K. S., J. Mount, S. Standish, E. Leyvas, D. Bell, E. Walther, B. Karas. 2015. Integrated detection trials to improve the accuracy of fatality rate estimates at wind projects. Conference on Wind Energy and Wildlife Impacts, Berlin, Germany, 9-12 March 2015.

Smallwood, K. S. and C. G. Thelander. 2005. Lessons learned from five years of avian mortality research in the Altamont Pass WRA. AWEA conference, Denver, May 2005.

Neher, L., L. Wilder, J. Woo, L. Spiegel, D. Yen-Nakafugi, and K.S. Smallwood. 2005. Bird's eye view on California wind. AWEA conference, Denver, May 2005.

Smallwood, K. S., C. G. Thelander and L. Spiegel. 2003. Toward a predictive model of avian fatalities in the Altamont Pass Wind Resource Area. Windpower 2003 Conference and Convention, Austin, Texas.

Smallwood, K.S. and Eva Butler. 2002. Pocket Gopher Response to Yellow Star-thistle Eradication as part of Grassland Restoration at Decommissioned Mather Air Force Base, Sacramento County, California. White Mountain Research Station Open House, Barcroft Station.

Smallwood, K.S. and Michael L. Morrison. 2002. Fresno kangaroo rat (*Dipodomys nitratoides*) Conservation Research at Resources Management Area 5, Lemoore Naval Air Station. White Mountain Research Station Open House, Barcroft Station.

Smallwood, K.S. and E.L. Fitzhugh. 1989. Differentiating mountain lion and dog tracks. Third Mountain Lion Workshop, Prescott, AZ.

Smith, T. R. and K. S. Smallwood. 2000. Effects of study area size, location, season, and allometry on reported *Sorex* shrew densities. Annual Meeting of the Western Section of The Wildlife Society.

### **Presentations at Professional Meetings and Seminars**

Mitigation of Raptor Fatalities in the Altamont Pass Wind Resource Area. Raptor Research Foundation Meeting, Sacramento, California, 6 November 2015.

From burrows to behavior: Research and management for burrowing owls in a diverse landscape. California Burrowing Owl Consortium meeting, 24 October 2015, San Jose, California.

The Challenges of repowering. Keynote presentation at Conference on Wind Energy and Wildlife Impacts, Berlin, Germany, 10 March 2015.

Research Highlights Altamont Pass 2011-2015. Scientific Review Committee, Oakland, California, 8 July 2015.

Siting wind turbines to minimize raptor collisions: Altamont Pass Wind Resource Area. US Fish and Wildlife Service Golden Eagle Working Group, Sacramento, California, 8 January 2015.

Evaluation of nest boxes as a burrowing owl conservation strategy. Sacramento Chapter of the Western Section, The Wildlife Society. Sacramento, California, 26 August 2013.

Predicting collision hazard zones to guide repowering of the Altamont Pass. Conference on wind power and environmental impacts. Stockholm, Sweden, 5-7 February 2013.

Impacts of Wind Turbines on Wildlife. California Council for Wildlife Rehabilitators, Yosemite, California, 12 November 2012.

Impacts of Wind Turbines on Birds and Bats. Madrone Audubon Society, Santa Rosa, California, 20 February 2012.

Comparing Wind Turbine Impacts across North America. California Energy Commission Staff Workshop: Reducing the Impacts of Energy Infrastructure on Wildlife, 20 July 2011.

Siting Repowered Wind Turbines to Minimize Raptor Collisions. California Energy Commission Staff Workshop: Reducing the Impacts of Energy Infrastructure on Wildlife, 20 July 2011.

Siting Repowered Wind Turbines to Minimize Raptor Collisions. Alameda County Scientific Review Committee meeting, 17 February 2011

Comparing Wind Turbine Impacts across North America. Conference on Wind energy and Wildlife impacts, Trondheim, Norway, 3 May 2011.

Update on Wildlife Impacts in the Altamont Pass Wind Resource Area. Raptor Symposium, The Wildlife Society—Western Section, Riverside, California, February 2011.

Siting Repowered Wind Turbines to Minimize Raptor Collisions. Raptor Symposium, The Wildlife

Society - Western Section, Riverside, California, February 2011.

Wildlife mortality caused by wind turbine collisions. Ecological Society of America, Pittsburgh, Pennsylvania, 6 August 2010.

Map-based repowering and reorganization of a wind farm to minimize burrowing owl fatalities. California burrowing Owl Consortium Meeting, Livermore, California, 6 February 2010.

Environmental barriers to wind power. Getting Real About Renewables: Economic and Environmental Barriers to Biofuels and Wind Energy. A symposium sponsored by the Environmental & Energy Law & Policy Journal, University of Houston Law Center, Houston, 23 February 2007.

Lessons learned about bird collisions with wind turbines in the Altamont Pass and other US wind farms. Meeting with Japan Ministry of the Environment and Japan Ministry of the Economy, Wild Bird Society of Japan, and other NGOs Tokyo, Japan, 9 November 2006.

Lessons learned about bird collisions with wind turbines in the Altamont Pass and other US wind farms. Symposium on bird collisions with wind turbines. Wild Bird Society of Japan, Tokyo, Japan, 4 November 2006.

Responses of Fresno kangaroo rats to habitat improvements in an adaptive management framework. California Society for Ecological Restoration (SERCAL) 13<sup>th</sup> Annual Conference, UC Santa Barbara, 27 October 2006.

Fatality associations as the basis for predictive models of fatalities in the Altamont Pass Wind Resource Area. EEI/APLIC/PIER Workshop, 2006 Biologist Task Force and Avian Interaction with Electric Facilities Meeting, Pleasanton, California, 28 April 2006.

Burrowing owl burrows and wind turbine collisions in the Altamont Pass Wind Resource Area. The Wildlife Society - Western Section Annual Meeting, Sacramento, California, February 8, 2006.

Mitigation at wind farms. Workshop: Understanding and resolving bird and bat impacts. American Wind Energy Association and Audubon Society. Los Angeles, CA. January 10 and 11, 2006.

Incorporating data from the California Wildlife Habitat Relationships (CWHR) system into an impact assessment tool for birds near wind farms. Shawn Smallwood, Kevin Hunting, Marcus Yee, Linda Spiegel, Monica Parisi. Workshop: Understanding and resolving bird and bat impacts. American Wind Energy Association and Audubon Society. Los Angeles, CA. January 10 and 11, 2006.

Toward indicating threats to birds by California's new wind farms. California Energy Commission, Sacramento, May 26, 2005.

Avian collisions in the Altamont Pass. California Energy Commission, Sacramento, May 26, 2005.

Ecological solutions for avian collisions with wind turbines in the Altamont Pass Wind Resource Area. EPRI Environmental Sector Council, Monterey, California, February 17, 2005.

Ecological solutions for avian collisions with wind turbines in the Altamont Pass Wind Resource Area. The Wildlife Society—Western Section Annual Meeting, Sacramento, California, January 19, 2005.

Associations between avian fatalities and attributes of electric distribution poles in California. The Wildlife Society - Western Section Annual Meeting, Sacramento, California, January 19, 2005.

Minimizing avian mortality in the Altamont Pass Wind Resources Area. UC Davis Wind Energy Collaborative Forum, Palm Springs, California, December 14, 2004.

Selecting electric distribution poles for priority retrofitting to reduce raptor mortality. Raptor Research Foundation Meeting, Bakersfield, California, November 10, 2004.

Responses of Fresno kangaroo rats to habitat improvements in an adaptive management framework. Annual Meeting of the Society for Ecological Restoration, South Lake Tahoe, California, October 16, 2004.

Lessons learned from five years of avian mortality research at the Altamont Pass Wind Resources Area in California. The Wildlife Society Annual Meeting, Calgary, Canada, September 2004.

The ecology and impacts of power generation at Altamont Pass. Sacramento Petroleum Association, Sacramento, California, August 18, 2004.

Burrowing owl mortality in the Altamont Pass Wind Resource Area. California Burrowing Owl Consortium meeting, Hayward, California, February 7, 2004.

Burrowing owl mortality in the Altamont Pass Wind Resource Area. California Burrowing Owl Symposium, Sacramento, November 2, 2003.

Raptor Mortality at the Altamont Pass Wind Resource Area. National Wind Coordinating Committee, Washington, D.C., November 17, 2003.

Raptor Behavior at the Altamont Pass Wind Resource Area. Annual Meeting of the Raptor Research Foundation, Anchorage, Alaska, September, 2003.

Raptor Mortality at the Altamont Pass Wind Resource Area. Annual Meeting of the Raptor Research Foundation, Anchorage, Alaska, September, 2003.

California mountain lions. Ecological & Environmental Issues Seminar, Department of Biology, California State University, Sacramento, November, 2000.

Intra- and inter-turbine string comparison of fatalities to animal burrow densities at Altamont Pass. National Wind Coordinating Committee, Carmel, California, May, 2000.

Using a Geographic Positioning System (GPS) to map wildlife and habitat. Annual Meeting of the Western Section of The Wildlife Society, Riverside, CA, January, 2000.

Suggested standards for science applied to conservation issues. Annual Meeting of the Western Section of The Wildlife Society, Riverside, CA, January, 2000.

The indicators framework applied to ecological restoration in Yolo County, California. Society for Ecological Restoration, September 25, 1999.

Ecological restoration in the context of animal social units and their habitat areas. Society for Ecological Restoration, September 24, 1999.

Relating Indicators of Ecological Health and Integrity to Assess Risks to Sustainable Agriculture and Native Biota. International Conference on Ecosystem Health, August 16, 1999.

A crosswalk from the Endangered Species Act to the HCP Handbook and real HCPs. Southern California Edison, Co. and California Energy Commission, March 4-5, 1999.

Mountain lion track counts in California: Implications for Management. Ecological & Environmental Issues Seminar, Department of Biological Sciences, California State University, Sacramento, November 4, 1998.

“No Surprises” -- Lack of science in the HCP process. California Native Plant Society Annual Conservation Conference, The Presidio, San Francisco, September 7, 1997.

In Your Interest. A half hour weekly show aired on Channel 10 Television, Sacramento. In this episode, I served on a panel of experts discussing problems with the implementation of the Endangered Species Act. Aired August 31, 1997.

Spatial scaling of pocket gopher (*Geomys*) density. Southwestern Association of Naturalists 44th Meeting, Fayetteville, Arkansas, April 10, 1997.

Estimating prairie dog and pocket gopher burrow volume. Southwestern Association of Naturalists 44th Meeting, Fayetteville, Arkansas, April 10, 1997.

Ten years of mountain lion track survey. Fifth Mountain Lion Workshop, San Diego, February 27, 1996.

Study and interpretive design effects on mountain lion density estimates. Fifth Mountain Lion Workshop, San Diego, February 27, 1996.

Small animal control. Session moderator and speaker at the California Farm Conference, Sacramento, California, Feb. 28, 1995.

Small animal control. Ecological Farming Conference, Asylomar, California, Jan. 28, 1995.

Habitat associations of the Swainson's Hawk in the Sacramento Valley's agricultural landscape. 1994 Raptor Research Foundation Meeting, Flagstaff, Arizona.

Alfalfa as wildlife habitat. Seed Industry Conference, Woodland, California, May 4, 1994.

Habitats and vertebrate pests: impacts and management. Managing Farmland to Bring Back Game Birds and Wildlife to the Central Valley. Yolo County Resource Conservation District, U.C. Davis, February 19, 1994.

Management of gophers and alfalfa as wildlife habitat. Orland Alfalfa Production Meeting and Sacramento Valley Alfalfa Production Meeting, February 1 and 2, 1994.

Patterns of wildlife movement in a farming landscape. Wildlife and Fisheries Biology Seminar Series: Recent Advances in Wildlife, Fish, and Conservation Biology, U.C. Davis, Dec. 6, 1993.

Alfalfa as wildlife habitat. California Alfalfa Symposium, Fresno, California, Dec. 9, 1993.

Management of pocket gophers in Sacramento Valley alfalfa. California Alfalfa Symposium, Fresno, California, Dec. 8, 1993.

Association analysis of raptors in a farming landscape. Plenary speaker at Raptor Research Foundation Meeting, Charlotte, North Carolina, Nov. 6, 1993.

Landscape strategies for biological control and IPM. Plenary speaker, International Conference on Integrated Resource Management and Sustainable Agriculture, Beijing, China, Sept. 11, 1993.

Landscape Ecology Study of Pocket Gophers in Alfalfa. Alfalfa Field Day, U.C. Davis, July 1993.

Patterns of wildlife movement in a farming landscape. Spatial Data Analysis Colloquium, U.C. Davis, August 6, 1993.

Sound stewardship of wildlife. Veterinary Medicine Seminar: Ethics of Animal Use, U.C. Davis. May 1993.

Landscape ecology study of pocket gophers in alfalfa. Five County Grower's Meeting, Tracy, California. February 1993.

Turbulence and the community organizers: The role of invading species in ordering a turbulent system, and the factors for invasion success. Ecology Graduate Student Association Colloquium, U.C. Davis. May 1990.

Evaluation of exotic vertebrate pests. Fourteenth Vertebrate Pest Conference, Sacramento, California. March 1990.

Analytical methods for predicting success of mammal introductions to North America. The Western Section of the Wildlife Society, Hilo, Hawaii. February 1988.

A state-wide mountain lion track survey. Sacramento County Dept Parks and Recreation. April 1986.

The mountain lion in California. Davis Chapter of the Audubon Society. October 1985.

Ecology Graduate Student Seminars, U.C. Davis, 1985-1990: Social behavior of the mountain lion;

Mountain lion control; Political status of the mountain lion in California.

### **Other forms of Participation at Professional Meetings**

- Scientific Committee, Conference on Wind energy and Wildlife impacts, Berlin, Germany, March 2015.
- Scientific Committee, Conference on Wind energy and Wildlife impacts, Stockholm, Sweden, February 2013.
- Workshop co-presenter at Birds & Wind Energy Specialist Group (BAWESG) Information sharing week, Bird specialist studies for proposed wind energy facilities in South Africa, Endangered Wildlife Trust, Darling, South Africa, 3-7 October 2011.
- Scientific Committee, Conference on Wind energy and Wildlife impacts, Trondheim, Norway, 2-5 May 2011.
- Chair of Animal Damage Management Session, The Wildlife Society, Annual Meeting, Reno, Nevada, September 26, 2001.
- Chair of Technical Session: Human communities and ecosystem health: Comparing perspectives and making connection. Managing for Ecosystem Health, International Congress on Ecosystem Health, Sacramento, CA August 15-20, 1999.
- Student Awards Committee, Annual Meeting of the Western Section of The Wildlife Society, Riverside, CA, January, 2000.
- Student Mentor, Annual Meeting of the Western Section of The Wildlife Society, Riverside, CA, January, 2000.

### **Printed Mass Media**

Smallwood, K.S., D. Mooney, and M. McGuinness. 2003. We must stop the UCD biolab now. Op-Ed to the Davis Enterprise.

Smallwood, K.S. 2002. Spring Lake threatens Davis. Op-Ed to the Davis Enterprise.

Smallwood, K.S. Summer, 2001. Mitigation of habitation. The Flatlander, Davis, California.

Entrikan, R.K. and K.S. Smallwood. 2000. Measure O: Flawed law would lock in new taxes. Op-Ed to the Davis Enterprise.

Smallwood, K.S. 2000. Davis delegation lobbies Congress for Wildlife conservation. Op-Ed to the Davis Enterprise.

Smallwood, K.S. 1998. Davis Visions. The Flatlander, Davis, California.

Smallwood, K.S. 1997. Last grab for Yolo's land and water. The Flatlander, Davis, California.

Smallwood, K.S. 1997. The Yolo County HCP. Op-Ed to the Davis Enterprise.

### **Radio/Television**

PBS News Hour,

FOX News, Energy in America: Dead Birds Unintended Consequence of Wind Power Development, August 2011.

KXJZ Capital Public Radio -- Insight (Host Jeffrey Callison). Mountain lion attacks (with guest Professor Richard Coss). 23 April 2009;

KXJZ Capital Public Radio -- Insight (Host Jeffrey Callison). Wind farm Rio Vista Renewable Power. 4 September 2008;

KQED QUEST Episode #111. Bird collisions with wind turbines. 2007;

KDVS Speaking in Tongues (host Ron Glick), Yolo County HCP: 1 hour. December 27, 2001;

KDVS Speaking in Tongues (host Ron Glick), Yolo County HCP: 1 hour. May 3, 2001;

KDVS Speaking in Tongues (host Ron Glick), Yolo County HCP: 1 hour. February 8, 2001;

KDVS Speaking in Tongues (host Ron Glick & Shawn Smallwood), California Energy Crisis: 1 hour. Jan. 25, 2001;

KDVS Speaking in Tongues (host Ron Glick), Headwaters Forest HCP: 1 hour. 1998;

Davis Cable Channel (host Gerald Heffernon), Burrowing owls in Davis: half hour. June, 2000;

Davis Cable Channel (hosted by Davis League of Women Voters), Measure O debate: 1 hour. October, 2000;

KXTV 10, In Your Interest, The Endangered Species Act: half hour. 1997.

**Reviews of Journal Papers** (Scientific journals for whom I've provided peer review)

<b>Journal</b>	<b>Journal</b>
American Naturalist	Journal of Animal Ecology
Journal of Wildlife Management	Western North American Naturalist
Auk	Journal of Raptor Research
Biological Conservation	National Renewable Energy Lab reports
Canadian Journal of Zoology	Oikos
Ecosystem Health	The Prairie Naturalist
Environmental Conservation	Restoration Ecology
Environmental Management	Southwestern Naturalist
Functional Ecology	The Wildlife Society--Western Section Trans.
Journal of Zoology (London)	Proc. Int. Congress on Managing for Ecosystem Health
Journal of Applied Ecology	Transactions in GIS
Ecology	Tropical Ecology
Biological Control	The Condor

**Committees**

- Scientific Review Committee, Alameda County, Altamont Pass Wind Resource Area
- Ph.D. Thesis Committee, Steve Anderson, University of California, Davis
- MS Thesis Committee, Marcus Yee, California State University, Sacramento

**Other Professional Activities or Products**

Testified in Federal Court in Denver during 2005 over the fate of radio-nuclides in the soil at Rocky Flats Plant after exposure to burrowing animals. My clients won a judgment of \$553,000,000. I have also testified in many other cases of litigation under CEQA, NEPA, the Warren-Alquist Act, and other environmental laws. My clients won most of the cases for which I testified.

Testified before Environmental Review Tribunals in Ontario, Canada regarding proposed White Pines and Amherst Island Wind Energy projects.

Testified in Skamania County Hearing in 2009 on the potential impacts of zoning the County for development of wind farms and hazardous waste facilities.

Testified in deposition in 2007 in the case of O'Dell et al. vs. FPL Energy in Houston, Texas.

Testified in Klickitat County Hearing in 2006 on the potential impacts of the Windy Point Wind Farm.

**Memberships in Professional Societies**

The Wildlife Society  
Raptor Research Foundation

**Honors and Awards**

Fulbright Research Fellowship to Indonesia, 1987  
J.G. Boswell Full Academic Scholarship, 1981 college of choice  
Certificate of Appreciation, The Wildlife Society—Western Section, 2000, 2001  
Northern California Athletic Association Most Valuable Cross Country Runner, 1984  
American Legion Award, Corcoran High School, 1981, and John Muir Junior High, 1977  
CIF Section Champion, Cross Country in 1978  
CIF Section Champion, Track & Field 2 mile run in 1981  
National Junior Record, 20 kilometer run, 1982  
National Age Group Record, 1500 meter run, 1978

**Community Activities**

District 64 Little League Umpire, 2003-2007  
Dixon Little League Umpire, 2006-07  
Davis Little League Chief Umpire and Board member, 2004-2005  
Davis Little League Safety Officer, 2004-2005  
Davis Little League Certified Umpire, 2002-2004  
Davis Little League Scorekeeper, 2002  
Davis Visioning Group member  
Petitioner for Writ of Mandate under the California Environmental Quality Act against City of Woodland decision to approve the Spring Lake Specific Plan, 2002  
Served on campaign committees for City Council candidates

# Exhibit B



Technical Consultation, Data Analysis and  
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April 30, 2020

Paige Fennie  
Lozeau | Drury LLP  
1939 Harrison Street, Suite 150  
Oakland, CA 94612

**Subject:           Comments on Times Mirror Square Project (SCH No. 2017061083)**

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Dear Ms. Fennie,

We have reviewed the March 2020 Responses to Lozeau Drury LLP Letter (“Responses”) and Final Environmental Impact Report (“FEIR”) for the Times Mirror Square Project (“Project”) located in the City of Los Angeles (“City”). After our review of the FEIR and Responses, we find that the FEIR is insufficient in addressing our concerns regarding the Project’s Air Quality and Greenhouse Gas impacts. As we asserted in our October 2019 comment letter, an updated CEQA analysis should be prepared to adequately evaluate the Project’s potential impacts.

## **Air Quality**

### **Unsubstantiated Input Parameters Used to Estimate Emissions**

In our October 15<sup>th</sup> comment letter, we identified several issues with the DEIR’s air model (California Emissions Estimator Model, “CalEEMod”)<sup>1</sup> that artificially reduced the Project’s construction and operational emissions. After review of the Responses to our comments, we maintain that the analysis fails to address all of our concerns regarding the Project’s flawed CalEEMod air model and fails to accurately estimate the Project’s criteria air pollutant emissions. As such, we find the responses within the Responses to be inadequate and maintain that an updated, Project-specific EIR should be prepared to adequately evaluate the Project’s local and regional air quality impacts. Until a proper analysis is conducted, the Project should not be approved.

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<sup>1</sup> <http://caleemod.com/>

### *Unsubstantiated Application of Fuel Type Mitigation Measure*

As discussed in our October 15<sup>th</sup> letter, the DEIR's CalEEMod model included an unsubstantiated change to the fuel type of two pieces of off-road construction equipment, from diesel to electrical. Review of the Responses demonstrates that the Project again failed to justify these fuel type changes. As discussed below, we find the Response to be inadequate and maintain that the air quality impact significance determination is unsubstantiated.

Regarding the unsubstantiated change to the fuel type of the required off-road construction equipment, the Responses state:

“As shown in Appendix C-2, the two types of equipment include signal boards and cranes (a total of 11 equipment in the CalEEMod output files). This is reflected in the CalEEMod output files with two rows that indicates two equipment types with electrical, rather than the default diesel fuel type (i.e., indicated as two rows in the CalEEMod output file with “electrical” as the fuel type). The CalEEMod output files rows for the number of equipment mitigated (below the fuel type rows) include equipment that would incorporate Tier 4 Final equipment as per MM-AQ-1

MM-AQ-1 requires that tower cranes and signal boards utilize electricity from power poles or alternative fuels (i.e., non-diesel) rather than diesel power generators and/or gasoline power generators. Electric tower cranes and signal boards are available and are commonly used types of construction equipment. Furthermore, this type of measure is commonly used for development projects in Los Angeles. The requirements of MM-AQ-1 will be included in applicable bid documents, and the successful contractor(s) must demonstrate the ability to supply such equipment. The Project will require the use of many pieces of construction equipment and will require a contractor with a large or medium fleet. Thus, it is expected that the successful contractor(s) would be capable of supplying the required equipment. Therefore, it is feasible for the Project to utilize and incorporate electrical equipment for Project construction as required in MM-AQ-1” (p. 2-50).

However, we find this response to be insufficient for three reasons.

First, while “MM-AQ-1 requires that tower cranes and signal boards utilize electricity,” MM-AQ-1 fails to specify how many pieces of off-road construction equipment would utilize electricity rather than diesel. While review of Appendix C-2 demonstrates that the construction assumptions indicate that 11 pieces of off-road construction equipment would be electric, this does not provide adequate justification (Appendix C, pp. 132). The DEIR and Project documents should substantiate the construction assumptions inputted into the model. Just because it is assumed by the model that 11 pieces of off-road construction equipment would be electric, this does not demonstrate that the Project has committed to the implementation and enforcement of the measure. As a result, we find the response to be insufficient and maintain that the fuel type changes are unjustified.

Second, review of the Project's CalEEMod output files demonstrates that the fuel type for 16 pieces of construction equipment, instead of 11 as indicated by the Responses, were manually changed from diesel to electrical (see excerpt below) (Appendix C, pp. 136, 182).

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

As you can see in the excerpt above, the model assumes that 16 pieces of construction equipment, as opposed to 11 as indicated by Appendix C-2 and the Responses. As a result, we find the response to be insufficient and maintain that the fuel type changes are unjustified.

Third, while the Responses claim that “[e]lectric tower cranes and signal boards are available and are commonly used types of construction equipment,” the Responses fails to provide a citation for this claim. Simply stating that electric tower cranes and signal boards are available and commonly used does not demonstrate feasibility. As a result, we find the response to be insufficient and maintain that the fuel type changes are unjustified.

### *Unsubstantiated Changes to Indoor and Outdoor Water Use Rates*

In our October 15<sup>th</sup> letter, we found that the DEIR’s CalEEMod model included several unsubstantiated changes to the Project’s indoor and outdoor water use rates. Review of the Responses demonstrates that the Project again failed to justify these changes. As discussed below, we find the Response to be inadequate and maintain that the air quality impact significance determination is incorrect and unsubstantiated in the FEIR.

Regarding the unsubstantiated change to the indoor and outdoor water use rates, the Responses state:

“[T]he default water rates in CalEEMod were adjusted with Project-specific information for water usage from the Project’s Water Supply Assessment approved by the Los Angeles Department of Water and Power (LADWP), which is further discussed in the Section IV.R, Water Supply, of the Draft EIR. The Water Supply Assessment also includes conservation commitments, which are provided as Project Design Feature PDF-WS-1 in the Draft EIR, which will help achieve the Project-specific water reductions. For example, in the operational CalEEMod files provided in Appendix C (C-3, Project Operational Emissions), and as shown in the excerpt in the comment, the residential water usage rate of 41,370,819.10 gallons per year is based on the water demand rate shown in Table IV.R-4 of 116,446 gallons per day. When considering the total additional water conservation of 5,935 gallons per day across all Project uses, a portion of which was allocated as water savings to the residential water usage, and multiplying by 365 days per year, the residential use was calculated as 41,370,819.10. Similar calculations were made for the residential amenity uses and non-residential uses. As a result, the Project’s water demand and associated water-related emissions calculations for the Project are justified and accurate. No changes to the air quality analysis are warranted” (p. 2-53).

However, we find this response to be insufficient.

As previously stated in our October 15<sup>th</sup> letter, review of the Project’s CalEEMod output files demonstrates that numerous indoor water use rates were changed from their default values (see excerpt below) (Appendix C, pp. 262, 273).

Table Name	Column Name	Default Value	New Value
tbiWater	IndoorWaterUseRate	73,428,586.88	41,370,819.10
tbiWater	IndoorWaterUseRate	50,670,114.22	22,622,497.88
tbiWater	IndoorWaterUseRate	1,515,247.35	4,209,271.08
tbiWater	IndoorWaterUseRate	16,205,664.91	4,236,560.43
tbiWater	IndoorWaterUseRate	6,738,448.42	1,761,629.58
tbiWater	IndoorWaterUseRate	6,163,410.74	3,967,634.18
tbiWater	IndoorWaterUseRate	0.00	511,321.06

As you can see in the excerpt above, the indoor water use rate values were manually changed, for a total of 78,679,733.31 gallons per year (“gpy”).<sup>2</sup> However, review of the WSA’s Estimated Project Water Demand demonstrates that this value is underestimated (see excerpt below) (WSA, p. IV.R-330, Table IV.R-4).

<b>Proposed Subtotal</b>	<b>308,862</b>	<b>58,801</b>	<b>250,061</b>	<b>280.13</b>
<b>Less Existing to be Removed Total</b>			<b>-20,137</b>	<b>-22.56</b>
<b>Less Additional Conservation<sup>o</sup></b>			<b>-5,935</b>	<b>-6.65</b>
<b>Net Additional Water Demand</b>			<b>223,990</b>	<b>250.92</b>
<b>Existing Water Demand to Remain</b>			<b>32,079</b>	<b>35.94</b>
<b>Total Water Demand Upon Project Buildout (Net + Existing)</b>			<b>256,069</b>	<b>286.86</b>

As you can see in the excerpt above, the total water demand for the proposed Project is 256,069 gallons per day (“gpd”), or 93,465,185 gpy.<sup>3</sup> Thus, the 78,679,733.31 gpy included in the model is underestimated by approximately 14,785,452 gpy. It is also important to note that the calculations provided in the WSA already include a reduction to the Project’s water use to account for conservation (see excerpt above, “Less Additional Conservation”), contrary to the Response’s claim otherwise.

Furthermore, the Response’s calculations are incorrect for two reasons. First, as previously mentioned, the WSA’s estimated Project Water Demand already includes a conservation reduction. Second, a daily water demand of 116,446 gpd correlates to a yearly demand of 42,502,790 gpy.<sup>4</sup> Thus, as you can see, the residential water demand in the model is underestimated by approximately 1,131,971 gpy, contrary to the claims made by the Response.

As the indoor water use rates manually inputted into the model underestimate the anticipated Project’s water demand by 14,785,452 gpy, which already accounts for the existing removed and conservation

<sup>2</sup> Calculated: 41,370,819.10 + 22,622,497.88 + 4,209,271.08 + 4,236,560.43 + 1,761,629.58 + 3,967,634.18 + 511,321.06 = 78,679,733.31 gallons per year

<sup>3</sup> Calculated: (256,069 gpd) x (365 days per year) = 93,465,185 gpy

<sup>4</sup> Calculated: (116,446 gpd) x (365 days per year) = 42,502,790 gpy

reductions, the model underestimates the proposed Project’s water-related operational emissions and should not be relied upon to determine Project significance.

### Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

As discussed in our October 15<sup>th</sup> letter, the DEIR incorrectly concluded that the Project would have a less than significant health risk impact without conducting a quantified construction and operational health risk assessment (“HRA”). In response, the FEIR prepared construction and operational HRAs, provided as Appendix A to the FEIR, and the Responses conclude that the maximum combined construction and operational cancer risk would be 0.47 in one million (p. 2-74). However, we find the FEIR’s construction and operational HRAs to be incorrect for three reasons.

First, the construction and operational HRAs both rely upon and incorrect and underestimated daily breathing rates. Review of the Project’s construction and operational HRA, provided as Appendix A to the FEIR, demonstrates that the excess cancer risk posed to nearby receptors was calculated assuming a daily breathing rate of 302 L/kg per day (see excerpt below) (Appendix A, pp. 7).

Parameter		Emissions Group			Total
		1 (0.25 years)	2 (2 years)	3 (67.75 years)	
DBR	Daily Breathing Rate (L/kg (body weight) per day)	302	302	302	70
A	Inhalation absorption factor (default = 1).	1	1	1	
EF	Exposure Frequency (days/year)	350	350	350	
ED	Exposure Duration (years)	0.25	2	67.75	
FAH	Fraction of Time at Home	1.0	1.0	1.0	
AT	Averaged Exposure Time Period (days)	25550	25550	25550	

As you can see in the excerpt above, the FEIR’s health risk calculations assumed a daily breathing rate of 302 L/kg per day for all age groups. However, this is inconsistent with SCAQMD guidance, which states that:

“For residential exposures, the breathing rates are determined for specific age groups (i.e., third trimester, 0-2, 2-16, and 16-30 years). CARB is developing an updated Risk Management Policy (RMP) that includes recommendations for inhalation exposures. Information regarding CARB’s RMP can be located at: <http://www.arb.ca.gov/toxics/toxics.htm>. For residential exposures, CARB’s RMP recommends using the high end DBR (e.g., 95th percentile) for children from the third trimester through age 2, and 80th percentile DBR for all other ages” (p. 6).<sup>5</sup>

Thus, the FEIR’s construction and operational HRA should have used 361 L/kg per day for the third trimester of pregnancy (0.25 years), 1,090 L/kg per day for the infantile stages of life (0-2 years), 572 L/kg per day for the child stages of life (2-16 years), and 361 L/kg per day for the third trimester of

<sup>5</sup> “RISK ASSESSMENT PROCEDURES for Rules 1401, 1401.1 and 212.” SCAQMD, September 2017, available at: <http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12>, p. 6.

pregnancy (0.25 years), as well as 261 L/kg per day and 233 L/kg per day for the adult stages of life (16-30 and 30-70 years, respectively) (see excerpt below).<sup>6</sup>

**Table 5.7 Daily Breathing Rate Distributions by Age Group for Residential Stochastic Analysis (L/kg BW-day)**

	3 <sup>rd</sup> Trimester	0<2 years	2<9 years	2<16 years	16<30 years	16-70 years
Distribution	Max extreme	Max extreme	Max extreme	Log-normal	Logistic	Logistic
Minimum	78	196	156	57	40	13
Maximum	491	2,584	1,713	1,692	635	860
Scale	59.31	568.09	125.59		40.92	36.19
Likeliest	191.50	152.12	462.61			
Location				-144.06		
Mean	225	658	535	452	210	185
Std Dev	72	217	168	172	75	67
Skewness	0.83	2.01	1.64	1.11	0.83	1.32
Kurtosis	3.68	10.61	7.88	6.02	5.17	10.83
<b>Percentiles</b>						
5%	127	416	328	216	96	86
10%	142	454	367	259	118	104
25%	179	525	427	331	161	141
50%	212	618	504	432	207	181
75%	260	723	602	545	252	222
80%	273	758	631	572	261	233
90%	333	934	732	659	307	262
95%	361	1090	861	745	335	290
99%	412	1430	1140	996	432	361

By failing to use the correct daily breathing rates, the FEIR is inconsistent with SCAQMD guidance and underestimates the Project’s health risk impact. As a result, the FEIR’s construction and operational HRA should not be relied upon to determine the significance of the Project’s health risk impact.

Second, while the FEIR conducted an HRA for the increased cancer risk due to operational diesel mobile-source emissions, provided as Appendix A to the FEIR, the HRA failed to include the Project’s *entire* operational emissions. According to the CalEEMod User’s Guide, a Project’s operational emissions include the following sources: on-road mobile vehicle traffic, off-road equipment used during operation, landscaping equipment, emergency generators, fire pumps, process boilers, consumer products, parking lot degreasers, fertilizers/pesticides, cleaning supplies, wood stoves and hearth usage, electricity usage in buildings, electricity usage from lighting in parking lots and lighting, ventilation and elevators for parking, water usage, and solid waste disposal.<sup>7</sup> Thus, by only conducting an HRA for the Project’s operational *mobile* emissions, the model underestimates the Project’s operational emissions and excess cancer risk to nearby sensitive receptors. Thus, the FEIR cannot conclude less than significant health risk impacts resulting from the Project without quantifying emissions and the excess cancer risk to nearby sensitive receptors resulting from the Project’s *entire* operational emissions.

<sup>66</sup> “Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>

<sup>7</sup> “CalEEMod User’s Guide.” CAPCOA, November 2017, available at: <http://www.caleemod.com/>, p. 2.

Third, the operational HRA relies upon an unsubstantiated and underestimated number of diesel motor vehicle trips. Review of the operational HRA demonstrates that emission rates were calculated assuming 294 daily one-way trips (see excerpt below) (Appendix A, pp. 12).

Operational Activity	Equipment Type	Days per Year (days/year)	Hours per Day (hours/day)	Emission Factor Year	Daily One-Way Vehicle Trips	One-Way Trip Distance per Day* (miles)	DPM Running Emissions Factor* (grams/mile)	Emissions Rate (grams/second)
I. Diesel-fuel motor vehicles	Motor Vehicle Fleet	365	24	2023	294	0.590	1.24E-02	2.49E-05

Notes:  
a. The portion of the on-road trip length within a 1/4 mile of the Project Site. Based on a one-way travel distance towards or away from the Project Site conservatively assuming travel occurs on a north-south street (for "300 meters) and an east-west street (for "400 meters).  
b. California Air Resources Board, EMFAC on-road vehicle emissions model.  
Source: ESA 2019

As you can see in the excerpt above, the FEIR’s operational HRA calculated an operational emission rate assuming 294 daily one-way trips. However, this is incorrect. Review of the Project’s Vehicle Trip Generation Estimate demonstrates that the proposed Project is expected to generate 10,817 daily trips (see excerpt below) (p. IV.P-48-49, Table IV.P-8).

**TABLE IV.P-8  
VEHICLE TRIP GENERATION ESTIMATE**

Land Use	Unit/Size	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
High-Rise Residential (ITE 222,232) <sup>a</sup>	1,127 du	4,733	73	310	383	265	163	428
<i>Less Internal Capture<sup>b</sup></i>		(852)	(2)	(15)	(17)	(107)	(70)	(177)
Office (ITE 710)	307.3 ksf	3,389	422	57	479	78	380	458
<i>Less Internal Capture<sup>b</sup></i>		(339)	(35)	(24)	(59)	(22)	(45)	(67)
<i>Less Transit Credit<sup>c</sup></i>		(488)	(97)	(8)	(105)	(14)	(84)	(98)
Supermarket (ITE 850)	50.0 ksf	5,112	105	65	170	242	232	474
<i>Less Internal Capture<sup>b</sup></i>		(1,585)	(15)	(20)	(35)	(98)	(132)	(230)
<i>Less Transit Credit<sup>c</sup></i>		(388)	(23)	(11)	(34)	(36)	(25)	(61)
<i>Less Pass-by<sup>d</sup></i>		(1,255)	(26)	(13)	(39)	(43)	(30)	(73)
Quality Restaurant (ITE 931) <sup>h</sup>	53.4 ksf	4,802	24	19	43	268	132	400
<i>Less Internal Capture<sup>b</sup></i>		(1,729)	(18)	(9)	(27)	(101)	(82)	(183)
<i>Less Transit Credit<sup>c</sup></i>		(307)	(2)	(3)	(5)	(42)	(13)	(55)
<i>Less Pass-by<sup>d</sup></i>		(276)	0	0	0	(12)	(3)	(15)
<b>SUBTOTAL – PROJECT</b>		<b>10,817</b>	<b>406</b>	<b>348</b>	<b>754</b>	<b>378</b>	<b>423</b>	<b>801</b>

As you can see in the excerpt above, the Project’s Vehicle Trip Generation Estimate estimates a daily trip value of 10,817. Assuming a truck fleet mix of 44%, consistent with the fleet mix utilized in the Project’s

CalEEMod model, the Project would be expected to generate 4,759.48<sup>8</sup> daily truck trips, 4,465.8 more trips than the 294 trips assumed by the FEIR's operational HRA. As the FEIR fails to provide a citation or explain how the value of 294 daily one-way trips was calculated, we find that the operational HRA may significantly underestimate the Project's mobile-related operational health risk.

For these reasons, we find the FEIR's construction and operational HRAs to be insufficient and maintain that the Project's health risk impact has not been adequately evaluated.

## Greenhouse Gas

### Failure to Adequately Evaluate Greenhouse Gas Impacts

In our October 15<sup>th</sup> letter, we found that the DEIR incorrectly relied upon CARB's 2017 Scoping Plan, SCAG's 2016 RTP/SCS, the City's *LA Green Plan*, and Sustainable City pLAN to determine Project significance. We also found that while the DEIR quantified GHG emissions for the proposed Project, the DEIR failed to compare the Project's emissions to the appropriate SCAQMD bright-line and service population efficiency thresholds. In our October 15<sup>th</sup> letter, we conducted an updated GHG analysis, which demonstrated that the Project's emissions significantly exceed the applicable SCAQMD bright-line and efficiency thresholds. Thus, our analysis provided substantial evidence that the Project's GHG emissions would result in a potentially significant impact. Review of the documentation reveals that the Responses and FEIR continue to claim that the Project's GHG impact will be less than significant, without providing an adequate analysis of the Project. Specifically, the Responses state,

“[I]n the absence of any adopted quantitative threshold, the City has determined that the Project would not have a significant effect on the environment if the Project is found to be consistent with applicable regulatory plans and policies to reduce GHG emissions, including the emissions reduction measures discussed within CARB's Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, and the City's LA Green Plan, Sustainable City pLAN, and Green Building Code. Therefore, if the Project does not conflict with these plans, the City will be able to achieve its GHG reduction goals, and, therefore, these plans can be used at a project level to show a project's consistency with the plans” (p. 2-84).

However, the above claim is incorrect for several reasons:

- (1) CARB's Scoping Plan, 2016–2040 RTP/SCS, LA Green Plan, and Sustainable City pLAN cannot be relied upon to determine Project significance;
- (2) Incorrect reliance on the LA Green Plan;
- (3) Incorrect reliance on the Sustainable City pLAN;
- (4) Incorrect reliance on CARB's 2017 Scoping Plan;
- (5) Incorrect Reliance on SCAG's 2016-2040 RTP/SCS;
- (6) Failure to demonstrate consistency with the CARB Scoping Plan or SCAG's 2016 RTP/SCS;
- (7) Failure to apply the relevant SCAQMD threshold;
- (8) Incorrect and unsubstantiated air model demonstrates a potentially significant GHG impact; and

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<sup>8</sup> Calculated: (10,817 total daily trips) x (44% trucks) = 4,759.5 daily truck trips

(9) SWAPE’s updated analysis demonstrates a potentially significant GHG impact.

*(1) The City’s LA Green Plan and Sustainable City pLAn Cannot Be Relied Upon to Determine Project Significance*

As discussed in our October 15<sup>th</sup> letter, the City’s *LA Green Plan* and *Sustainable City pLAn* fail to qualify as plans for the reduction of greenhouse gas emissions. According to CEQA Guidelines § 15183.5,

“Plans for the Reduction of Greenhouse Gas Emissions. Public agencies may choose to analyze and mitigate significant greenhouse gas emissions in a plan for the reduction of greenhouse gas emissions or similar document. A plan to reduce greenhouse gas emissions may be used in a cumulative impacts analysis as set forth below. Pursuant to sections 15064(h)(3) and 15130(d), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan or mitigation program under specified circumstances.

- (1) Plan elements. A plan for the reduction of greenhouse gas emissions should:
  - (A) Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
  - (B) Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emission from activities covered by the plan would not be cumulatively considerable;
  - (C) Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area;
  - (D) **Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;**
  - (E) Establish a mechanism to monitor the plan’s progress toward achieving the level and to require amendment if the plan is not achieving specified levels” (emphasis added)

Here, as previously stated, the Project documents fail to prove that the City’s *LA Green Plan* and *Sustainable City pLAn* contain the above-listed features, as required by CEQA to qualify as GHG reduction plans. As such, the FEIR and Response again leaves an analytical gap showing that compliance with these plans can be used for use in project-level greenhouse gas analysis. Thus, consistency with these plans should not be used to determine the significance of the proposed Project’s GHG impact.

*(2) Incorrect Reliance on the LA Green Plan*

As discussed in our October 15<sup>th</sup> letter, the DEIR relies upon Project consistency with the City’s *LA Green Plan* to determine the significance of the Project’s GHG impact. However, this is incorrect for two reasons.

First, review of the DEIR’s discussion of the City’s *LA Green Plan* demonstrates that the measures discussed are predominantly city-level actions or measures. Specifically, the DEIR states that the scope

of measures included in the plan “range from those impacting only municipal facilities, such as retrofitting City Hall with high efficiency lighting systems, to those facilitating changes in the private sector, such as rebates for the purchase of energy-efficient appliances” (p. IV.E-21). As you can see, the DEIR acknowledges that the City’s *LA Green Plan* contains City-level measures. The DEIR goes on to state that several of the measures discussed “primarily applies to the City and LADWP” (p. IV.E-66, Table IV.E-7). Furthermore, according to the City’s *LA Green Plan*, “[t]his plan details innovative steps for **city departments and agencies** to reduce greenhouse gas (GHG) emissions and create a more sustainable environment.”<sup>9</sup> Thus, you can see that the *LA Green Plan* includes city-wide initiatives, not project-level measures. Furthermore, the *LA Green Plan* also fails to include performance standards to be implemented on a project-by-project basis.

Second, review of the City’s *LA Green Plan* demonstrates that the plan is outdated and inapplicable to the proposed Project. Specifically, the plan was adopted in 2007 and its implementation program, ClimateLA, was adopted in 2008 (IV.E-21). This was over 12 years ago, and as such, is outdated. In addition, ClimateLA is no longer available on the City’s website, where the DEIR cited it, and thus, we are unable to verify the source.

As the City’s *LA Green Plan* is outdated and fails to include project-level measures, as required by CEQA Guidelines § 15183.5(1)(d), the Project’s reliance on the City’s *LA Green Plan* is incorrect, and the less than significant GHG impact determination should not be relied upon.

### *(3) Incorrect Reliance on the Sustainable City pLAN*

As discussed in our October 15<sup>th</sup> letter, the DEIR and FEIR rely upon Project consistency with the *Sustainable City pLAN* to determine the Project’s GHG significance. However, this is incorrect for two reasons.

First, the April 2015 Sustainable City pLAN referenced in the DEIR, FEIR, and Response is outdated and superseded by the L.A. Green New Deal. According to the L.A. Green New Deal:

“When the Mayor released the first Sustainable City pLAN in 2015 he committed to annual progress reports and a major update to the pLAN every four years...This report is the first four-year update to the 2015 pLAN. It augments, expands, and elaborates in even more detail L.A.’s vision for a sustainable future and it tackles the climate emergency with accelerated targets and new aggressive goals. This is L.A.’s Green New Deal.”<sup>10</sup>

As you can see in the excerpt above, the *Sustainable City pLAN* requires a major update every 4 years and has been replaced by the *LA Green New Deal*. As such, the Project’s reliance on the *Sustainable City pLAN* and GHG significance determination is incorrect.

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<sup>9</sup> “Green LA: An Action plan to Lead the Nation In Fighting Global Warming.” City of Los Angeles, May 2007, available at: [https://handels.gu.se/digitalAssets/1344/1344086\\_la\\_climatechange\\_final\\_1.pdf](https://handels.gu.se/digitalAssets/1344/1344086_la_climatechange_final_1.pdf), p. 3.

<sup>10</sup> “L.A.’s Green New Deal.” 2019, available at: [http://plan.lamayor.org/sites/default/files/pLAN\\_2019\\_final.pdf](http://plan.lamayor.org/sites/default/files/pLAN_2019_final.pdf), p. 8.

Second, both the *Sustainable City pLAN* and the *L.A. Green New Deal* fail to include project-level measures for land use development projects.<sup>11</sup> Regarding the Project’s consistency with the Sustainable City pLAN, the DEIR states:

“The *Sustainable City pLAN* is a comprehensive and actionable directive from the Mayor to improve the environmental, economic, and equitable conditions in the City of Los Angeles. The pLAN is a tool that **the Mayor will use to manage the City and establish visions, goals, and metrics for City Departments**. The Sustainable City pLAN sets targets to reduce GHG emissions below the 1990 baseline by 34 percent by 2025, 60 percent by 2035, and 80 percent by 2050, and **establishes the following visions for City departments**” (emphasis added) (p. IV.E-21 – IV.E-22).

As you can see, the *Sustainable City pLAN* contains city-level goals, not project-level measures. Similarly, review of the *L.A. Green New Deal* demonstrates that it also fails to include project-level measures. The *Sustainable City pLAN* also fails to include performance standards to be implemented on a project-by-project basis. As a result, the Project’s reliance on the *Sustainable City pLAN* is incorrect and the DEIR and FEIR’s GHG significance determination should not be relied upon.

#### *(4) Incorrect Reliance on CARB’s 2017 Scoping Plan*

As discussed in our October 15<sup>th</sup> letter, the DEIR and FEIR rely upon Project consistency with CARB’s 2017 *Scoping Plan* to determine the Project’s GHG significance. However, this is incorrect.

According to the *Scoping Plan*,

“CARB recommends that local governments evaluate and adopt robust and quantitative locally-appropriate goals that align with the statewide per capita targets and the State’s sustainable development objectives and develop plans to achieve the local goals... Sufficiently detailed and adequately supported **GHG reduction plans (including CAPs) also provide local governments** with a valuable tool for streamlining project-level environmental review. Under CEQA, individual projects that comply with the strategies and actions within an adequate local CAP can streamline the project-specific GHG analysis. The California Supreme Court recently called out this provision in CEQA as allowing tiering from a geographically specific GHG reduction plan” (emphasis added).<sup>12</sup>

Furthermore, according to the DEIR,

“The 2017 Scoping Plan outlines the **strategies the State will implement** to achieve the 2030 GHG reduction target of 40 percent below 1990 levels, which build on the Cap-and-Trade Regulation, the LCFS [Low Carbon Fuel Standard], improved vehicle, truck, and freight movement emission standards, increasing renewable energy, and strategies to reduce methane emissions from

<sup>11</sup> “L.A.’s Green New Deal.” 2019, available at: [http://plan.lamayor.org/sites/default/files/pLAN\\_2019\\_final.pdf](http://plan.lamayor.org/sites/default/files/pLAN_2019_final.pdf), p. 8.

<sup>12</sup> California Air Resources Board (“CARB”) (Jan. 2017) 2017 Scoping Plan, available at: [https://ww3.arb.ca.gov/cc/scopingplan/2030sp\\_appb\\_localaction\\_final.pdf](https://ww3.arb.ca.gov/cc/scopingplan/2030sp_appb_localaction_final.pdf), p. 101.

agricultural and other wastes by using it to meet our energy needs” (emphasis added) (p. IV.E-9 – IV.E-10).

As you can see, CARB’s 2017 *Scoping Plan* contains state-level measures, not project-level measures. The *Scoping Plan* also fails to include performance standards to be implemented on a project-by-project basis. As such, the Project’s reliance on CARB’s 2017 *Scoping Plan* is incorrect and the FEIR’s GHG significance determination should not be relied upon.

#### *(5) Incorrect Reliance on SCAG’s 2016-2040 RTP/SCS*

As discussed in our October 15<sup>th</sup> letter, the DEIR and FEIR rely upon Project consistency with SCAG’S 2016-2040 *RTP/SCS* to determine the Project’s GHG significance. However, this is incorrect.

Review of the *RTP/SCS* reveals that the plan applies to city-level measures, rather than project-level measures. Specifically, according to the *RTP/SCS*,

“[P]rogram-level performance-based mitigation measures designed to offset any identified potentially significant adverse programmatic level environmental effects are summarized below. Project-level environmental mitigation should be appropriately identified and prepared by implementing agencies on a project-by-project or site-by-site basis as projects proceed through the design and decision-making process” (emphasis added).<sup>13</sup>

As you can see, SCAG’s *RTP/SCS* contains program-level measures, not project-level measures. The *RTP/SCS* also fails to include performance standards to be implemented on a project-by-project basis. As such, the Project’s reliance on SCAG’s *RTP/SCS* is incorrect and the FEIR’s GHG significance determination should not be relied upon.

#### *(6) Failure to Demonstrate Consistency with CARB’s 2017 Scoping Plan and SCAG’s 2016–2040 RTP/SCS*

As previously stated, the DEIR, FEIR, and Response claim that the proposed Project is consistent with CARB’s *Climate Change Scoping Plan* and SCAG’s 2016–2040 *RTP/SCS*, and as a result, the Project will result in less than significant GHG impacts. However, review of the aforementioned plans reveals that the Project is inconsistent with several goals and policies of the plans. Despite the fact that these plans are not project-level, as discussed above, the proposed Project claims to be consistent with the measures outlined in these plans. However, review of the measures reveals that the proposed Project is inconsistent with several of the measures, including but not limited to those listed below:

#### CARB 2017 Scoping Plan<sup>14</sup>

<sup>13</sup> Southern California Association of Governments (“SCAG”) (Apr. 2016) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, *available at*:

[https://ww3.arb.ca.gov/cc/scopingplan/2030sp\\_appb\\_localaction\\_final.pdf](https://ww3.arb.ca.gov/cc/scopingplan/2030sp_appb_localaction_final.pdf), p.115.

<sup>14</sup> California Air Resources Board (“CARB”) (Jan. 2017) 2017 Scoping Plan, Appendix B-Local Action, *available at*: [https://ww3.arb.ca.gov/cc/scopingplan/2030sp\\_appb\\_localaction\\_final.pdf](https://ww3.arb.ca.gov/cc/scopingplan/2030sp_appb_localaction_final.pdf), p. 8-10.

Measures – Construction	
Enforce idling time restrictions for construction vehicles	Here, while the DEIR states that “[t]he Project would be consistent with the CARB Air Toxics Control Measure to limit heavy duty diesel motor vehicle idling to no more than 5 minutes,” this measure is not included in the FEIR’s Mitigation Monitoring Program (“MMP”) (p. IV.E-47, Table IV.E-4). As such, the proposed Project fails to commit to the implementation, monitoring, and enforcement of this measure and is not consistent as a result.
Require construction vehicles to operate with the highest tier engines commercially available	Here, MM-AQ-1(a) of the MMP states that “[o]ff-road diesel-powered equipment equal to or greater than 50 horsepower that will be used during any portion of the construction activities shall meet or exceed the Tier 4 standards” (MMP, p. 4-8). However, this does not require the <b>highest</b> tier, as Tier 4 includes both Tier 4 <u>Interim</u> and Tier 4 <u>Final</u> . As Tier 4 <u>Interim</u> engines have higher emissions than Tier 4 <u>Final</u> engines, requiring <u>general</u> Tier 4 and not specifying Tier 4 <u>Final</u> allows construction vehicles to operate without the highest tier engines commercially available. Thus, the proposed Project is not consistent with this measure.
Divert and recycle construction and demolition waste, and use locally-sourced building materials with a high recycled material content to the greatest extent feasible	Here, the DEIR acknowledges that the Scoping Plan “[r]equires a minimum of 50 percent recycle or reuse of nonhazardous construction and demolition debris” and states that “[t]he Project would meet or exceed this requirement as part of its compliance with the City’s requirements and the CALGreen Code” (p. IV.E-43, Table IV.E-4). However, the DEIR fails to elaborate on <i>how</i> the proposed Project will “meet or exceed” 50 percent recycling. In addition, the Project fails to commit to the implementation, monitoring, and enforcement of this measure, as the MMP fails to mention or include the recycling of construction or demolition waste. Thus, the proposed Project is not consistent with this measure.
Require diesel equipment fleets to be lower emitting than any current emission standard	Here, while MM-AQ-1(a) requires the use of Tier 4 engines, the measure fails to require <i>the most efficient, lowest-emitting</i> Tier 4 <u>Final</u> engines, as previously stated (MMP, p. 4-8). In addition, the DEIR states that the Project “would not conflict with implementation of the vehicle emissions standards,” but fails to indicate that they would be required to be lower emitting than current

	standards. As such, the proposed Project is not consistent with this measure.
<b>Measures – Operation</b>	
Comply with lead agency’s standards for mitigating transportation impacts under SB 743	Here, the DEIR states “Because the Project comprises mixed uses including residential uses, and the Project Site is a previously developed “infill” site located within 750 feet of Metro’s Los Angeles Civic Center/Grand Park Station and directly across W. 2nd Street from Metro’s 2nd Street and Broadway Station (currently under construction), the Project meets the criteria of SB 743” (p. II-13). However, this fails to address the <b>lead agency’s</b> standards for mitigating transportation impacts under SB 743. Specifically, the LADOT has most recently released its Transportation Assessment Guidelines (TAG) in July 2019. The TAG document relies upon the California Office of Planning and Research (OPR) 2018 Technical Advisory, which “recommends that a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold.” <sup>15</sup> According to the LADOT’s TAG document, “[t]he California Natural Resources Agency certified and adopted the CEQA Guidelines in December of 2018, and are now in effect.” <sup>16</sup> In order to comply with the transportation standards under SB 743, the proposed Project should have demonstrated a per capita VMT that is at least 15% below existing development. Thus, the Project is not consistent with this measure.
Require on-site EV charging capabilities for parking spaces serving the project to meet jurisdiction-wide EV proliferation goals.	Here, while the MMP states that “5 percent of the Code-required spaces [would be] further improved with electric vehicle charging stations,” the MMP, DEIR, and FEIR fail to address or mention jurisdiction-wide EV proliferation goals. Considering that LA County’s goal is to have 100 percent of non-emergency light duty vehicle purchases to be zero emission vehicles by 2025 <sup>17</sup> , the proposed Project is not consistent, demonstrating only a 5 percent commitment to

<sup>15</sup> “Technical Advisory on Evaluating Transportation Impacts in CEQA” California Office of Planning and Research (OPR), December 2018, available at: [http://opr.ca.gov/docs/20190122-743\\_Technical\\_Advisory.pdf](http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf), p. 10.

<sup>16</sup> “Transportation Assessment Guidelines” Los Angeles Department of Transportation (LADOT), July 2019, available at: [https://ladot.lacity.org/sites/default/files/documents/ta\\_guidelines\\_-20190731\\_0.pdf](https://ladot.lacity.org/sites/default/files/documents/ta_guidelines_-20190731_0.pdf), p. 15.

<sup>17</sup> “Electric Vehicles and Charging Stations.” County of Los Angeles, available at: <http://isd.lacounty.gov/electric-vehicles-and-charging-stations/>.

	charging. As such, the proposed Project is not consistent with this measure.
Allow for new construction to install fewer on-site parking spaces than required by local municipal building code, if appropriate	Here, the proposed Project fails to evaluate installing fewer on-site parking than required by the local municipal building code for new construction. As such, the proposed Project is not consistent with this measure.
Provide adequate, safe, convenient, and secure on-site bicycle parking and storage in multi-family residential projects and in non-residential projects	Here, MM-TRAF-1 of the MMP states that the proposed Project “ <u>should include</u> ...Providing “bicycle parking in conformance with Section 12.21 A.16 of the LAMC” (emphasis added) (p. 4-34 – 4-35). However, the DEIR and MMP fail to specify how many spaces this would be or commit to a specific number. The DEIR and MMP also fail to discuss implementation, monitoring, and enforcement of this measure on the Project site. Finally, the DEIR and MMP fail to address or discuss storage beyond parking. As such, the proposed Project is not consistent with this measure.
Require on-site renewable energy generation	Here, while the DEIR discusses the City of Los Angeles Green Building Code, which “emphasizes...increasing renewable energy generation,” the proposed Project fails to require or include on-site renewable energy generation (p. IV.E-90). As such, the proposed Project is not consistent with this measure.
Prohibit wood-burning fireplaces in new development, and require replacement of wood-burning fireplaces for renovations over a certain size developments	Here, while the DEIR states that “[t]he Project will comply with this regulatory mandate [SCAQMD Rule 445]. All cooking stoves would either be electric or natural gas” (p. IV.E-40, Table IV.E-4). However, the MMP fails to include this requirement and as a result, the proposed Project fails to commit to this measure.
Require cool roofs and “cool parking” that promotes cool surface treatment for new parking facilities as well as existing surface lots undergoing resurfacing	Here, the DEIR states that “[s]ome of the Project’s key design features that would contribute to energy efficiencies include...low albedo (high reflectivity) color paving to reduce heat island effect” (p. II-48). However, this measure is not included or mentioned in the MMP. As such, the proposed Project fails to commit to the implementation, monitoring, and enforcement of this measure. In addition, the DEIR fails to elaborate on how much and where this paving would be located on the Project site. As such, the proposed Project is not consistent with this measure.

Require solar-ready roofs	Here, the DEIR states that “Building rooftop areas without landscaping, pool, deck, garden or other improvements will be constructed as solar-ready for the future installation of on-site solar photovoltaic (PV) or solar water heating (SWH) systems as required by the 2016 Title 24 Building Energy Efficiency Standards” (p. IV.E-69 – IV.E-70, Table IV.E-7). However, this measure is not included or mentioned in the MMP. As such, the proposed Project fails to commit to the implementation, monitoring, and enforcement of this measure. In addition, the DEIR fails to elaborate on how much and where this PV-ready roofing would be located. As such, the proposed Project is not consistent with this measure.
Require organic collection in new developments	Here, the DEIR and MMP fail to include or mention organic collection at all. As such, the proposed Project is not consistent with this measure.
Achieve Zero Net Energy performance building standards prior to dates required by the Energy Code	Here, while the DEIR discusses California’s “building energy efficiency programs and initiatives, such as the State’s building energy efficiency standards and zero net energy building goals,” the DEIR and MMP fail to indicate that the proposed Project will achieve, or even attempt to achieve, zero net energy performance building standards, especially prior to required dates (p. IV.E-74). As such, the proposed Project is not consistent with this measure.
Require the design of bike lanes to connect to the regional bicycle network	Here, while the DEIR discusses nearby, existing bike lanes, the DEIR fails to indicate that the proposed Project will include or require the design of bike lanes, or their connection to the regional bicycle network (p. II-9 – II-10). As such, the proposed Project is not consistent with this measure.
Expand urban forestry and green infrastructure in new land development	Here, while the DEIR states that “[t]he Project would provide appropriate landscaping on the Project Site including vegetation,” the MMP fails to substantiate or commit to this measure (p. IV.E-47, Table IV.E-4). Without elaborating upon what “appropriate landscaping” or “vegetation” entail, we cannot verify that this measure will be sufficiently implemented, monitored, and enforced on the Project site. As such, the proposed Project is not consistent with this measure.
Require a transportation management plan for specific plans which establishes a numeric target for non-SOV travel and overall VMT	Here, while MM-TRAF-1 of the MMP states that “[t]he Project Applicant shall submit a comprehensive Transportation Demand

	Management (TDM) Program to promote non-auto travel and reduce single-occupant vehicle trips,” the measure fails to “establish a numeric target,” as required in the Scoping Plan (p. 4-34). As such, the proposed Project is not consistent with this measure.
Develop a rideshare program targeting commuters to major employment centers	Here, MM-TRAF-1 of the MMP states that the “TDM Program <u>should include</u> ...Facilitate rideshare programs with provisions to include on-site transit and rideshare information center” (emphasis added) (p. 4-35). However, the MMP and DEIR fail to elaborate upon these rideshare “programs” and “provisions,” or the “rideshare information center.” As such, we cannot verify that these measures will be implemented, monitored, and enforced on the Project site.
Require the design of bus stops/shelters/express lanes in new developments to promote the usage of mass-transit	Here, the DEIR and MMP fail to mention or require the design of bus stops/shelters/express lanes in the Project’s new development. As such, the proposed Project is not consistent with this measure.
Require gas outlets in residential backyards for use with outdoor cooking appliances such as gas barbeques if natural gas service is available	Here, the DEIR and MMP fail to mention or require gas outlets in residential backyards. As such, the proposed Project is not consistent with this measure.
Require the installation of electrical outlets on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment	Here, while MM-AQ-3 of the MMP requires “that landscaping equipment used on the Project Site be electric- or battery-powered,” the MMP and DEIR fail to mention or require the installation of electrical outlets on the exterior walls of the front and back of residences (p. 4-10). As such, the proposed Project is not consistent with this measure.
Require the design of the electric outlets and/or wiring in new residential unit garages to promote electric vehicle usage	Here, the DEIR and MMP fail to mention or require electric outlets in residential garages. As such, the proposed Project is not consistent with this measure.
Provide electric outlets to promote the use of electric landscape maintenance equipment to the extent feasible on parks and public/quasi-public lands	Here, the DEIR and MMP fail to mention or require electric outlets. As such, the proposed Project is not consistent with this measure.
Require each residential unit to be “solar ready,” including installing the appropriate hardware and proper structural engineering	Here, the DEIR states that “Building rooftop areas without landscaping, pool, deck, garden or other improvements will be constructed as solar-ready for the future installation of on-site solar photovoltaic (PV) or solar water heating (SWH) systems as required by the 2016 Title 24 Building

	Energy Efficiency Standards” (p. IV.E-69 – IV.E-70, Table IV.E-7). However, this measure is not included or mentioned in the MMRP. As such, the proposed Project fails to commit to the implementation, monitoring, and enforcement of this measure. In addition, the DEIR fails to mention or address residential units in regard to being “solar ready,” so we cannot verify that this will occur. As such, the proposed Project is not consistent with this measure.
Require the installation of energy conserving appliances such as on-demand tank-less water heaters and whole-house fans	Here, while PDF WS-1 of the MMP discusses water conservation features of the Project, including high efficiency toilets and ENERGY STAR washers, the DEIR, FEIR, and MMP fail to mention on-demand tank-less water heaters or whole house fans (p. 4-36). Rather, the proposed Project fails to include <i>energy efficient</i> heaters or fans whatsoever, although water efficient appliances are included. As such, we cannot verify that the proposed Project is consistent with this measure.
Require each residential and commercial building equip buildings with energy efficient AC units and heating systems with programmable thermostats/timers	Here, the DEIR, FEIR, and MMP, fail to mention or require energy efficient AC units and heating systems for the proposed Project. The DEIR, FEIR, and MMP also fail to mention or require programmable thermostats/timers. As such, the proposed Project is not consistent with this measure.
Require large-scale residential developments and commercial buildings to report energy use, and set specific targets for per-capita energy use	Here, the DEIR, FEIR, and MMP fail to require the proposed Project to report its energy use. The DEIR, FEIR, and MMP also fail to set specific targets, or indicate that specific targets will be set, for per-capita energy use on the Project site. As such, the proposed Project is not consistent with this measure.
Require the use of energy-efficient lighting for all street, parking, and area lighting	Here, the DEIR states that “[t]he Project would incorporate energy efficient lighting” (p. IV.E-41, Table IV.E-4). However, the DEIR fails to elaborate and the MMP fails to include the measure. As such, the proposed Project fails to commit to the implementation, monitoring, and enforcement of this measure, and thus, we cannot verify that it will actually be required on the Project site.
Require the landscaping design for parking lots to utilize tree cover and compost/mulch	Here, while the DEIR states that “[t]he Project would provide appropriate landscaping on the Project Site including vegetation and approximately 194 trees,” the MMP fails to

	substantiate or commit to this measure (p. IV.E-47, Table IV.E-4). Furthermore, the DEIR, FEIR, and MMP fail to discuss tree <u>cover</u> whatsoever. In addition, the DEIR, FEIR, and MMP fail to mention compost or mulch. As such, the proposed Project is not consistent with this measure.
Incorporate water retention in the design of parking lots and landscaping, including using compost/mulch	Here, the DEIR, FEIR, and MMP fail to address or mention incorporating water retention into the design of parking lots and landscaping. The DEIR and FEIR also fail to mention compost/mulch. As such, the proposed Project is not consistent with this measure.
Require the development project to propose an off-site mitigation project which should generate carbon credits equivalent to the anticipated GHG emission reductions. This would be implemented via an approved protocol for carbon credits from California Air Pollution Control Officers Association (CAPCOA), the California Air Resources Board, or other similar entities determined acceptable by the local air district	Here, the DEIR and FEIR fail to address or mention off-site mitigation projects or the generation of carbon credits. As such, the proposed Project is not consistent with this measure.
Require the project to purchase carbon credits from the CAPCOA GHG Reduction Exchange Program, American Carbon Registry (ACR), Climate Action Reserve (CAR) or other similar carbon credit registry determined to be acceptable by the local air district	Here, the DEIR and FEIR fail to address or mention carbon credits, or the CAPCOA GHG Reduction Exchange Program, American Carbon Registry, Climate Action Reserve, or any other carbon credit registries. As such, the proposed Project is not consistent with this measure.
Consider generating or purchasing local and California-only carbon credits as the preferred mechanism to implement its offsite mitigation measure for GHG emissions and that will facilitate the State's efforts in achieving the GHG emission reduction goal	Here, the DEIR and FEIR fail to address or mention carbon credits, or specifically local and California-only carbon credits. As such, the proposed Project is not consistent with this measure.
<b>SCAG 2016 – 2040 RTP/SCS<sup>18</sup></b>	
<b>Measures – Air Quality (transportation control measures TCM)</b>	
Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas	Here, while the DEIR discusses SCAQMD Rule 403, it fails to include or mention watering trucks to minimize dust in the DEIR, FEIR, or MMP. As such, we cannot verify that the proposed Project will implement, monitor, and enforce the use of watering trucks to minimize dust on the project

<sup>18</sup> Southern California Association of Governments (“SCAG”) (Apr. 2016) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, *available at*: [https://ww3.arb.ca.gov/cc/scopingplan/2030sp\\_appb\\_localaction\\_final.pdf](https://ww3.arb.ca.gov/cc/scopingplan/2030sp_appb_localaction_final.pdf), p.

	site and the Project fails to demonstrate consistency with this measure.
Revegetate disturbed lands, including vehicular paths created during construction to avoid future off-road vehicular activities.	Here, the DEIR, FEIR, and MMP fail to mention or address revegetating disturbed lands or vehicular paths. As such, the proposed Project is not consistent with this measure.
As appropriate, require that portable engine-driven equipment units used at the project work site, with the exception of on-road and offroad motor vehicles, obtain ARB Portable Equipment Registration with the state or local district permit.	Here, the DEIR, FEIR, and MMP fail to mention or require portable engine-drive equipment units to obtain ARB Portable Equipment Registration with the state or local district permit. As such, the proposed Project is not consistent with this measure.
<b>Measures – Greenhouse Gasses</b>	
Incorporate Best Available Control Technology (BACT) during design, construction and operation of projects to minimize greenhouse gas emissions.	Here, while the DEIR states that “[a]ny permit that has a net increase in emissions is required to apply BACT,” the MMP fails to include or mention this measure (p. IV.B-9). As such, we cannot verify that it will be implemented, monitored, and enforced on the Project site. Thus, the proposed Project is not consistent with this measure.
Incorporate design measures to reduce greenhouse gas emissions from solid waste management through encouraging solid waste recycling and reuse.	Here, the DEIR states that “[t]he Project would be served by a solid waste collection and recycling service that would include mixed waste processing, and that yields waste diversion results comparable to source separation and consistent with citywide recycling targets. The Project would also comply with the City of Los Angeles Space Allocation Ordinance (171,687) which requires that developments include a recycling area or a room of a specified size on the Project Site” (p. IVI.E-71, Table IV.E-6). However, the MMP fails to mention or address recycling whatsoever. Furthermore, simply stating that the Project would “be served by a solid waste collection and recycling service” and be “consistent with citywide targets” fails to prove that there would be any project-level measures implemented on the site. In addition, without including any measures in the MMP, we cannot verify that solid waste management through recycling and reuse would be implemented, monitored, and enforced on the Project site. As such, the proposed Project is not consistent with this measure.
Incorporate design measures to reduce energy consumption and increase use of renewable energy	Here, while the DEIR discusses the City of Los Angeles Green Building Code, which “emphasizes...increasing renewable energy generation,” the proposed Project fails to require

	or include on-site renewable energy generation (p. IV.E-90). As such, the proposed Project is not consistent with this measure.
Plant shade trees in or near construction projects where feasible.	Here, while the DEIR states that “[t]he Project would provide appropriate landscaping on the Project Site including vegetation and approximately 194 trees,” the MMP fails to substantiate or commit to this measure (p. IV.E-47, Table IV.E-4). Furthermore, the DEIR, FEIR, and MMP fail to discuss <i>shade</i> trees whatsoever. As such, the proposed Project is not consistent with this measure.
<b>Measures – Transportation, Traffic and Safety</b>	
Encourage bicycling to transit facilities by providing additional bicycle parking, locker facilities, and bike lane access to transit facilities when feasible.	Here, MM-TRAF-1 of the MMP states that the proposed Project “ <u>should include</u> ...Providing “bicycle parking in conformance with Section 12.21 A.16 of the LAMC” (emphasis added) (p. 4-34 – 4-35). However, the DEIR and MMP fail to specify how many spaces this would be or commit to a specific number. The DEIR and MMP also fail to discuss implementation, monitoring, and enforcement of this measure on the Project site. Finally, the DEIR and MMP fail to address or discuss locker facilities or bike lane access to transit facilities. As such, the proposed Project is not consistent with this measure.
Encourage the use of public transit systems by <ul style="list-style-type: none"> <li>enhancing safety and cleanliness on vehicles and in and around stations</li> <li>providing public education and publicity about public transportation services.</li> </ul>	Here, the DEIR and MMP fail to mention or address enhancing safety and cleanliness on vehicles and in and around stations or providing public education about public transportation services. As such, the proposed Project is not consistent with this measure.
Encourage bicycling and walking by <ul style="list-style-type: none"> <li>incorporating bicycle lanes into street systems in regional transportation plans, new subdivisions, and large developments</li> <li>creating bicycle lanes and walking paths directed to the location of schools and other logical points of destination</li> <li>provide adequate bicycle parking</li> <li>encouraging commercial projects to include facilities on-site to encourage employees to bicycle or walk to work.</li> </ul>	Here, while the DEIR discusses nearby, existing bike lanes, the DEIR fails to indicate that the proposed Project will include or require the design of bike lanes, or their connection to the regional bicycle network (p. II-9 – II-10). As such, the proposed Project is not consistent with this measure. Furthermore, MM-TRAF-1 of the MMP states that the proposed Project “ <u>should include</u> ...Providing “bicycle parking in conformance with Section 12.21 A.16 of the LAMC” (emphasis added) (p. 4-34 – 4-35). However, the DEIR and MMP fail to specify how many spaces this would be or commit to a specific number. The DEIR and MMP also fail to discuss implementation, monitoring, and enforcement of this measure on the Project site.

	Finally, the DEIR and MMP fail to address or discuss storage beyond parking. As such, the proposed Project is not consistent with this measure.
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As the above tables indicate, the DEIR, FEIR, and MMP fail to provide sufficient information and analysis to determine Project consistency with various measures under CARB’s 2017 *Climate Change Scoping Plan* and SCAG’s 2016-2040 *RTP/SCS*. Thus, we cannot verify that the proposed Project is “consistent with applicable regulatory plans and policies to reduce GHG emissions, including the emissions reduction measures” of CARB’s 2017 *Climate Change Scoping Plan* and SCAG’s 2016-2040 *RTP/SCS* (p. 2-84). As a result, we recommend that an updated CEQA evaluation include further information and analysis in order to conclude consistency for the proposed Project.

*(7) Failure to Apply the SCAQMD’s Bright-Line and Efficiency Thresholds to Project Emissions*

As discussed in our October 15<sup>th</sup> letter, the DEIR failed to apply the SCAQMD bright-line and efficiency thresholds to Project emissions. Regarding the DEIR’s failure to apply the SCAQMD bright-line and efficiency thresholds, the Responses state:

“Again, as described above in Response to Comment No. 2-48 and in Section IV.E, Greenhouse Gas Emissions, page IV.E-18 of the Draft EIR, the SCAQMD staff’s proposed Interim Thresholds cited by the commenter have never been formally adopted by the SCAQMD. In the absence of an applicable adopted threshold, the City has exercised its discretion to utilize a qualitative threshold based on consistency with CARB’s 2017 Climate Change Scoping Plan, SCAG’s 2016 RTP/SCS, the LA Green Plan, and the Sustainable City pLAN” (2-95).

However, this response is insufficient. While the DEIR and Responses are correct in stating that the SCAQMD *Interim Thresholds* were never adopted, this does not mean, however, that they are inapplicable to the proposed Project or otherwise can be ignored. As explained below, consistent with CEQA Guidelines, the SCAQMD’s interim thresholds should have been used by the DEIR. It is commonly recognized by California air districts that a project’s impact on climate change is cumulative in nature.<sup>19</sup>

<sup>19</sup> See e.g., SCAQMD (Oct. 2008), *supra* fn. 28, p. 1-4-5 (citing the OPR Technical Advisor: “When assessing whether a project’s effects on climate change are ‘cumulatively considerable’ even though its GHG contribution may be individually limited, the lead agency must consider the impact of the project when viewed in connection with the effects of past, current, and probable future projects.”), [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgattachmente.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf); Bay Area Air Quality Management District (“BAAQMD”) (May 2017) CEQA Air Quality Guidelines, p. 2-1 (“No single project could generate enough GHG emissions to noticeably change the global average temperature [but rather] [t]he combination of GHG emissions from past, present, and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts.”), [http://www.baqmd.gov/~media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](http://www.baqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en); San Luis Obispo County Air Pollution Control District (“SLOAPCD”) (Mar. 28, 2012) GHG Threshold and Supporting Evidence, p. 5 (“No single land use project could generate enough GHG emissions to noticeably change the global average temperature. Cumulative GHG emissions, however, contribute to global climate change and its significant adverse environmental impacts. Thus, the primary goal in adopting GHG significance thresholds, analytical

SCAQMD’s multi-tiered approach under its *Interim Threshold* was not officially adopted as a valid threshold or part of a plan “adopted by the relevant public agency through a public review process” as CEQA requires.<sup>20</sup> Moreover, SCAQMD developed its thresholds when AB 32 was the governing statute for GHG reductions in California. AB 32 requires California to reduce GHG emissions to 1990 levels by 2020. Health & Saf. Code § 38500 *et seq.* However, in September 2016, before the release of the DEIR, Governor Brown signed Senate Bill 32, enacting Health & Saf. Code § 38566. This statute (“SB 32”) requires California to achieve a new, more aggressive 40 percent reduction in GHG emissions over the 1990 level by the end of 2030.

Consistent with the edicts of SB 32, other air control districts have adopted more aggressive GHG thresholds for project-level analysis, including but not limited to the Sacramento Metropolitan Air Quality Management District (SMAQMD), the Bay Area Air Quality Management District (BAAQMD), and the San Luis Obispo Air Pollution Control District (SLOAPCD) (as summarized in the tables below). Given the cumulative nature of GHG emissions and consistent with CEQA Guidelines § 15064.7(c), these recommended thresholds are appropriate for projects in the SCAQMD regions.

SMAQMD (May 2018) Guide to Air Quality Assessment <sup>21</sup>		
Land Development and Construction Projects		
	Construction Phase	Operational Phase
Greenhouse Gas Emissions (GHG) Thresholds		
GHG as CO <sub>2</sub> e	1,100 metric tons/year	1,100 metric tons/year

Stationary Source Only		
	Construction Phase	Operational Phase
Greenhouse Gas Emissions (GHG) Thresholds		
GHG as CO <sub>2</sub> e	1,100 metric tons/year	10,000 metric tons/year

- 1) Construction phase of all project types – 1,100 MT CO<sub>2</sub>e/yr.
- 2) Operational phase of a land development project – 1,100 MT CO<sub>2</sub>e/yr (noting a 72-room hotel and a 122-unit high-rise apartment building would each be equivalent to the 1,100 MT CO<sub>2</sub>e/yr threshold).<sup>22</sup>
- 3) Stationary source operational emissions – 10,000 MT CO<sub>2</sub>e/yr.

methodologies, and mitigation measures is to ensure new land use development provides its fair share of the GHG reductions needed to address cumulative environmental impacts from those emissions.), <https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/Greenhouse%20Gas%20Thresholds%20and%20Supporting%20Evidence%204-2-2012.pdf>; Sacramento Metropolitan Air Quality Management District (“SMAQMD”) (May 2018) Guide to Air Quality Assessment in Sacramento County, p. 6-1-3, (“(GHG) emissions adversely affect the environment through contributing, on a cumulative basis, to global climate change ... *the District recommends that lead agencies address the impacts of climate change on a proposed project and its ability to adapt to these changes in CEQA documents...* [thus urging] evaluating whether the GHG emissions associated with a proposed project will be responsible for making a cumulatively considerable contribution to global climate change.”[emphasis original]), <http://www.airquality.org/LandUseTransportation/Documents/Ch6GHGFinal5-2018.pdf>.

<sup>20</sup> SCAQMD (Dec. 5, 2008), *supra* fn. 50, p. 3.

<sup>21</sup> SMAQMD (May 2018), *supra* fn. 50, p. 6-10-12; *see also* SMAQMD Thresholds of Significance Table, <http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable5-2015.pdf>.

<sup>22</sup> SMAQMD (Apr. 2018) SMAQMD Operational Screening Levels (showing that a 190-room hotel like Option A or a 160-unit high-rise apartment like Option B would exceed the 72-room and 122-unit thresholds), <http://www.airquality.org/LandUseTransportation/Documents/Ch4+Ch6OperationalScreening4-2018.pdf>.

**BAAQMD (May 2017) CEQA Air Quality Guidelines<sup>23</sup>**

<b>GHGs – Projects other than Stationary Sources</b>	<b>Compliance with Qualified GHG Reduction Strategy</b> OR 1,100 MT of CO <sub>2</sub> e/yr OR 4.6 MT CO <sub>2</sub> e/SP/yr (residents+employees)
<b>GHGs –Stationary Sources</b>	10,000 MT/yr

While providing 10,000 MT CO<sub>2</sub>e/yr for stationary-source projects, other projects (e.g., residential, commercial, public land uses):

- 1) CAP: Compliance with a qualified GHG Reduction Strategy; or
- 2) Bright Line: Annual emissions less than 1,100 MT CO<sub>2</sub>e/year; or
- 3) Efficiency Level: 4.6 MT CO<sub>2</sub>e/SP/year (residents + employees).<sup>24</sup>

**SLOAPCD (Mar. 2012) GHG Thresholds and Supporting Evidence<sup>25</sup>**

<b>GHG Emissions Threshold Summary</b>	
<b>Residential and Commercial Projects</b>	<b>Compliance with Qualified GHG Reduction Strategy</b> OR <b>Bright-Line Threshold of 1,150 MT of CO<sub>2</sub>e/yr.</b> OR <b>Efficiency Threshold of 4.9 MT CO<sub>2</sub>e/SP*/yr.</b>
<b>Industrial (Stationary Sources)</b>	<b>10,000 MT of CO<sub>2</sub>e/yr.</b>

- 1) CAP: Consistency with qualitative reduction strategies (e.g., Climate Action Plans).
- 2) Bright-Line Threshold: 1,150 MT CO<sub>2</sub>e/year after inclusion of emission-reducing features of a proposed project, those still exceeding the threshold would have to reduce their emissions below that level to be considered less than significant.
- 3) Efficiency-Based Threshold: 4.9 MT CO<sub>2</sub>e/SP/year dependent on per capita basis for residential projects or the sum of jobs and residents for mixed-use projects (noting 0.64 employees per 1,000 SF of hotel development).

Although more demanding, the above-listed thresholds adopted by these air districts are analogous with the application of SCAQMD’s screening threshold for mixed-use developments (3,000 MT CO<sub>2</sub>e/year) and SCAQMD’s Tier 4 efficiency target goals (4.8 MT CO<sub>2</sub>e/SP/year for target year 2020 and 3.0 MT CO<sub>2</sub>e/SP/year for target year 2035).<sup>26</sup> The actions taken by other air districts to reduce GHG

<sup>23</sup> BAAQMD (May 2017), *supra* fn. 50, p. 2-2-4. Like the SCAQMD area, BAAQMD is designated as a nonattainment area for state/national ozone and particulate matter (PM) and thresholds would seem particularly apt for the 5<sup>th</sup> and Hill Project. *Compare id.* at p. 2-1 with SCAQMD NAAQS/CAAQS Attainment Status (noting “extreme” and “serious” nonattainment for multiple ozone and PM standards), <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf>.

<sup>24</sup> The BAAQMD has not formally adopted an efficiency level after 2020. However, other projects within BAAQMD’s jurisdiction have extrapolated 2030 efficiency thresholds in order to comply with SB 32 reduction targets. For example, the Park View Towers Project’s Addendum to the Final Supplemental Environmental Impact Report utilizes a 2030 efficiency threshold of 2.6 MT CO<sub>2</sub>e/year. Based on this efficiency threshold, the proposed Project would exceed threshold and result in a significant impact. Park View Tower’s Addendum available at: <http://www.sanjoseca.gov/DocumentCenter/View/80743>

<sup>25</sup> SLOAPCD (Mar. 28, 2012), *supra* fn. 50, p. 25-30, 42.

<sup>26</sup> See SCAQMD (Dec. 5, 2008) Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-)

emissions through more stringent thresholds is the most persuasive rationale as to why the *Interim Thresholds* apply as the current standard set of evolving scientific knowledge and regulatory schemes. Even though the SCAQMD's interim thresholds may be outdated and may not be adopted, they are consistent with the methods of analysis that is regularly practiced by other air districts and furthers CEQA's demand for "'conservative analysis' to afford 'fullest possible protection of the environment.'"<sup>27</sup> Hence, we reiterate that the DEIR's GHG analysis is not consistent with evolving standards, nor is the conclusion that the Project has a less than significant GHG impact supported by substantial evidence.

### *8) Updated Analysis Indicates a Potentially Significant GHG Impact*

As previously stated in our October 15<sup>th</sup> letter and notwithstanding the DEIR's incorrect and unsubstantiated modeling, as discussed above, the Project's emissions exceed the SCAQMD bright-line and service population efficiency thresholds, indicating a potentially significant GHG impact not previously addressed by the DEIR. Regarding the DEIR's failure to compare the Project's emissions to SCAQMD thresholds, the Responses state:

"As the Draft EIR explains on page IV.E-18 of Section IV.E, Greenhouse Gas Emissions, the SCAQMD has also yet to adopt a GHG significance threshold for residential and mixed-use development projects. As a point of reference, the SCAQMD Governing Board did adopt an interim 10,000 MTCO<sub>2</sub>e/yr GHG significance threshold for projects where the SCAQMD is lead agency (e.g., stationary sources, rules, and plans). While this adopted threshold is not applicable to the Project, it shows that SCAQMD can and will adopt a numeric threshold that it deems appropriate.

In 2008, the SCAQMD formed a GHG Significance Threshold Working Group to further evaluate potential GHG significance thresholds. However, the aforementioned Working Group has been inactive since 2010. For this Project, the City has determined not to rely on interim drafted thresholds developed almost 10 years ago and that were never adopted. In the absence of adopted thresholds, the City has the discretion to use a significance threshold relevant to the proposed Project" (p. 2-99).

However, we find this response to be insufficient. We reiterate that the SCAQMD thresholds, though not formally adopted, can and should still be used to evaluate the Project's GHG impact, as discussed above.

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[thresholds/ghgboardsynopsis.pdf?sfvrsn=2](#); see also SCAQMD (Oct. 2008) Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgattachmente.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf); SCAQMD (Sep. 28, 2010) Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group # 15, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf).

<sup>27</sup> "Warehouse Truck Trip Study Data Results and Usage Presentation: Inland Empire Logistics Council." SCAQMD, June 2014, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/final-ielc\\_6-19-2014.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/final-ielc_6-19-2014.pdf?sfvrsn=2), p. 3; see also *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 390 ("The foremost principle under CEQA is that the Legislature intended the act to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.") (internal citations omitted).

As a result, we maintain that the DEIR’s GHG impact significance determination is unsubstantiated based on our October 15<sup>th</sup> analysis, which utilizes the DEIR’s air modeling (see below).

The CalEEMod output files disclose the Project’s mitigated GHG emissions (p. IV.E-85, Table IV.E-9). When these emissions are compared to the 3,000 MT CO<sub>2</sub>e/year threshold, we find that the Project’s GHG emissions exceed the SCAQMD’s mixed-use threshold (see table below).

<b>DEIR Annual Greenhouse Gas Emissions</b>	
<b>Project Phase</b>	<b>Proposed Project (MT CO<sub>2</sub>e/year)</b>
On-Road Mobile Sources	11,800
Stationary (Emergency Generators)	27
Area	20
Electricity	6,862
Natural Gas	1,846
Water Conveyance and Wastewater Treatment	505
Solid Waste	242
Construction (Amortized)	745
Proposed Subtotal	22,047
Percent Reduction (Project Only)	28%
<b>Net Operational (Proposed – Existing)</b>	<b>14,922</b>
SCAQMD Significance Threshold	3,000
<b>Exceed?</b>	<b>Yes</b>

As demonstrated in the table above, the proposed Project would generate a total of approximately 14,922 MT CO<sub>2</sub>e/year, which significantly exceeds the 3,000 MT CO<sub>2</sub>e/year mixed-use project screening threshold.<sup>28</sup> According to SCAQMD guidance, when emissions exceed the screening-level threshold, a more detailed review of the project’s GHG emissions is warranted.<sup>29</sup> SCAQMD proposed per capita efficiency targets to be used in these detailed reviews. SCAQMD proposed a 2020 efficiency target of 4.8 MTCO<sub>2</sub>e/SP/year for project-level analyses and 6.6 MTCO<sub>2</sub>e/SP/year for plan-level projects (e.g., program-level projects such as general plans). Those per capita efficiency targets are based on AB 32’s GHG reduction target and the 2020 GHG emissions inventory prepared for CARB’s 2008 Scoping Plan.

However, as the responses indicate, these thresholds were developed almost 10 years ago (p. 2-99). As a result, we rely upon the SCAQMD’s 2035 efficiency threshold, which was developed by reducing the 2020 thresholds by 40 percent, resulting in an efficiency threshold for plans of 4.1 MTCO<sub>2</sub>e/SP/year and an efficiency threshold at the project level of 3.0 MTCO<sub>2</sub>e/SP/year.<sup>30</sup> Therefore, per SCAQMD guidance,

<sup>28</sup> It should further be noted that this amounts to a mere 2.1 percent reduction of GHG emissions as compared to the Project’s unmitigated emissions (i.e., 9,211 MT CO<sub>2</sub>e/year). See pp. 193, pp. 195.

<sup>29</sup> SCAQMD (12/5/08), *supra* fn. 61, p. 6; see also SCAQMD (9/28/10), *supra* fn. 61, p. 2.

<sup>30</sup> *Ibid.*

because the Project’s GHG emissions exceed SCAQMD’s 3,000 MTCO<sub>2</sub>e/year screening-level threshold and the DEIR asserts that the Project will not be operational until 2023, the Project’s emissions should be compared to the proposed 2035 efficiency target of 3.0 MT CO<sub>2</sub>e/sp/yr (p. II-48).

According to CAPCOA’s *CEQA & Climate Change* report, service population is defined as “the sum of the number of residents and the number of jobs supported by the project.”<sup>31</sup> The DEIR states that the proposed Project would generate approximately 2,739 new residents (with full occupancy) and 186 new employees (p. IV.J-13). As a result, we estimate that the Project’s service population would be approximately 2,925 people<sup>32</sup>. Dividing the Project’s GHG emissions by a service population value of 2,925, we find that the Project would emit approximately 5.1 MTCO<sub>2</sub>e/SP/year.<sup>33</sup> When we compare the Project’s per service population GHG emissions to the SCAQMD 2035 efficiency target of 3.0 MTCO<sub>2</sub>e/sp/yr, we find that the Project would result in a significant GHG impact (see table below).

<b>Annual Greenhouse Gas Emissions Efficiency</b>		
<b>Source</b>	<b>Project Emissions</b>	<b>Unit</b>
DEIR Annual Emissions	14,922	MT CO <sub>2</sub> e/year
Maximum Service Population	2,925	Residents & Employees
<b>Per Service Population Annual Emissions</b>	<b>5.1</b>	<b>MT CO<sub>2</sub>e/SP/year</b>
2035 SCAQMD Project Level Efficiency Threshold	3.0	MT CO <sub>2</sub> e/SP/year
<b>Exceed?</b>	<b>Yes</b>	-

As you can see in the table above, when we compare the per service population emissions estimated by the DEIR to the SCAQMD threshold of 3.0 MTCO<sub>2</sub>e/SP/year for 2035, we find that the Project’s emissions would exceed the threshold, thus resulting in a potentially significant impact not previously identified or addressed by the DEIR.

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

<sup>31</sup> CAPCOA (Jan. 2008) *CEQA & Climate Change*, p. 71-72, <http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf>.

<sup>32</sup> Calculated: (2,739 residents + 186 employees) = (2,925 service population)

<sup>33</sup> Calculated: (14,922 MTCO<sub>2</sub>e/yr / (2,925 service population) = (5.10 MTCO<sub>2</sub>e/sp/yr)

Sincerely,

A handwritten signature in blue ink that reads "Matt Hagemann". The signature is fluid and cursive, with a long horizontal stroke at the end.

Matt Hagemann, P.G., C.Hg.

A handwritten signature in blue ink that reads "Paul Rosenfeld". The signature is cursive and clearly legible.

Paul E. Rosenfeld, Ph.D.

Start date and time 10/15/19 14:01:27

AERSCREEN 16216

LA Times Construction

LA Times Construction

----- DATA ENTRY VALIDATION -----

METRIC

ENGLISH

\*\* AREADATA \*\*

Emission Rate:	0.767E-03 g/s	0.609E-02 lb/hr
Area Height:	3.00 meters	9.84 feet
Area Source Length:	143.00 meters	469.16 feet
Area Source Width:	102.00 meters	334.65 feet
Vertical Dimension:	1.50 meters	4.92 feet
Model Mode:	URBAN	
Population:	4000000	
Dist to Ambient Air:	1.0 meters	3. feet

\*\* BUILDING DATA \*\*

No Building Downwash Parameters

\*\* TERRAIN DATA \*\*

No Terrain Elevations

Source Base Elevation: 0.0 meters 0.0 feet

Probe distance: 5000. meters 16404. feet

No flagpole receptors

No discrete receptors used

\*\* FUMIGATION DATA \*\*

No fumigation requested

\*\* METEOROLOGY DATA \*\*

Min/Max Temperature: 250.0 / 310.0 K -9.7 / 98.3 Deg F

Minimum Wind Speed: 0.5 m/s

Anemometer Height: 10.000 meters

Dominant Surface Profile: Urban

Dominant Climate Type: Average Moisture

Surface friction velocity (u\*): not adjusted

DEBUG OPTION ON

AERSCREEN output file:

2019.10.15\_LATimes\_Construction.out

\*\*\* AERSCREEN Run is Ready to Begin

No terrain used, AERMAP will not be run

\*\*\*\*\*

SURFACE CHARACTERISTICS & MAKEMET

Obtaining surface characteristics...

Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season	Albedo	Bo	zo
Winter	0.35	1.50	1.000
Spring	0.14	1.00	1.000
Summer	0.16	2.00	1.000
Autumn	0.18	2.00	1.000

Creating met files aerscreen\_01\_01.sfc & aerscreen\_01\_01.pfl

Creating met files aerscreen\_02\_01.sfc & aerscreen\_02\_01.pfl

Creating met files aerscreen\_03\_01.sfc & aerscreen\_03\_01.pfl

Creating met files aerscreen\_04\_01.sfc & aerscreen\_04\_01.pfl

Buildings and/or terrain present or rectangular area source, skipping probe

FLOWSECTOR started 10/15/19 14:03:03

\*\*\*\*\*

Running AERMOD

Processing Winter

Processing surface roughness sector 1

\*\*\*\*\*

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 0

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 5

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 10

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 15

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 20

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 25

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 30

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 8

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 35

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 9

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 40

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Running AERMOD

Processing Spring

Processing surface roughness sector 1

\*\*\*\*\*

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 0

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 5

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 10

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 15

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 20

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 25

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 30

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 8

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 35

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 9

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 40

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Running AERMOD

Processing Summer

Processing surface roughness sector 1

\*\*\*\*\*

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 0

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 5

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 10

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 15

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 20

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 25

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***** WARNING MESSAGES *****  
*** NONE ***
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Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 30

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***** WARNING MESSAGES *****  
*** NONE ***
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Processing wind flow sector 8

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 35

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***** WARNING MESSAGES *****  
*** NONE ***
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Processing wind flow sector 9

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 40

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Running AERMOD

Processing Autumn

Processing surface roughness sector 1

\*\*\*\*\*

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 0

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 5

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 10

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 15

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 20

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 25

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 30

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 8

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 35

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 9

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 40

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

FLOWSECTOR ended 10/15/19 14:03:25

REFINE started 10/15/19 14:03:25

AERMOD Finishes Successfully for REFINE stage 3 Winter sector 0

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

REFINE ended 10/15/19 14:03:27

\*\*\*\*\*

AERSCREEN Finished Successfully

With no errors or warnings

Check log file for details

\*\*\*\*\*

Ending date and time 10/15/19 14:03:30

Concentration		Distance		Elevation	Diag	Season/Month		Zo sector		Date			
H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS	HT
REF	TA	HT											
	0.10526E+01		1.00	0.00	0.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.11936E+01		25.00	0.00	0.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.13037E+01		50.00	0.00	5.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
*	0.13957E+01		75.00	0.00	20.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.99691E+00		100.00	0.00	30.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.66101E+00		125.00	0.00	30.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.50087E+00		150.00	0.00	25.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.40593E+00		175.00	0.00	5.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.33958E+00		200.00	0.00	0.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.29008E+00		225.00	0.00	0.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.25168E+00		250.00	0.00	5.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.22142E+00		275.00	0.00	0.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.19702E+00		300.00	0.00	0.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.17682E+00		325.00	0.00	5.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.15999E+00		350.00	0.00	5.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.14587E+00		375.00	0.00	0.0			Winter		0-360	10011001		
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	

310.0	2.0											
	0.13364E+00	400.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.12309E+00	425.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.11394E+00	450.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.10594E+00	475.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.98804E-01	500.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.92486E-01	525.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.86854E-01	550.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.81768E-01	575.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.77183E-01	600.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.73035E-01	625.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.69240E-01	650.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.65762E-01	675.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.62587E-01	700.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.59668E-01	725.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.56979E-01	750.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.54493E-01	775.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.52193E-01	800.00	0.00	0.0		Winter	0-360	10011001				



0.29225E-01	1225.00	0.00	10.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.28431E-01	1250.00	0.00	10.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.27674E-01	1275.00	0.00	10.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.26951E-01	1300.00	0.00	10.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.26261E-01	1325.00	0.00	5.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.25603E-01	1350.00	0.00	5.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.24972E-01	1375.00	0.00	5.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.24368E-01	1400.00	0.00	5.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.23788E-01	1425.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.23233E-01	1450.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.22701E-01	1475.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.22189E-01	1500.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.21697E-01	1525.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.21224E-01	1550.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.20767E-01	1575.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.20326E-01	1600.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.19902E-01	1625.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	

310.0	2.0											
	0.19491E-01	1650.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.19093E-01	1675.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.18710E-01	1700.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.18339E-01	1725.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.17981E-01	1750.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.17635E-01	1775.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.17387E-01	1800.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.17061E-01	1825.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.16746E-01	1850.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.16441E-01	1875.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.16145E-01	1900.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.15858E-01	1925.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.15580E-01	1950.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.15311E-01	1975.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.15049E-01	2000.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.14795E-01	2025.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.14549E-01	2050.00	0.00	0.0		Winter	0-360	10011001				



0.11241E-01	2475.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.11087E-01	2500.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.10937E-01	2525.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.10791E-01	2550.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.10647E-01	2575.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.10508E-01	2600.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.10371E-01	2625.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.10237E-01	2650.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.10106E-01	2675.00	0.00	15.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.99783E-02	2700.00	0.00	20.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.98532E-02	2725.00	0.00	20.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.97308E-02	2750.00	0.00	20.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.96109E-02	2775.00	0.00	15.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.94936E-02	2800.00	0.00	10.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.93788E-02	2825.00	0.00	10.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.92663E-02	2850.00	0.00	20.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.91562E-02	2875.00	0.00	10.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	

310.0	2.0											
	0.90483E-02	2900.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.89426E-02	2925.00	0.00	30.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.88390E-02	2950.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.87375E-02	2975.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.86379E-02	3000.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.85404E-02	3025.00	0.00	40.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.84447E-02	3050.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.83508E-02	3074.99	0.00	20.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.82588E-02	3100.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.81684E-02	3125.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.80798E-02	3150.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.79929E-02	3174.99	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.79075E-02	3199.99	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.78237E-02	3225.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.77415E-02	3250.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.76607E-02	3275.00	0.00	20.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.75813E-02	3300.00	0.00	5.0		Winter	0-360	10011001				



0.64230E-02	3725.00	0.00	15.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.63645E-02	3750.00	0.00	15.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.63069E-02	3775.00	0.00	25.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.62502E-02	3800.00	0.00	0.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.61943E-02	3825.00	0.00	5.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.61393E-02	3849.99	0.00	15.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.60852E-02	3875.00	0.00	5.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.60319E-02	3900.00	0.00	0.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.59794E-02	3925.00	0.00	5.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.59276E-02	3950.00	0.00	0.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.58767E-02	3975.00	0.00	5.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.58265E-02	4000.00	0.00	0.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.57770E-02	4025.00	0.00	0.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.57283E-02	4050.00	0.00	30.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.56803E-02	4075.00	0.00	5.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.56329E-02	4100.00	0.00	25.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0
310.0	2.0						
0.55863E-02	4125.00	0.00	30.0	Winter	0-360	10011001	
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50	0.35 0.50 10.0

310.0	2.0											
	0.55402E-02	4150.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.54949E-02	4175.00	0.00	25.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.54502E-02	4200.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.54061E-02	4225.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.53627E-02	4250.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.53198E-02	4275.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.52775E-02	4300.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.52358E-02	4325.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.51947E-02	4350.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.51541E-02	4375.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.51141E-02	4400.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.50746E-02	4425.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.50356E-02	4449.99	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.49972E-02	4475.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.49592E-02	4499.99	0.00	35.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.49218E-02	4525.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.48848E-02	4550.00	0.00	0.0		Winter	0-360	10011001				



0.43231E-02	4975.00	0.00	0.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.42935E-02	5000.00	0.00	0.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					

Start date and time 10/15/19 13:59:00

AERSCREEN 16216

LA Times Operational

LA Times Operational

----- DATA ENTRY VALIDATION -----

METRIC

ENGLISH

\*\* AREADATA \*\*

Emission Rate:	0.585E-02 g/s	0.465E-01 lb/hr
Area Height:	3.00 meters	9.84 feet
Area Source Length:	143.00 meters	469.16 feet
Area Source Width:	102.00 meters	334.65 feet
Vertical Dimension:	1.50 meters	4.92 feet
Model Mode:	URBAN	
Population:	4000000	
Dist to Ambient Air:	1.0 meters	3. feet

\*\* BUILDING DATA \*\*

No Building Downwash Parameters

\*\* TERRAIN DATA \*\*

No Terrain Elevations

Source Base Elevation: 0.0 meters 0.0 feet

Probe distance: 5000. meters 16404. feet

No flagpole receptors

No discrete receptors used

\*\* FUMIGATION DATA \*\*

No fumigation requested

\*\* METEOROLOGY DATA \*\*

Min/Max Temperature: 250.0 / 310.0 K -9.7 / 98.3 Deg F

Minimum Wind Speed: 0.5 m/s

Anemometer Height: 10.000 meters

Dominant Surface Profile: Urban

Dominant Climate Type: Average Moisture

Surface friction velocity (u\*): not adjusted

DEBUG OPTION ON

AERSCREEN output file:

2019.10.15\_LATimes\_Operational.out

\*\*\* AERSCREEN Run is Ready to Begin

No terrain used, AERMAP will not be run

\*\*\*\*\*

SURFACE CHARACTERISTICS & MAKEMET

Obtaining surface characteristics...

Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season	Albedo	Bo	zo
Winter	0.35	1.50	1.000
Spring	0.14	1.00	1.000
Summer	0.16	2.00	1.000
Autumn	0.18	2.00	1.000

Creating met files aerscreen\_01\_01.sfc & aerscreen\_01\_01.pfl

Creating met files aerscreen\_02\_01.sfc & aerscreen\_02\_01.pfl

Creating met files aerscreen\_03\_01.sfc & aerscreen\_03\_01.pfl

Creating met files aerscreen\_04\_01.sfc & aerscreen\_04\_01.pfl

Buildings and/or terrain present or rectangular area source, skipping probe

FLOWSECTOR started 10/15/19 14:00:33

\*\*\*\*\*

Running AERMOD

Processing Winter

Processing surface roughness sector 1

\*\*\*\*\*

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 0

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 5

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 10

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 15

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 20

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 25

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 30

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 8

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 35

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 9

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector 40

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Running AERMOD

Processing Spring

Processing surface roughness sector 1

\*\*\*\*\*

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 0

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 5

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 10

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 15

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 20

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 25

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 30

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 8

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 35

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 9

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector 40

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Running AERMOD

Processing Summer

Processing surface roughness sector 1

\*\*\*\*\*

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 0

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 5

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 10

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 15

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 20

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 25

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***** WARNING MESSAGES *****  
*** NONE ***
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\*\*\*\*\*

Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 30

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***** WARNING MESSAGES *****  
*** NONE ***
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\*\*\*\*\*

Processing wind flow sector 8

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 35

```
***** WARNING MESSAGES *****  
*** NONE ***
```

\*\*\*\*\*

Processing wind flow sector 9

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector 40

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Running AERMOD

Processing Autumn

Processing surface roughness sector 1

\*\*\*\*\*

Processing wind flow sector 1

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 0

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 2

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 5

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 3

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 10

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 4

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 15

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 5

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 20

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 6

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 25

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 7

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 30

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 8

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 35

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\*

Processing wind flow sector 9

AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector 40

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

FLOWSECTOR ended 10/15/19 14:00:56

REFINE started 10/15/19 14:00:56

AERMOD Finishes Successfully for REFINE stage 3 Winter sector 0

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

REFINE ended 10/15/19 14:00:58

\*\*\*\*\*

AERSCREEN Finished Successfully

With no errors or warnings

Check log file for details

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Ending date and time 10/15/19 14:01:01

Concentration		Distance		Elevation	Diag	Season/Month		Zo sector		Date			
H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS	HT
REF	TA	HT											
	0.80327E+01		1.00	0.00	0.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.91084E+01		25.00	0.00	0.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.99487E+01		50.00	0.00	5.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
*	0.10651E+02		75.00	0.00	20.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.76076E+01		100.00	0.00	30.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.50443E+01		125.00	0.00	30.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.38222E+01		150.00	0.00	25.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.30978E+01		175.00	0.00	5.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.25914E+01		200.00	0.00	0.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.22137E+01		225.00	0.00	0.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.19206E+01		250.00	0.00	5.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.16897E+01		275.00	0.00	0.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.15035E+01		300.00	0.00	0.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.13494E+01		325.00	0.00	5.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.12209E+01		350.00	0.00	5.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0												
	0.11132E+01		375.00	0.00	0.0			Winter		0-360		10011001	
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0	

310.0	2.0											
	0.10198E+01	400.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.93936E+00	425.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.86946E+00	450.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.80842E+00	475.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.75399E+00	500.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.70578E+00	525.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.66280E+00	550.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.62399E+00	575.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.58900E+00	600.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.55734E+00	625.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.52838E+00	650.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.50185E+00	675.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.47762E+00	700.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.45534E+00	725.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.43482E+00	750.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.41585E+00	775.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.		6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0											
	0.39829E+00	800.00	0.00	0.0		Winter	0-360	10011001				



0.22302E+00	1225.00	0.00	10.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.21697E+00	1250.00	0.00	10.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.21119E+00	1275.00	0.00	10.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.20567E+00	1300.00	0.00	10.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.20040E+00	1325.00	0.00	5.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.19538E+00	1350.00	0.00	5.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.19057E+00	1375.00	0.00	5.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.18596E+00	1400.00	0.00	5.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.18153E+00	1425.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.17730E+00	1450.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.17323E+00	1475.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.16933E+00	1500.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.16558E+00	1525.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.16197E+00	1550.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.15848E+00	1575.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.15511E+00	1600.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	
310.0 2.0						
0.15187E+00	1625.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0 1.000 1.50	0.35	0.50	10.0	

310.0	2.0	0.14874E+00	1650.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.14570E+00	1675.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.14278E+00	1700.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.13995E+00	1725.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.13722E+00	1750.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.13458E+00	1775.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.13268E+00	1800.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.13020E+00	1825.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.12779E+00	1850.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.12546E+00	1875.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.12320E+00	1900.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.12102E+00	1925.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.11890E+00	1950.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.11684E+00	1975.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.11484E+00	2000.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.11291E+00	2025.00	0.00	0.00	Winter	0-360	10011001			
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0
310.0	2.0	0.11102E+00	2050.00	0.00	0.00	Winter	0-360	10011001			



0.85782E-01	2475.00	0.00	5.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.84610E-01	2500.00	0.00	15.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.83465E-01	2525.00	0.00	20.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.82346E-01	2550.00	0.00	10.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.81253E-01	2575.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.80185E-01	2600.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.79141E-01	2625.00	0.00	20.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.78121E-01	2650.00	0.00	15.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.77123E-01	2675.00	0.00	25.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.76146E-01	2700.00	0.00	20.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.75192E-01	2725.00	0.00	20.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.74257E-01	2750.00	0.00	20.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.73343E-01	2775.00	0.00	15.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.72448E-01	2800.00	0.00	10.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.71571E-01	2825.00	0.00	0.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.70713E-01	2850.00	0.00	20.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0
310.0 2.0						
0.69872E-01	2875.00	0.00	25.0	Winter	0-360	10011001
-1.30 0.043 -9.000 0.020 -999.	21.	6.0	1.000	1.50	0.35	0.50 10.0

310.0	2.0											
	0.69049E-01	2900.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.68242E-01	2925.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.67452E-01	2950.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.66677E-01	2975.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.65918E-01	3000.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.65173E-01	3025.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.64443E-01	3050.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.63727E-01	3074.99	0.00	20.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.63024E-01	3100.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.62335E-01	3125.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.61659E-01	3150.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.60995E-01	3174.99	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.60344E-01	3199.99	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.59704E-01	3225.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.59076E-01	3250.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.58460E-01	3275.00	0.00	20.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.57855E-01	3300.00	0.00	30.0		Winter	0-360	10011001				



0.49015E-01	3724.99	0.00	20.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.48568E-01	3750.00	0.00	25.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.48129E-01	3775.00	0.00	0.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.47696E-01	3800.00	0.00	0.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.47270E-01	3825.00	0.00	5.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.46850E-01	3849.99	0.00	15.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.46437E-01	3875.00	0.00	5.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.46030E-01	3900.00	0.00	15.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.45630E-01	3925.00	0.00	5.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.45235E-01	3950.00	0.00	0.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.44846E-01	3975.00	0.00	5.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.44463E-01	4000.00	0.00	0.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.44085E-01	4025.00	0.00	5.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.43713E-01	4050.00	0.00	0.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.43347E-01	4075.00	0.00	5.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.42986E-01	4100.00	0.00	0.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0
310.0	2.0					
0.42630E-01	4125.00	0.00	0.0	Winter	0-360	10011001
-1.30	0.043	-9.000	0.020	-999.	21.	6.0 1.000 1.50 0.35 0.50 10.0

310.0	2.0											
	0.42279E-01	4149.99	0.00	20.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.41933E-01	4175.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.41591E-01	4200.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.41255E-01	4225.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.40923E-01	4250.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.40596E-01	4275.00	0.00	5.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.40274E-01	4300.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.39956E-01	4325.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.39642E-01	4350.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.39332E-01	4375.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.39027E-01	4400.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.38725E-01	4425.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.38428E-01	4449.99	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.38134E-01	4475.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.37845E-01	4500.00	0.00	10.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.37559E-01	4525.00	0.00	0.0		Winter	0-360	10011001				
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	
310.0	2.0											
	0.37277E-01	4550.00	0.00	0.0		Winter	0-360	10011001				







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**Matthew F. Hagemann, P.G., C.Hg., QSD, QSP**

**Geologic and Hydrogeologic Characterization  
Industrial Stormwater Compliance  
Investigation and Remediation Strategies  
Litigation Support and Testifying Expert  
CEQA Review**

**Education:**

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.

B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

**Professional Certifications:**

California Professional Geologist

California Certified Hydrogeologist

Qualified SWPPP Developer and Practitioner

**Professional Experience:**

Matt has 25 years of experience in environmental policy, assessment and remediation. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) while also working with permit holders to improve hydrogeologic characterization and water quality monitoring.

Matt has worked closely with U.S. EPA legal counsel and the technical staff of several states in the application and enforcement of RCRA, Safe Drinking Water Act and Clean Water Act regulations. Matt has trained the technical staff in the States of California, Hawaii, Nevada, Arizona and the Territory of Guam in the conduct of investigations, groundwater fundamentals, and sampling techniques.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2014;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

**Senior Regulatory and Litigation Support Analyst:**

With SWAPE, Matt’s responsibilities have included:

- Lead analyst and testifying expert in the review of over 100 environmental impact reports since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, Valley Fever, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at industrial facilities.
- Manager of a project to provide technical assistance to a community adjacent to a former Naval shipyard under a grant from the U.S. EPA.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.
- Expert witness on two cases involving MTBE litigation.
- Expert witness and litigation support on the impact of air toxins and hazards at a school.
- Expert witness in litigation at a former plywood plant.

With Komex H2O Science Inc., Matt’s duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.

- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

### **Executive Director:**

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

### **Hydrogeology:**

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

**Policy:**

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9. Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, *Oxygenates in Water: Critical Information and Research Needs*.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

### **Geology:**

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

### **Teaching:**

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt taught physical geology (lecture and lab and introductory geology at Golden West College in Huntington Beach, California from 2010 to 2014.

### **Invited Testimony, Reports, Papers and Presentations:**

**Hagemann, M.F.**, 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

**Hagemann, M.F.**, 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

**Hagemann, M.F.**, 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Colorado.

**Hagemann, M.F.**, 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

**Hagemann, M.F.**, 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

**Hagemann, M.F.**, 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

**Hagemann, M.F.**, 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

**Hagemann, M.F.**, 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

**Hagemann, M.F.**, 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal representatives, Parker, AZ.

**Hagemann, M.F.**, 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

**Hagemann, M.F.**, 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

**Hagemann, M.F.**, 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

**Hagemann, M.F.**, 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

**Hagemann, M.F.**, 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

**Hagemann, M.F.**, 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

**Hagemann, M.F.**, 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

**Hagemann, M.F.**, 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

**Hagemann, M.F.**, 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

**Hagemann, M.F.**, 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

**Hagemann, M.F.**, 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

**Hagemann, M.F.**, and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F.** 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

**Hagemann, M.F.**, 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

**Hagemann, M.F.**, 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

**Hagemann, M.F.**, and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

**Hagemann, M.F.**, Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

**Hagemann, M. F.**, Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

**Hagemann, M.F.**, 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

**Hagemann, M.F.** and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

**Hagemann, M.F.**, 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

**Hagemann, M.F.**, 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

**Other Experience:**

Selected as subject matter expert for the California Professional Geologist licensing examination, 2009-2011.



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## ***Paul Rosenfeld, Ph.D.***

**Chemical Fate and Transport & Air Dispersion Modeling**

*Principal Environmental Chemist*

**Risk Assessment & Remediation Specialist**

### **Education:**

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on VOC filtration.  
M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.  
B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

### **Professional Experience:**

Dr. Rosenfeld is the Co-Founder and Principal Environmental Chemist at Soil Water Air Protection Enterprise (SWAPE). His focus is the fate and transport of environmental contaminants, risk assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from unconventional oil drilling, oil spills, boilers, incinerators and other industrial and agricultural sources relating to nuisance and personal injury. His project experience ranges from monitoring and modeling of pollution sources as they relate to human and ecological health. Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing petroleum, chlorinated solvents, pesticides, radioactive waste, PCBs, PAHs, dioxins, furans, volatile organics, semi-volatile organics, perchlorate, heavy metals, asbestos, PFOA, unusual polymers, MtBE, fuel oxygenates and odor. Dr. Rosenfeld has evaluated greenhouse gas emissions using various modeling programs recommended by California Air Quality Management Districts.

### **Professional History:**

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner  
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)  
UCLA School of Public Health; 2003 to 2006; Adjunct Professor  
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator  
UCLA Institute of the Environment, 2001-2002; Research Associate  
Komex H<sub>2</sub>O Science, 2001 to 2003; Senior Remediation Scientist  
National Groundwater Association, 2002-2004; Lecturer  
San Diego State University, 1999-2001; Adjunct Professor  
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager  
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager  
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor  
King County, Seattle, 1996 – 1999; Scientist  
James River Corp., Washington, 1995-96; Scientist  
Big Creek Lumber, Davenport, California, 1995; Scientist  
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist  
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist  
Bureau of Land Management, Kremmling Colorado 1990; Scientist

## **Publications:**

Chen, J. A., Zapata, A R., Sutherland, A. J., Molmen, D. R., Chow, B. S., Wu, L. E., **Rosenfeld, P. E.**, Hesse, R. C., (2012) Sulfur Dioxide and Volatile Organic Compound Exposure To A Community In Texas City Texas Evaluated Using Aermod and Empirical Data. *American Journal of Environmental Science*, 8(6), 622-632.

**Rosenfeld, P.E.** & Feng, L. (2011). *The Risks of Hazardous Waste*. Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2011). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Agrochemical Industry*, Amsterdam: Elsevier Publishing.

Gonzalez, J., Feng, L., Sutherland, A., Waller, C., Sok, H., Hesse, R., **Rosenfeld, P.** (2010). PCBs and Dioxins/Furans in Attic Dust Collected Near Former PCB Production and Secondary Copper Facilities in Sauget, IL. *Procedia Environmental Sciences*. 113–125.

Feng, L., Wu, C., Tam, L., Sutherland, A.J., Clark, J.J., **Rosenfeld, P.E.** (2010). Dioxin and Furan Blood Lipid and Attic Dust Concentrations in Populations Living Near Four Wood Treatment Facilities in the United States. *Journal of Environmental Health*. 73(6), 34-46.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2010). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Wood and Paper Industries*. Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2009). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Petroleum Industry*. Amsterdam: Elsevier Publishing.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P.** (2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. *WIT Transactions on Ecology and the Environment, Air Pollution*, 123 (17), 319-327.

Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. *Organohalogen Compounds*, 70, 002252-002255.

Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. *Organohalogen Compounds*, 70, 000527-000530.

Hensley, A.R. A. Scott, J. J. J. Clark, **Rosenfeld, P.E.** (2007). Attic Dust and Human Blood Samples Collected near a Former Wood Treatment Facility. *Environmental Research*. 105, 194-197.

**Rosenfeld, P.E.**, J. J. J. Clark, A. R. Hensley, M. Suffet. (2007). The Use of an Odor Wheel Classification for Evaluation of Human Health Risk Criteria for Compost Facilities. *Water Science & Technology* 55(5), 345-357.

**Rosenfeld, P. E.**, M. Suffet. (2007). The Anatomy Of Odour Wheels For Odours Of Drinking Water, Wastewater, Compost And The Urban Environment. *Water Science & Technology* 55(5), 335-344.

Sullivan, P. J. Clark, J.J.J., Agardy, F. J., **Rosenfeld, P.E.** (2007). *Toxic Legacy, Synthetic Toxins in the Food, Water, and Air in American Cities*. Boston Massachusetts: Elsevier Publishing,

**Rosenfeld P.E.**, and Suffet, I.H. (Mel) (2007). Anatomy of an Odor Wheel. *Water Science and Technology*.

**Rosenfeld, P.E.**, Clark, J.J.J., Hensley A.R., Suffet, I.H. (Mel) (2007). The use of an odor wheel classification for evaluation of human health risk criteria for compost facilities. *Water Science And Technology*.

- Rosenfeld, P.E.,** and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash. *Water Science and Technology*. 49(9),171-178.
- Rosenfeld P. E.,** J.J. Clark, I.H. (Mel) Suffet (2004). The Value of An Odor-Quality-Wheel Classification Scheme For The Urban Environment. *Water Environment Federation's Technical Exhibition and Conference (WEFTEC) 2004*. New Orleans, October 2-6, 2004.
- Rosenfeld, P.E.,** and Suffet, I.H. (2004). Understanding Odorants Associated With Compost, Biomass Facilities, and the Land Application of Biosolids. *Water Science and Technology*. 49(9), 193-199.
- Rosenfeld, P.E.,** and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash, *Water Science and Technology*, 49( 9), 171-178.
- Rosenfeld, P. E.,** Grey, M. A., Sellew, P. (2004). Measurement of Biosolids Odor and Odorant Emissions from Windrows, Static Pile and Biofilter. *Water Environment Research*. 76(4), 310-315.
- Rosenfeld, P.E.,** Grey, M and Suffet, M. (2002). Compost Demonstration Project, Sacramento California Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Integrated Waste Management Board Public Affairs Office, Publications Clearinghouse (MS-6)*, Sacramento, CA Publication #442-02-008.
- Rosenfeld, P.E.,** and C.L. Henry. (2001). Characterization of odor emissions from three different biosolids. *Water Soil and Air Pollution*. 127(1-4), 173-191.
- Rosenfeld, P.E.,** and Henry C. L., (2000). Wood ash control of odor emissions from biosolids application. *Journal of Environmental Quality*. 29, 1662-1668.
- Rosenfeld, P.E.,** C.L. Henry and D. Bennett. (2001). Wastewater dewatering polymer affect on biosolids odor emissions and microbial activity. *Water Environment Research*. 73(4), 363-367.
- Rosenfeld, P.E.,** and C.L. Henry. (2001). Activated Carbon and Wood Ash Sorption of Wastewater, Compost, and Biosolids Odorants. *Water Environment Research*, 73, 388-393.
- Rosenfeld, P.E.,** and Henry C. L., (2001). High carbon wood ash effect on biosolids microbial activity and odor. *Water Environment Research*. 131(1-4), 247-262.
- Chollack, T. and **P. Rosenfeld**. (1998). Compost Amendment Handbook For Landscaping. Prepared for and distributed by the City of Redmond, Washington State.
- Rosenfeld, P. E.** (1992). The Mount Liamuiga Crater Trail. *Heritage Magazine of St. Kitts*, 3(2).
- Rosenfeld, P. E.** (1993). High School Biogas Project to Prevent Deforestation On St. Kitts. *Biomass Users Network*, 7(1).
- Rosenfeld, P. E.** (1998). Characterization, Quantification, and Control of Odor Emissions From Biosolids Application To Forest Soil. Doctoral Thesis. University of Washington College of Forest Resources.
- Rosenfeld, P. E.** (1994). Potential Utilization of Small Diameter Trees on Sierra County Public Land. Masters thesis reprinted by the Sierra County Economic Council. Sierra County, California.
- Rosenfeld, P. E.** (1991). How to Build a Small Rural Anaerobic Digester & Uses Of Biogas In The First And Third World. Bachelors Thesis. University of California.

## **Presentations:**

**Rosenfeld, P.E.**, Sutherland, A; Hesse, R.; Zapata, A. (October 3-6, 2013). Air dispersion modeling of volatile organic emissions from multiple natural gas wells in Decatur, TX. *44th Western Regional Meeting, American Chemical Society*. Lecture conducted from Santa Clara, CA.

Sok, H.L.; Waller, C.C.; Feng, L.; Gonzalez, J.; Sutherland, A.J.; Wisdom-Stack, T.; Sahai, R.K.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Atrazine: A Persistent Pesticide in Urban Drinking Water. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

Feng, L.; Gonzalez, J.; Sok, H.L.; Sutherland, A.J.; Waller, C.C.; Wisdom-Stack, T.; Sahai, R.K.; La, M.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Bringing Environmental Justice to East St. Louis, Illinois. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

**Rosenfeld, P.E.** (April 19-23, 2009). Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS) Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*, Lecture conducted from Tuscon, AZ.

**Rosenfeld, P.E.** (April 19-23, 2009). Cost to Filter Atrazine Contamination from Drinking Water in the United States” Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*. Lecture conducted from Tuscon, AZ.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P.** (20-22 July, 2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. Brebbia, C.A. and Popov, V., eds., *Air Pollution XVII: Proceedings of the Seventeenth International Conference on Modeling, Monitoring and Management of Air Pollution*. Lecture conducted from Tallinn, Estonia.

**Rosenfeld, P. E.** (October 15-18, 2007). Moss Point Community Exposure To Contaminants From A Releasing Facility. *The 23<sup>rd</sup> Annual International Conferences on Soils Sediment and Water*. Platform lecture conducted from University of Massachusetts, Amherst MA.

**Rosenfeld, P. E.** (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23<sup>rd</sup> Annual International Conferences on Soils Sediment and Water*. Platform lecture conducted from University of Massachusetts, Amherst MA.

**Rosenfeld, P. E.** (October 15-18, 2007). Somerville Community Exposure To Contaminants From Wood Treatment Facility Emissions. *The 23<sup>rd</sup> Annual International Conferences on Soils Sediment and Water*. Lecture conducted from University of Massachusetts, Amherst MA.

**Rosenfeld P. E.** (March 2007). Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP). *The Association for Environmental Health and Sciences (AEHS) Annual Meeting*. Lecture conducted from San Diego, CA.

**Rosenfeld P. E.** (March 2007). Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama. *The AEHS Annual Meeting*. Lecture conducted from San Diego, CA.

Hensley A.R., Scott, A., **Rosenfeld P.E.**, Clark, J.J.J. (August 21 – 25, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006*. Lecture conducted from Radisson SAS Scandinavia Hotel in Oslo Norway.

Hensley A.R., Scott, A., **Rosenfeld P.E.**, Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition*. Lecture conducted from Boston Massachusetts.

**Paul Rosenfeld Ph.D.** (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference*. Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

**Paul Rosenfeld Ph.D.** (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

**Paul Rosenfeld Ph.D.** (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel in Irvine, California.

**Paul Rosenfeld Ph.D.** (September 26-27, 2005). Fate, Transport and Persistence of PDBEs. *Mealey's Groundwater Conference*. Lecture conducted from Ritz Carlton Hotel, Marina Del Ray, California.

**Paul Rosenfeld Ph.D.** (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

**Paul Rosenfeld Ph.D.** (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

**Paul Rosenfeld Ph.D.** (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

**Paul Rosenfeld, Ph.D.** and James Clark Ph.D. and Rob Hesse R.G. (May 5-6, 2004). Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. *National Groundwater Association. Environmental Law Conference*. Lecture conducted from Congress Plaza Hotel, Chicago Illinois.

**Paul Rosenfeld, Ph.D.** (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse (2004). Perchlorate Contamination of the Colorado River. *Meeting of tribal representatives*. Lecture conducted from Parker, AZ.

**Paul Rosenfeld, Ph.D.** (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association*. Lecture conducted from Radison Hotel, Sacramento, California.

**Rosenfeld, P. E.**, Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference Orlando, FL*.

**Paul Rosenfeld, Ph.D.** and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants..* Lecture conducted from Hyatt Regency Phoenix Arizona.

**Paul Rosenfeld, Ph.D.** (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum*. Lecture conducted from Marriott Hotel, Anaheim California.

**Paul Rosenfeld, Ph.D.** (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable*. Lecture conducted from Sacramento California.

**Rosenfeld, P.E.** and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association.* Lecture conducted from Barcelona Spain.

**Rosenfeld, P.E.** and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association.* Lecture conducted from Barcelona Spain.

**Rosenfeld, P.E.** and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association.* Lecture conducted from Vancouver Washington..

**Rosenfeld, P.E.** and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conference.* Lecture conducted from Indianapolis, Maryland.

**Rosenfeld, P.E.** (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation.* Lecture conducted from Anaheim California.

**Rosenfeld, P.E.** (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest.* Lecture conducted from Ocean Shores, California.

**Rosenfeld, P.E.** (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association.* Lecture conducted from Sacramento California.

**Rosenfeld, P.E.,** C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings.* Lecture conducted from Bellevue Washington.

**Rosenfeld, P.E.,** and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America.* Lecture conducted from Salt Lake City Utah.

**Rosenfeld, P.E.,** C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell.* Lecture conducted from Seattle Washington.

**Rosenfeld, P.E.,** C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest.* Lecture conducted from Lake Chelan, Washington.

**Rosenfeld, P.E.,** C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings.* Lecture conducted from Bellevue Washington.

**Rosenfeld, P.E.,** C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America.* Lecture conducted from Anaheim California.

## **Teaching Experience:**

UCLA Department of Environmental Health (Summer 2003 through 2010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

## **Academic Grants Awarded:**

California Integrated Waste Management Board. \$41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: \$10,000 grant awarded to San Diego State University. Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. \$100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. \$20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: \$10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: \$15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. \$500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993.

## **Deposition and/or Trial Testimony:**

- In The Superior Court of the State of California, County of Alameda  
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants  
Case No.: RG14711115  
Rosenfeld Deposition, September, 2015
- In The Iowa District Court In And For Poweshiek County  
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants  
Case No.: LALA002187  
Rosenfeld Deposition, August 2015
- In The Iowa District Court For Wapello County  
Jerry Dovico, et al., Plaintiffs vs. Valley View Sine LLC, et al., Defendants  
Law No.: LALA105144 - Division A  
Rosenfeld Deposition, August 2015
- In The Iowa District Court For Wapello County  
Doug Pauls, et al., et al., Plaintiffs vs. Richard Warren, et al., Defendants  
Law No.: LALA105144 - Division A  
Rosenfeld Deposition, August 2015
- In The Circuit Court of Ohio County, West Virginia  
Robert Andrews, et al. v. Antero, et al.  
Civil Action N0. 14-C-30000  
Rosenfeld Deposition, June 2015
- In The Third Judicial District County of Dona Ana, New Mexico  
Betty Gonzalez, et al. Plaintiffs vs. Del Oro Dairy, Del Oro Real Estate LLC, Jerry Settles and Deward  
DeRuyter, Defendants  
Rosenfeld Deposition: July 2015
- In The Iowa District Court For Muscatine County  
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant  
Case No 4980  
Rosenfeld Deposition: May 2015
- In the Circuit Court of the 17<sup>th</sup> Judicial Circuit, in and For Broward County, Florida  
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.  
Case Number CACE07030358 (26)  
Rosenfeld Deposition: December 2014
- In the United States District Court Western District of Oklahoma  
Tommy McCarty, et al., Plaintiffs, v. Oklahoma City Landfill, LLC d/b/a Southeast Oklahoma City  
Landfill, et al. Defendants.  
Case No. 5:12-cv-01152-C  
Rosenfeld Deposition: July 2014
- In the County Court of Dallas County Texas  
Lisa Parr et al, *Plaintiff*, vs. Aruba et al, *Defendant*.  
Case Number cc-11-01650-E  
Rosenfeld Deposition: March and September 2013  
Rosenfeld Trial: April 2014
- In the Court of Common Pleas of Tuscarawas County Ohio

John Michael Abicht, et al., *Plaintiffs*, vs. Republic Services, Inc., et al., *Defendants*  
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)  
Rosenfeld Deposition: October 2012

In the Court of Common Pleas for the Second Judicial Circuit, State of South Carolina, County of Aiken  
David Anderson, et al., *Plaintiffs*, vs. Norfolk Southern Corporation, et al., *Defendants*.  
Case Number: 2007-CP-02-1584

In the Circuit Court of Jefferson County Alabama  
Jaeanette Moss Anthony, et al., *Plaintiffs*, vs. Drummond Company Inc., et al., *Defendants*  
Civil Action No. CV 2008-2076  
Rosenfeld Deposition: September 2010

In the Ninth Judicial District Court, Parish of Rapides, State of Louisiana  
Roger Price, et al., *Plaintiffs*, vs. Roy O. Martin, L.P., et al., *Defendants*.  
Civil Suit Number 224,041 Division G  
Rosenfeld Deposition: September 2008

In the United States District Court, Western District Lafayette Division  
Ackle et al., *Plaintiffs*, vs. Citgo Petroleum Corporation, et al., *Defendants*.  
Case Number 2:07CV1052  
Rosenfeld Deposition: July 2009

In the United States District Court for the Southern District of Ohio  
Carolyn Baker, et al., *Plaintiffs*, vs. Chevron Oil Company, et al., *Defendants*.  
Case Number 1:05 CV 227  
Rosenfeld Deposition: July 2008

In the Fourth Judicial District Court, Parish of Calcasieu, State of Louisiana  
Craig Steven Arabie, et al., *Plaintiffs*, vs. Citgo Petroleum Corporation, et al., *Defendants*.  
Case Number 07-2738 G

In the Fourteenth Judicial District Court, Parish of Calcasieu, State of Louisiana  
Leon B. Brydels, *Plaintiffs*, vs. Conoco, Inc., et al., *Defendants*.  
Case Number 2004-6941 Division A

In the District Court of Tarrant County, Texas, 153<sup>rd</sup> Judicial District  
Linda Faust, *Plaintiff*, vs. Burlington Northern Santa Fe Rail Way Company, Witco Chemical Corporation  
A/K/A Witco Corporation, Solvents and Chemicals, Inc. and Koppers Industries, Inc., *Defendants*.  
Case Number 153-212928-05  
Rosenfeld Deposition: December 2006, October 2007  
Rosenfeld Trial: January 2008

In the Superior Court of the State of California in and for the County of San Bernardino  
Leroy Allen, et al., *Plaintiffs*, vs. Nutro Products, Inc., a California Corporation and DOES 1 to 100,  
inclusive, *Defendants*.  
John Loney, Plaintiff, vs. James H. Didion, Sr.; Nutro Products, Inc.; DOES 1 through 20, inclusive,  
*Defendants*.  
Case Number VCVVS044671  
Rosenfeld Deposition: December 2009  
Rosenfeld Trial: March 2010

In the United States District Court for the Middle District of Alabama, Northern Division  
James K. Benefield, et al., *Plaintiffs*, vs. International Paper Company, *Defendant*.  
Civil Action Number 2:09-cv-232-WHA-TFM  
Rosenfeld Deposition: July 2010, June 2011

In the Superior Court of the State of California in and for the County of Los Angeles  
Leslie Hensley and Rick Hensley, *Plaintiffs*, vs. Peter T. Hoss, as trustee on behalf of the Cone Fee Trust; Plains Exploration & Production Company, a Delaware corporation; Rayne Water Conditioning, Inc., a California Corporation; and DOES 1 through 100, *Defendants*.  
Case Number SC094173  
Rosenfeld Deposition: September 2008, October 2008

In the Superior Court of the State of California in and for the County of Santa Barbara, Santa Maria Branch Clifford and Shirley Adelhelm, et al., all individually, *Plaintiffs*, vs. Unocal Corporation, a Delaware Corporation; Union Oil Company of California, a California corporation; Chevron Corporation, a California corporation; ConocoPhillips, a Texas corporation; Kerr-McGee Corporation, an Oklahoma corporation; and DOES 1 through 100, *Defendants*.  
Case Number 1229251 (Consolidated with case number 1231299)  
Rosenfeld Deposition: January 2008

In the United States District Court for Eastern District of Arkansas, Eastern District of Arkansas  
Harry Stephens Farms, Inc, and Harry Stephens, individual and as managing partner of Stephens Partnership, *Plaintiffs*, vs. Helena Chemical Company, and Exxon Mobil Corp., successor to Mobil Chemical Co., *Defendants*.  
Case Number 2:06-CV-00166 JMM (Consolidated with case number 4:07CV00278 JMM)  
Rosenfeld Deposition: July 2010

In the United States District Court for the Western District of Arkansas, Texarkana Division  
Rhonda Brasel, et al., *Plaintiffs*, vs. Weyerhaeuser Company and DOES 1 through 100, *Defendants*.  
Civil Action Number 07-4037  
Rosenfeld Deposition: March 2010  
Rosenfeld Trial: October 2010

In the District Court of Texas 21<sup>st</sup> Judicial District of Burleson County  
Dennis Davis, *Plaintiff*, vs. Burlington Northern Santa Fe Rail Way Company, *Defendant*.  
Case Number 25,151  
Rosenfeld Trial: May 2009

In the United States District Court of Southern District of Texas Galveston Division  
Kyle Cannon, Eugene Donovan, Genaro Ramirez, Carol Sassler, and Harvey Walton, each Individually and on behalf of those similarly situated, *Plaintiffs*, vs. BP Products North America, Inc., *Defendant*.  
Case 3:10-cv-00622  
Rosenfeld Deposition: February 2012  
Rosenfeld Trial: April 2013

In the Circuit Court of Baltimore County Maryland  
Philip E. Cvach, II et al., *Plaintiffs* vs. Two Farms, Inc. d/b/a Royal Farms, Defendants  
Case Number: 03-C-12-012487 OT  
Rosenfeld Deposition: September 2013

# Exhibit C



April 30, 2020

Mr. Richard Drury  
Lozeau Drury  
1939 Harrison Street, Suite 150  
Oakland, CA 94612

**Subject: Times Mirror Square Project Draft Environmental Impact  
Report (SCH No. 2017061083) P19035**

Dear Mr. Drury:

At your request, I have reviewed the City of Los Angeles' (the "City") responses to our October 11, 2019 comments on the Draft Environmental Impact Report (hereinafter the "DEIR") for the Times Mirror Square Project (the "Project").

My qualifications to perform this review, which is specific to the Traffic and Circulation sections of that document and related appendices are thoroughly documented in my October 11, 2019 letter.

Findings of my review of the City's responses are summarized below, relying on the numeric designations the City's response has applied to my comments.

### **Comment and Response 2-56**

The essence of this comment is that since the DEIR discloses that the Project would have significant traffic impact in the Existing + Project condition at one downtown intersection and in the Future (2023 + Project) condition at six downtown intersections, for City decision makers and the public to have adequate information to determine whether the Project should be approved through assertion of overriding considerations, a detailed analysis of actual projected queue lengths (i.e. 95<sup>th</sup> percentile and average queue lengths) and what blockages would result from queues of these lengths should be performed

for the six impacted intersections. In other words, would the queues that result block operations at an upstream intersection or block access and egress to another major building a significant portion of the time in peak hours? The comment noted that it is critical that the severity of impact at these locations be accurately disclosed since the DEIR finds that physical improvements at these locations are infeasible.

The City's response indicates that because the Critical Movement Analysis methodology that the City relies on estimates volume to capacity ratios and levels of service (LOS), and because LOS definitions include reference to queues, by implication the analysis the DEIR did perform already considers queues. This response is a preposterous evasion and misrepresentation.

First, consider the loose, highly generalized and nonspecific to queue length relationship to queues included in the LOS definitions. Here we reproduce the LOS definitions presented in DEIR Appendix L<sup>1</sup>, Table 2A (portions italicized for emphasis).

- LOS D: FAIR. Delays may be substantial during portions of the rush hours, *but enough lower volume periods occur to permit clearing of developing lines,*<sup>2</sup> preventing excessive backups.
- LOS E: POOR. Represents the most vehicles intersection approaches can accommodate; *may be long lines of waiting vehicles through several signal cycles.*
- LOS F FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. *Tremendous delays with continuously increasing queue lengths.*

Obviously these definitions that are non-specific to queue length provide limited crude information regarding the actual consequences of queue formation and queue length.

Also, consider the Critical Movement Analysis procedure. It is an analysis tool that was devised 40 years ago as an interim procedure to be used until the next edition of the *Highway Capacity Manual* ("HCM") could be completed. In the intervening 40 years, it has been rendered obsolete by several subsequent editions of the HCM. The City of Los Angeles is among the decreasing number of jurisdictions that continue to rely on it for reasons that may include continuity and comparability to prior studies, simplicity and familiarity. But other than in the highly generalized and unspecific mention of queues in the LOS definitions described above, it gives no indication of queue length. For that, other commonly used and more modern methods of analysis are required. The City's

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<sup>1</sup> The DEIR's Transportation Impact Analysis.

<sup>2</sup> "Lines" is used as a synonym for queues.

consultants who prepared the transportation impact analysis are experts in applications of appropriate queue analysis procedures so it is astounding that the City would want to avoid having this critical information available to policy decision makers and the public.

### **Comment and Response 2-57**

This comment concerns the DEIR's failure to consider the traffic consequences of the Downtown Streetcar operation. The Response merely rehashes the DEIR's reasoning for avoiding considering of the streetcar operation, fundamentally that the streetcar project is not fully funded and a distant priority for regional transportation funding. We understand that the downtown streetcar is a low priority project for regional transit funding and even believe this status is deserved. Nonetheless, the streetcar project is an adopted plan of the City of Los Angeles and as such, under CEQA, this EIR must consider the consequences of the subject Project's access and circulation on that Plan and the consequences of that Plan on the subject Project's access and circulation. In the current response the City continues to do so.

This streetcar would operate in street-running configuration southbound on Broadway and northbound on Hill Street in the Project vicinity. Seven of the DEIR's study intersections and four of the intersections disclosed to be significantly impacted by the subject Project would be on the streetcar route. The operations and/or lane reservations for the streetcar would inevitably have deleterious effects on traffic that could only intensify the severity of the Projects traffic impacts that have been disclosed. Also, the traffic impacts of the Project could have deleterious effect on streetcar operations.

### **Comment and Response 2-58**

Response 2-58 responds by reference to Responses-To-Comments 2-63 and 2-64 which are elucidations of this summary comment. We refer our review of the response in kind.

### **Comment and Response 2-59**

This comment concerned the DEIR's assumption that 35 percent of the Project's vehicle trips disappear from the street system within a roughly circular area of about 0.75 to 0.85 miles from the intersection of W. 2<sup>nd</sup> and Broadway and that virtually all of the actual vehicle trips to/from the project are likely longer than this and pass through the somewhat more distant critical gateway intersections on the approaches to downtown. The comment notes that the City's transportation model on which the short-trip assumption is based is a person trip model and the 35 percent short trip statistic represents almost entirely walk, bike, local transit, taxi and TNC trips, not private auto trips.

The Response opines that since trips in that short range could be made by walking, bicycling or transit, assigning these as vehicle trips is a conservative assumption. This response is does not reflect the true situation. The vehicle trips in the data base are real counted vehicle trips, already heavily adjusted downward for presumed transit trips and internal trips within the Project. The urban sites reflected in the data base had transit, pedestrian and bicycle trips but these were generally not counted. It is complete misleading nonsense for the response to suggest that maybe the very short vehicle trips assumed in the traffic distribution are really transit, pedestrian and bicyclist trips and that it is conservative to have assigned these very short trips as vehicle trips. The reverse is true. The DEIR analysis has taken real motor vehicle trips and assigned them to short-distance origins and destinations that are likely to be walk, bike, local transit and TNC trips and in so doing, have understated the amount of Project and concurrent development traffic that would reach and impact the gateway intersections to downtown and the freeway system. The appropriate action would have been to assign virtually all the vehicle trips as longer trips that would have reached the gateway intersections on the approaches to the downtown area.

#### **Comment and Response 2-60**

Response 2-60 defers response to this summary comment concerning failure to consider impacts of Transportation Network Companies (TNCs or ridesharing) to response to comment 2-66. We do likewise.

#### **Comment and Response 2-61**

Comment 2-61 is a further discussion of the failure to address queuing issues at 4 of the impacted intersections disclosed as the involving operations in the Level-of-Service (LOS) E or F categories. For discussion of the inadequacy of the response, see Comment and Response 2-56 above.

#### **Comment and Response 2-62**

This comment involved further discussion of the impropriety of the DEIR's failure to consider the Downtown Streetcar project and included key dates in the City's approvals of the streetcar EIR and Routing which predate the NOP for the subject Times-Mirror Project. The City's response comments about streetcar funding are irrelevant to the fact the Downtown Streetcar was a project under CEQA definition at the time of the NOP for the subject Project and hence this Project's impacts on the Downtown Streetcar Plan should have been analyzed in the DEIR.

### **Comment and Response 2-63**

This comment concerns the reliance on trip generation data from *Trip Generation, 9<sup>th</sup> Edition (2012)* instead of *Trip Generation, 10<sup>th</sup> Edition (2017)*.

The response concedes that *Trip Generation, 10<sup>th</sup> Edition* more relevant data for a project of this nature located in a dense urban area, but claims that because the LADOT's MOU approved the trip generation estimates for the Project in March, 2017 and *Trip Generation, 10<sup>th</sup> Edition* was not available until Fall of 2017, the *10<sup>th</sup> Edition* data was available too late for use in the study. But this ignores the facts that the Notice of Preparation (NOP) for the Project's EIR, a date of significance under CEQA, was not issued until June 30, 2017 and the traffic analysis was not completed until May, 2018. Hence, the DEIR's transportation impact analysis could easily have adapted to rely on the superior edition of the data source.

The response goes on to present a table comparing peak hour trip rates from *Trip Generation, 9<sup>th</sup> Edition* to the *10<sup>th</sup> Edition* for the uses comprising the Project. It concludes that because the rates from the *9<sup>th</sup> Edition* are generally higher, that the DEIR traffic analysis is conservative. However, the table in the response is a false and misleading comparison. In dense urban situations such as that of the subject Project, the City applies heavy discounts to the *9<sup>th</sup> Edition* rates to account for such considerations as transit use and internalization. The rates in *10<sup>th</sup> Edition* inherently reflect the dense urban conditions that the City applies discounts to the *9<sup>th</sup> Edition* rates to adjust for.

### **Comment and Response 2-64**

The first part of this comment observes that the 2017 Existing + Project analysis credits the Project with a trip discount for a transit station that did not exist in 2017. The response states that since the Existing + Project analysis is purely hypothetical, for purported "comparison purposes", the DEIR applied the same transit discount to the Project in 2017 as it will be entitled to in its presumed 2023 completion date, subsequent to completion of the of the 2<sup>nd</sup> St./Broadway Regional Connector Station.

This response is pure balderdash. The Existing + Project analysis is not just some hypothetical whimsy. CEQA Guidelines §15125(a) provide that the ordinary baseline for measurement of environmental impact is the environment that existed at the time of issuance of the NOP. So it is wholly improper for the DEIR to apply to the Project in the Existing + Project analysis a trip discount for a transit station that did not exist in 2017.

The second part of the comment related to the assumption that 40 percent of the motor vehicle trips to/from the supermarket component of the project would be

attracted from traffic already passing the site. The comment observes that such rates of passer-by traffic attraction are ordinarily only achieved in supermarkets located along suburban arterials in centers with copious surface parking.

The response agrees that this rate of attraction of vehicular passer-by trips is really a suburban phenomenon but argues that in a dense urban setting many people will walk from nearby locations and that the passer-by discount is really a *surrogate measure for these walk trips*.

What this really comprises is an inappropriately informal, on-the-fly amendment to the LADOT Traffic Impact Analysis Guidelines without observational studies and technical substantiation. The fact that LADOT staff was complaisant in this does not give it substantiation.

Although the responders will likely be dismissive of this as anecdotal, this commenter's daughter lives in the Murry Hill area of New York City, a dense neighborhood close to the Empire State Building. When she shops at a supermarket (as contrast with a convenience market or boutique grocery), she, and most people she observes, takes her own car, uses Uber or Lyft or a taxi.

### **Comment and Response 2-65**

This comment was a further articulation of matters discussed under Comment and Response 2-59. For discussion of why the response is inadequate, see Comment and Response 2-59 above.

### **Comment and Response 2-66**

This comment concerned the considerable extra traffic and traffic congestion generated by the increased use of TNC services like Uber and Lyft.

The City's response is the same as it has been for the last three years, claiming that research is limited and that LADOT has not established a methodology for considering their use. It then opines, without substantiation, that TNCs are used more for occasional discretionary trips rather than for daily trips. This response is inadequate.

### **Conclusion**

This concludes my observations on the inadequate response to our comments on the Times-Mirror Project DEIR transportation element.

Sincerely,

Smith Engineering & Management

Mr. Richard Drury  
April 30, 2020  
Page 7

A California Corporation



Daniel T. Smith Jr., P.E.  
President



**DANIEL T. SMITH, Jr.**  
**President**

**EDUCATION**

Bachelor of Science, Engineering and Applied Science, Yale University, 1967  
Master of Science, Transportation Planning, University of California, Berkeley, 1968

**PROFESSIONAL REGISTRATION**

California No. 21913 (Civil)                      Nevada No. 7969 (Civil)    Washington No. 29337 (Civil)  
California No. 938 (Traffic)                      Arizona No. 22131 (Civil)

**PROFESSIONAL EXPERIENCE**

Smith Engineering & Management, 1993 to present. President.  
DKS Associates, 1979 to 1993. Founder, Vice President, Principal Transportation Engineer.  
De Leuw, Cather & Company, 1968 to 1979. Senior Transportation Planner.  
Personal specialties and project experience include:

**Litigation Consulting.** Provides consultation, investigations and expert witness testimony in highway design, transit design and traffic engineering matters including condemnations involving transportation access issues; traffic accidents involving highway design or traffic engineering factors; land use and development matters involving access and transportation impacts; parking and other traffic and transportation matters.

**Urban Corridor Studies/Alternatives Analysis.** Principal-in-charge for State Route (SR) 102 Feasibility Study, a 35-mile freeway alignment study north of Sacramento. Consultant on I-280 Interstate Transfer Concept Program, San Francisco, an AA/EIS for completion of I-280, demolition of Embarcadero freeway, substitute light rail and commuter rail projects. Principal-in-charge, SR 238 corridor freeway/expressway design/environmental study, Hayward (Calif.) Project manager, Sacramento Northeast Area multi-modal transportation corridor study. Transportation planner for I-80N West Terminal Study, and Harbor Drive Traffic Study, Portland, Oregon. Project manager for design of surface segment of Woodward Corridor LRT, Detroit, Michigan. Directed staff on I-80 National Strategic Corridor Study (Sacramento-San Francisco), US 101-Sonoma freeway operations study, SR 92 freeway operations study, I-880 freeway operations study, SR 152 alignment studies, Sacramento RTD light rail systems study, Tasman Corridor LRT AA/EIS, Fremont-Warm Springs BART extension plan/EIR, SRs 70/99 freeway alternatives study, and Richmond Parkway (SR 93) design study.

**Area Transportation Plans.** Principal-in charge for transportation element of City of Los Angeles General Plan Framework, shaping nations largest city two decades into 21st century. Project manager for the transportation element of 300-acre Mission Bay development in downtown San Francisco. Mission Bay involves 7 million gsf office/commercial space, 8,500 dwelling units, and community facilities. Transportation features include relocation of commuter rail station; extension of MUNI-Metro LRT; a multi-modal terminal for LRT, commuter rail and local bus; removal of a quarter mile elevated freeway; replacement by new ramps and a boulevard; an internal roadway network overcoming constraints imposed by an internal tidal basin; freeway structures and rail facilities; and concept plans for 20,000 structured parking spaces. Principal-in-charge for circulation plan to accommodate 9 million gsf of office/commercial growth in downtown Bellevue (Wash.). Principal-in-charge for 64 acre, 2 million gsf multi-use complex for FMC adjacent to San Jose International Airport. Project manager for transportation element of Sacramento Capitol Area Plan for the state governmental complex, and for Downtown Sacramento Redevelopment Plan. Project manager for Napa (Calif.) General Plan Circulation Element and Downtown Riverfront Redevelopment Plan, on parking program for downtown Walnut Creek, on downtown transportation plan for San Mateo and redevelopment plan for downtown Mountain View (Calif.), for traffic circulation and safety plans for California cities of Davis, Pleasant Hill and Hayward, and for Salem, Oregon.

**Transportation Centers.** Project manager for Daly City Intermodal Study which developed a \$7 million surface bus terminal, traffic access, parking and pedestrian circulation improvements at the Daly City BART station plus development of functional plans for a new BART station at Colma. Project manager for design of multi-modal terminal (commuter rail, light rail, bus) at Mission Bay, San Francisco. In Santa Clarita Long Range Transit Development Program, responsible for plan to relocate system's existing timed-transfer hub and development of three satellite transfer hubs. Performed airport ground transportation system evaluations for San Francisco International, Oakland International, Sea-Tac International, Oakland International, Los Angeles International, and San Diego Lindberg.

**Campus Transportation.** Campus transportation planning assignments for UC Davis, UC Berkeley, UC Santa Cruz and UC San Francisco Medical Center campuses; San Francisco State University; University of San Francisco; and the University of Alaska and others. Also developed master plans for institutional campuses including medical centers, headquarters complexes and research & development facilities.

**Special Event Facilities.** Evaluations and design studies for football/baseball stadiums, indoor sports arenas, horse and motor racing facilities, theme parks, fairgrounds and convention centers, ski complexes and destination resorts throughout western United States.

**Parking.** Parking programs and facilities for large area plans and individual sites including downtowns, special event facilities, university and institutional campuses and other large site developments; numerous parking feasibility and operations studies for parking structures and surface facilities; also, resident preferential parking .

**Transportation System Management & Traffic Restraint.** Project manager on FHWA program to develop techniques and guidelines for neighborhood street traffic limitation. Project manager for Berkeley, (Calif.), Neighborhood Traffic Study, pioneered application of traffic restraint techniques in the U.S. Developed residential traffic plans for Menlo Park, Santa Monica, Santa Cruz, Mill Valley, Oakland, Palo Alto, Piedmont, San Mateo County, Pasadena, Santa Ana and others. Participated in development of photo/radar speed enforcement device and experimented with speed humps. Co-author of Institute of Transportation Engineers reference publication on neighborhood traffic control.

**Bicycle Facilities.** Project manager to develop an FHWA manual for bicycle facility design and planning, on bikeway plans for Del Mar, (Calif.), the UC Davis and the City of Davis. Consultant to bikeway plans for Eugene, Oregon, Washington, D.C., Buffalo, New York, and Skokie, Illinois. Consultant to U.S. Bureau of Reclamation for development of hydraulically efficient, bicycle safe drainage inlets. Consultant on FHWA research on effective retrofits of undercrossing and overcrossing structures for bicyclists, pedestrians, and handicapped.

## MEMBERSHIPS

Institute of Transportation Engineers      Transportation Research Board

## PUBLICATIONS AND AWARDS

*Residential Street Design and Traffic Control*, with W. Homburger *et al.* Prentice Hall, 1989.

Co-recipient, Progressive Architecture Citation, *Mission Bay Master Plan*, with I.M. Pei WRT Associated, 1984.

*Residential Traffic Management, State of the Art Report*, U.S. Department of Transportation, 1979.

*Improving The Residential Street Environment*, with Donald Appleyard *et al.*, U.S. Department of Transportation, 1979.

*Strategic Concepts in Residential Neighborhood Traffic Control*, International Symposium on Traffic Control Systems, Berkeley, California, 1979.

*Planning and Design of Bicycle Facilities: Pitfalls and New Directions*, Transportation Research Board, Research Record 570, 1976.

Co-recipient, Progressive Architecture Award, *Livable Urban Streets, San Francisco Bay Area and London*, with Donald Appleyard, 1979.

# Exhibit D



# INDOOR ENVIRONMENTAL ENGINEERING



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Date: April 22, 2020

To: Richard Drury  
Lozeau | Drury LLP  
1939 Harrison Street, Suite 150  
Oakland, California 94612

From: Francis J. Offermann PE CIH

Subject: Indoor Air Quality: Times Mirror Square Project Los Angeles, CA  
(IEE File Reference: P-4353)

Pages: 7

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The following are my responses to the March, 2020 “Responses to Lozeau Drury LLP Letter”, related to Comment no. 2-13, “The EIR Fails to Address the Potential Significant Indoor Air Quality Impacts on the Health of Future Residents of the Project”.

The following responses to the Lozeau Drury comments are *italicized* and my rebuttal comments follow.

## ***Response to Comment No. 2-13***

1.) *The commenter maintains that the Project would have a significant impact on indoor air quality due to formaldehyde. However, the commenter provides no credible evidence that the Project will be constructed with building materials with significant amounts of formaldehyde, citing only an unsubstantiated, general article provided in Exhibit D.*

Exhibit D is the Chan 2018 research paper (Wanyu Chan, Yang-Seon Kim, Brett Singer, and Iain Walker; Indoor Air Quality in New California Homes with Mechanical Ventilation), which presents the preliminary results of their study of formaldehyde in new California homes. This study unequivocally showed that formaldehyde concentrations in new California homes built with CARB Phase 2 composite wood products posed cancer risks greater than 100 in a million.

The complete study is the Chan 2019 research paper (Chan, W., Kim, Y., Singer, B., and Walker I. 2019. Ventilation and Indoor Air Quality in New California Homes with Gas Appliances and Mechanical Ventilation. Lawrence Berkeley National Laboratory, Energy Technologies Area, LBNL-2001200, DOI: 10.20357/B7QC7X.).

The Chan 2019 research paper found that new homes (i.e., 69 of 70 built in 2012 or later with CARB Phase 2 Formaldehyde ATCM materials) had elevated indoor formaldehyde concentrations, with a median indoor concentrations of  $22.4 \mu\text{g}/\text{m}^3$  (18.2 ppb).

With respect to this project, the buildings in the Times Mirror Square Project in Los Angeles, CA consist of residential and commercial retail spaces

The residential occupants will potentially have continuous exposure (e.g. 24 hours per day, 52 weeks per year). These exposures are anticipated to result in significant cancer risks resulting from exposures to formaldehyde released by the building materials and furnishing commonly found in residential construction.

Because these residences will be constructed with CARB Phase 2 Formaldehyde ATCM materials, and be ventilated with the minimum code required amount of outdoor air, the indoor residential formaldehyde concentrations are likely similar to those concentrations observed in residences built with CARB Phase 2 Formaldehyde ATCM materials, which is a median of  $22.4 \mu\text{g}/\text{m}^3$  (Chan et. al., 2019)

Assuming that the residential occupants inhale  $20 \text{ m}^3$  of air per day, the average 70-year lifetime formaldehyde daily dose is 448  $\mu\text{g}/\text{day}$  for continuous exposure in the

residences. This exposure represents a cancer risk of 112 per million, which is more than 11 times the South Coast Air Quality Management District CEQA cancer risk of 10 per million. For occupants that do not have continuous exposure, the cancer risk will be proportionally less but still substantially over the CEQA cancer risk of 10 per million (e.g. for 12/hour/day occupancy, more than 5 times the CEQA cancer risk of 10 per million).

The employees of the commercial spaces are also expected to experience significant indoor exposures (e.g., 40 hours per week, 50 weeks per year). These exposures for employees are anticipated to result in significant cancer risks resulting from exposures to formaldehyde released by the building materials and furnishing commonly found in offices, warehouses, residences and hotels.

Because these commercial spaces will be constructed with CARB Phase 2 Formaldehyde ATCM materials, and be ventilated with the minimum code required amount of outdoor air, the indoor formaldehyde concentrations are likely similar to those concentrations observed in residences built with CARB Phase 2 Formaldehyde ATCM materials, which is a median of 22.4  $\mu\text{g}/\text{m}^3$  (Chan et. al., 2019).

Assuming that the commercial space employees work 8 hours per day and inhale 20  $\text{m}^3$  of air per day, the formaldehyde dose per work-day at the offices is 149  $\mu\text{g}/\text{day}$ .

Assuming that the commercial space employees work 5 days per week and 50 weeks per year for 45 years (start at age 20 and retire at age 65) the average 70-year lifetime formaldehyde daily dose is 65.6  $\mu\text{g}/\text{day}$ .

This exposure represents a cancer risk of 16.4 per million, which is more than 1.64 times the South Coast Air Quality Management District CEQA cancer risk of 10 per million.

*2.) The Project will comply with the existing codes and regulations in California, which adequately address potential emissions and risks from building materials to ensure safe practices and healthy indoor air.*

This response cites Title 24, The Building Energy Efficiency Standards (Energy Standards), as one of the codes and regulations that the Project will comply with and “*which adequately address potential emissions and risks from building materials to ensure safe practices and healthy indoor air.*” However, Title 24 does not speak at all about formaldehyde emissions from composite wood products, hence compliance with Title 24 does not “*ensure safe practices and healthy indoor air*” with respect to formaldehyde emissions from composite wood products.

This response further cites CAL Green and the CARB ATCM as codes and regulations that the Project will comply with and “*which adequately address potential emissions and risks from building materials to ensure safe practices and healthy indoor air.*” With respect to formaldehyde emissions from composite wood products, CAL Green simply requires compliance with the CARB ATCM. With respect to the CARB ATCM regulations of formaldehyde emissions from composite wood products, this response states “*The control measure assures that all building materials and furnishings manufactured, distributed, imported and used in new construction in California meet the maximum allowable concentrations that assure healthful indoor air quality*”. This is not true. This response more accurately states the intent of the control measure when they quote the stated purpose of the CARB ATCM regulation - *The purpose of this airborne toxic control measure is to “reduce formaldehyde emissions from composite wood products, and finished goods that contain composite wood products, that are sold, offered for sale, supplied, used, or manufactured for sale in California”*. In other words, the CARB ATCM regulations do not “*assure healthful indoor air quality*”, but rather “*reduce formaldehyde emissions from composite wood products*”.

Just how much protection do the CARB ATCM regulations provide building occupants from the formaldehyde emissions generated by composite wood products ? Definitely some, but certainly the regulations do not “*assure healthful indoor air quality*” when CARB Phase 2 products are utilized. As shown in the Chan 2019 study of new California homes, the median indoor formaldehyde concentration was of 22.4  $\mu\text{g}/\text{m}^3$  (18.2 ppb), which corresponds to a cancer risk of 112 per million for occupants with continuous

exposure, which is more than 11 times the Bay Area Air Quality Management District CEQA cancer risk of 10 per million.

Another way of looking at how much protection the CARB ATCM regulations provide building occupants from the formaldehyde emissions generated by composite wood products is to calculate the maximum number of square feet of composite wood product that can be in a residence without exceeding the CEQA cancer risk of 10 per million for occupants with continuous occupancy.

For this calculation I utilized the floor area (2,272 ft<sup>2</sup>), the ceiling height (8.5 ft), and the number of bedrooms (4) as defined in Appendix B (New Single-Family Residence Scenario) of the Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers, Version 1.1, 2017, California Department of Public Health, Richmond, CA. <https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx>.

For the outdoor air ventilation rate I used the 2019 Title 24 code required mechanical ventilation rate (ASHRAE 62.2) of 106 cfm (180 m<sup>3</sup>/h) calculated for this model residence. For the composite wood formaldehyde emission rates I used the CARB ATCM Phase 2 rates.

The calculated maximum number of square feet of composite wood product that can be in a residence, without exceeding the CEQA cancer risk of 10 per million for occupants with continuous occupancy are as follows for the different types of regulated composite wood products.

Medium Density Fiberboard (MDF) – 15 ft<sup>2</sup> (0.7% of the floor area), or

Particle Board – 30 ft<sup>2</sup> (1.3% of the floor area), or

Hardwood Plywood – 119 ft<sup>2</sup> (5.3% of the floor area), or

Thin MDF – 46 ft<sup>2</sup> (2.0 % of the floor area).

Clearly the CARB ATCM does not regulate the formaldehyde emissions from composite wood products such that the potentially large areas of these products, such as for flooring, baseboards, interior doors, window and door trims, and kitchen and bathroom cabinetry, could be used without causing indoor formaldehyde concentrations that result in CEQA cancer risks that substantially exceed 10 per million for occupants with continuous occupancy.

If CARB Phase 2 compliant composite wood products are utilized in this Project, then the resulting indoor formaldehyde concentrations should be determined in the design phase using the specific amounts of each type of composite wood product, the specific formaldehyde emission rates, and the volume and outdoor air ventilation rates of the indoor spaces, and all feasible mitigation measures employed to reduce this impact (e.g. use less formaldehyde containing composite wood products and/or incorporate mechanical systems capable of higher outdoor air ventilation rates).

Alternatively, and perhaps a simpler approach, is to use only composite wood products (e.g. hardwood plywood, medium density fiberboard, particleboard) for all interior finish systems that are made with CARB approved no-added formaldehyde (NAF) resins or ultra-low emitting formaldehyde (ULEF) resins. These products are now readily available and many other projects such as the AC by Marriott Hotel – West San Jose Project and 2525 North Main Street, Santa Ana have entered into settlement agreements stipulating the use of composite wood materials only containing NAF or ULEF resins.

# Francis (Bud) J. Offermann III PE, CIH

## Indoor Environmental Engineering

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### **Education**

M.S. Mechanical Engineering (1985)  
Stanford University, Stanford, CA.

Graduate Studies in Air Pollution Monitoring and Control (1980)  
University of California, Berkeley, CA.

B.S. in Mechanical Engineering (1976)  
Rensselaer Polytechnic Institute, Troy, N.Y.

### **Professional Experience**

President: Indoor Environmental Engineering, San Francisco, CA. December, 1981 - present.

Direct team of environmental scientists, chemists, and mechanical engineers in conducting State and Federal research regarding indoor air quality instrumentation development, building air quality field studies, ventilation and air cleaning performance measurements, and chemical emission rate testing.

Provide design side input to architects regarding selection of building materials and ventilation system components to ensure a high quality indoor environment.

Direct Indoor Air Quality Consulting Team for the winning design proposal for the new State of Washington Ecology Department building.

Develop a full-scale ventilation test facility for measuring the performance of air diffusers; ASHRAE 129, Air Change Effectiveness, and ASHRAE 113, Air Diffusion Performance Index.

Develop a chemical emission rate testing laboratory for measuring the chemical emissions from building materials, furnishings, and equipment.

Principle Investigator of the California New Homes Study (2005-2007). Measured ventilation and indoor air quality in 108 new single family detached homes in northern and southern California.

Develop and teach IAQ professional development workshops to building owners, managers, hygienists, and engineers.

Air Pollution Engineer: Earth Metrics Inc., Burlingame, CA, October, 1985 to March, 1987.

Responsible for development of an air pollution laboratory including installation a forced choice olfactometer, tracer gas electron capture chromatograph, and associated calibration facilities. Field team leader for studies of fugitive odor emissions from sewage treatment plants, entrainment of fume hood exhausts into computer chip fabrication rooms, and indoor air quality investigations.

Staff Scientist: Building Ventilation and Indoor Air Quality Program, Energy and Environment Division, Lawrence Berkeley Laboratory, Berkeley, CA. January, 1980 to August, 1984.

Deputy project leader for the Control Techniques group; responsible for laboratory and field studies aimed at evaluating the performance of indoor air pollutant control strategies (i.e. ventilation, filtration, precipitation, absorption, adsorption, and source control).

Coordinated field and laboratory studies of air-to-air heat exchangers including evaluation of thermal performance, ventilation efficiency, cross-stream contaminant transfer, and the effects of freezing/defrosting.

Developed an *in situ* test protocol for evaluating the performance of air cleaning systems and introduced the concept of effective cleaning rate (ECR) also known as the Clean Air Delivery Rate (CADR).

Coordinated laboratory studies of portable and ducted air cleaning systems and their effect on indoor concentrations of respirable particles and radon progeny.

Co-designed an automated instrument system for measuring residential ventilation rates and radon concentrations.

Designed hardware and software for a multi-channel automated data acquisition system used to evaluate the performance of air-to-air heat transfer equipment.

Assistant Chief Engineer: Alta Bates Hospital, Berkeley, CA, October, 1979 to January, 1980.

Responsible for energy management projects involving installation of power factor correction capacitors on large inductive electrical devices and installation of steam meters on physical plant steam lines. Member of Local 39, International Union of Operating Engineers.

Manufacturing Engineer: American Precision Industries, Buffalo, NY, October, 1977 to October, 1979.

Responsible for reorganizing the manufacturing procedures regarding production of shell and tube heat exchangers. Designed customized automatic assembly, welding, and testing equipment. Designed a large paint spray booth. Prepared economic studies justifying new equipment purchases. Safety Director.

Project Engineer: Arcata Graphics, Buffalo, N.Y. June, 1976 to October, 1977.

Responsible for the design and installation of a bulk ink storage and distribution system and high speed automatic counting and marking equipment. Also coordinated material handling studies which led to the purchase and installation of new equipment.

### **PROFESSIONAL ORGANIZATION MEMBERSHIP**

American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)

- Chairman of SPC-145P, Standards Project Committee - Test Method for Assessing the Performance of Gas Phase Air Cleaning Equipment (1991-1992)
- Member SPC-129P, Standards Project Committee - Test Method for Ventilation Effectiveness (1986-97)
  - Member of Drafting Committee
- Member Environmental Health Committee (1992-1994, 1997-2001, 2007-2010)
  - Chairman of EHC Research Subcommittee
  - Member of Man Made Mineral Fiber Position Paper Subcommittee
  - Member of the IAQ Position Paper Committee
  - Member of the Legionella Position Paper Committee
  - Member of the Limiting Indoor Mold and Dampness in Buildings Position Paper Committee
- Member SSPC-62, Standing Standards Project Committee - Ventilation for Acceptable Indoor Air Quality (1992 to 2000)
  - Chairman of Source Control and Air Cleaning Subcommittee
- Chairman of TC-4.10, Indoor Environmental Modeling (1988-92)
  - Member of Research Subcommittee
- Chairman of TC-2.3, Gaseous Air Contaminants and Control Equipment (1989-92)
  - Member of Research Subcommittee

American Society for Testing and Materials (ASTM)

- D-22 Sampling and Analysis of Atmospheres
  - Member of Indoor Air Quality Subcommittee
- E-06 Performance of Building Constructions

American Board of Industrial Hygiene (ABIH)

American Conference of Governmental Industrial Hygienists (ACGIH)

- Bioaerosols Committee (2007-2013)

American Industrial Hygiene Association (AIHA)

Cal-OSHA Indoor Air Quality Advisory Committee

International Society of Indoor Air Quality and Climate (ISIAQ)

- Co-Chairman of Task Force on HVAC Hygiene

U. S. Green Building Council (USGBC)

- Member of the IEQ Technical Advisory Group (2007-2009)
- Member of the IAQ Performance Testing Work Group (2010-2012)

Western Construction Consultants (WESTCON)

### **PROFESSIONAL CREDENTIALS**

Licensed Professional Engineer - Mechanical Engineering

Certified Industrial Hygienist - American Board of Industrial Hygienists

### **SCIENTIFIC MEETINGS AND SYMPOSIA**

Biological Contamination, Diagnosis, and Mitigation, Indoor Air'90, Toronto, Canada, August, 1990.

Models for Predicting Air Quality, Indoor Air'90, Toronto, Canada, August, 1990.

Microbes in Building Materials and Systems, Indoor Air '93, Helsinki, Finland, July, 1993.

Microorganisms in Indoor Air Assessment and Evaluation of Health Effects and Probable Causes, Walnut Creek, CA, February 27, 1997.

Controlling Microbial Moisture Problems in Buildings, Walnut Creek, CA, February 27, 1997.

Scientific Advisory Committee, Roomvent 98, 6<sup>th</sup> International Conference on Air Distribution in Rooms, KTH, Stockholm, Sweden, June 14-17, 1998.

Moisture and Mould, Indoor Air '99, Edinburgh, Scotland, August, 1999.

Ventilation Modeling and Simulation, Indoor Air '99, Edinburgh, Scotland, August, 1999.

Microbial Growth in Materials, Healthy Buildings 2000, Espoo, Finland, August, 2000.

Co-Chair, Bioaerosols X- Exposures in Residences, Indoor Air 2002, Monterey, CA, July 2002.

Healthy Indoor Environments, Anaheim, CA, April 2003.

Chair, Environmental Tobacco Smoke in Multi-Family Homes, Indoor Air 2008, Copenhagen, Denmark, July 2008.

Co-Chair, ISIAQ Task Force Workshop; HVAC Hygiene, Indoor Air 2002, Monterey, CA, July 2002.

Chair, ETS in Multi-Family Housing: Exposures, Controls, and Legalities Forum, Healthy Buildings 2009, Syracuse, CA, September 14, 2009.

Chair, Energy Conservation and IAQ in Residences Workshop, Indoor Air 2011, Austin, TX, June 6, 2011.

Chair, Electronic Cigarettes: Chemical Emissions and Exposures Colloquium, Indoor Air 2016, Ghent, Belgium, July 4, 2016.

### **SPECIAL CONSULTATION**

Provide consultation to the American Home Appliance Manufacturers on the development of a standard for testing portable air cleaners, AHAM Standard AC-1.

Served as an expert witness and special consultant for the U.S. Federal Trade Commission regarding the performance claims found in advertisements of portable air cleaners and residential furnace filters.

Conducted a forensic investigation for a San Mateo, CA pro se defendant, regarding an alleged homicide where the victim was kidnapped in a steamer trunk. Determined the air exchange rate in the steamer trunk and how long the person could survive.

Conducted *in situ* measurement of human exposure to toluene fumes released during nailpolish application for a plaintiffs attorney pursuing a California Proposition 65 product labeling case. June, 1993.

Conducted a forensic *in situ* investigation for the Butte County, CA Sheriff's Department of the emissions of a portable heater used in the bedroom of two twin one year old girls who suffered simultaneous crib death.

Consult with OSHA on the 1995 proposed new regulation regarding indoor air quality and environmental tobacco smoke.

Consult with EPA on the proposed Building Alliance program and with OSHA on the proposed new OSHA IAQ regulation.

Johnson Controls Audit/Certification Expert Review; Milwaukee, WI. May 28-29, 1997.

Winner of the nationally published 1999 Request for Proposals by the State of Washington to conduct a comprehensive indoor air quality investigation of the Washington State Department of Ecology building in Lacey, WA.

Selected by the State of California Attorney General's Office in August, 2000 to conduct a comprehensive indoor air quality investigation of the Tulare County Court House.

Lawrence Berkeley Laboratory IAQ Experts Workshop: "Cause and Prevention of Sick Building Problems in Offices: The Experience of Indoor Environmental Quality Investigators", Berkeley, California, May 26-27, 2004.

Provide consultation and chemical emission rate testing to the State of California Attorney General's Office in 2013-2015 regarding the chemical emissions from e-cigarettes.

#### **PEER-REVIEWED PUBLICATIONS :**

F.J.Offermann, C.D.Hollowell, and G.D.Roseme, "Low-Infiltration Housing in Rochester, New York: A Study of Air Exchange Rates and Indoor Air Quality," *Environment International*, 8, pp. 435-445, 1982.

W.W.Nazaroff, F.J.Offermann, and A.W.Robb, "Automated System for Measuring Air Exchange Rate and Radon Concentration in Houses," *Health Physics*, 45, pp. 525-537, 1983.

F.J.Offermann, W.J.Fisk, D.T.Grimrud, B.Pedersen, and K.L.Revzan, "Ventilation Efficiencies of Wall- or Window-Mounted Residential Air-to-Air Heat Exchangers," *ASHRAE Annual Transactions*, 89-2B, pp 507-527, 1983.

W.J.Fisk, K.M.Archer, R.E Chant, D. Hekmat, F.J.Offermann, and B.Pedersen, "Onset of Freezing in Residential Air-to-Air Heat Exchangers," *ASHRAE Annual Transactions*, 91-1B, 1984.

W.J.Fisk, K.M.Archer, R.E Chant, D. Hekmat, F.J.Offermann, and B.Pedersen, "Performance of Residential Air-to-Air Heat Exchangers During Operation with Freezing and Periodic Defrosts," *ASHRAE Annual Transactions*, 91-1B, 1984.

F.J.Offermann, R.G.Sextro, W.J.Fisk, D.T.Grimrud, W.W.Nazaroff, A.V.Nero, and K.L.Revzan, "Control of Respirable Particles with Portable Air Cleaners," *Atmospheric Environment*, Vol. 19, pp.1761-1771, 1985.

R.G.Sextro, F.J.Offermann, W.W.Nazaroff, A.V.Nero, K.L.Revzan, and J.Yater, "Evaluation of Indoor Control Devices and Their Effects on Radon Progeny Concentrations," *Atmospheric Environment*, *12*, pp. 429-438, 1986.

W.J. Fisk, R.K.Spencer, F.J.Offermann, R.K.Spencer, B.Pedersen, R.Sextro, "Indoor Air Quality Control Techniques," *Noyes Data Corporation*, Park Ridge, New Jersey, (1987).

F.J.Offermann, "Ventilation Effectiveness and ADPI Measurements of a Forced Air Heating System," *ASHRAE Transactions* , Volume 94, Part 1, pp 694-704, 1988.

F.J.Offermann and D. Int-Hout "Ventilation Effectiveness Measurements of Three Supply/Return Air Configurations," *Environment International* , Volume 15, pp 585-592 1989.

F.J. Offermann, S.A. Loiselle, M.C. Quinlan, and M.S. Rogers, "A Study of Diesel Fume Entrainment in an Office Building," *IAQ '89*, The Human Equation: Health and Comfort, pp 179-183, ASHRAE, Atlanta, GA, 1989.

R.G.Sextro and F.J.Offermann, "Reduction of Residential Indoor Particle and Radon Progeny Concentrations with Ducted Air Cleaning Systems," submitted to *Indoor Air*, 1990.

S.A.Loiselle, A.T.Hodgson, and F.J.Offermann, "Development of An Indoor Air Sampler for Polycyclic Aromatic Compounds", *Indoor Air* , Vol 2, pp 191-210, 1991.

F.J.Offermann, S.A.Loiselle, A.T.Hodgson, L.A. Gundel, and J.M. Daisey, "A Pilot Study to Measure Indoor Concentrations and Emission Rates of Polycyclic Aromatic Compounds", *Indoor Air* , Vol 4, pp 497-512, 1991.

F.J. Offermann, S. A. Loiselle, R.G. Sextro, "Performance Comparisons of Six Different Air Cleaners Installed in a Residential Forced Air Ventilation System," *IAQ'91*, Healthy Buildings, pp 342-350, ASHRAE, Atlanta, GA (1991).

F.J. Offermann, J. Daisey, A. Hodgson, L. Gundell, and S. Loiselle, "Indoor Concentrations and Emission Rates of Polycyclic Aromatic Compounds", *Indoor Air*, Vol 4, pp 497-512 (1992).

F.J. Offermann, S. A. Loiselle, R.G. Sextro, "Performance of Air Cleaners Installed in a Residential Forced Air System," *ASHRAE Journal*, pp 51-57, July, 1992.

F.J. Offermann and S. A. Loiselle, "Performance of an Air-Cleaning System in an Archival Book Storage Facility," *IAQ'92*, ASHRAE, Atlanta, GA, 1992.

S.B. Hayward, K.S. Liu, L.E. Alevantis, K. Shah, S. Loiselle, F.J. Offermann, Y.L. Chang, L. Webber, "Effectiveness of Ventilation and Other Controls in Reducing Exposure to ETS in Office Buildings," *Indoor Air '93*, Helsinki, Finland, July 4-8, 1993.

F.J. Offermann, S. A. Loiselle, G. Ander, H. Lau, "Indoor Contaminant Emission Rates Before and After a Building Bake-out," *IAQ'93*, Operating and Maintaining Buildings for Health, Comfort, and Productivity, pp 157-163, ASHRAE, Atlanta, GA, 1993.

L.E. Alevantis, Hayward, S.B., Shah, S.B., Loiselle, S., and Offermann, F.J. "Tracer Gas Techniques for Determination of the Effectiveness of Pollutant Removal From Local Sources," *IAQ '93*, Operating and Maintaining Buildings for Health, Comfort, and Productivity, pp 119-129, ASHRAE, Atlanta, GA, 1993.

L.E. Alevantis, Liu, L.E., Hayward, S.B., Offermann, F.J., Shah, S.B., Leiserson, K. Tsao, E., and Huang, Y., "Effectiveness of Ventilation in 23 Designated Smoking Areas in California Buildings," *IAQ '94*, Engineering Indoor Environments, pp 167-181, ASHRAE, Atlanta, GA, 1994.

L.E. Alevantis, Offermann, F.J., Loiselle, S., and Macher, J.M., "Pressure and Ventilation Requirements of Hospital Isolation Rooms for Tuberculosis (TB) Patients: Existing Guidelines in the United States and a Method for Measuring Room Leakage", Ventilation and Indoor air quality in Hospitals, M. Maroni, editor, Kluwer Academic publishers, Netherlands, 1996.

F.J. Offermann, M. A. Waz, A.T. Hodgson, and H.M. Ammann, "Chemical Emissions from a Hospital Operating Room Air Filter," *IAQ'96*, Paths to Better Building Environments, pp 95-99, ASHRAE, Atlanta, GA, 1996.

F.J. Offermann, "Professional Malpractice and the Sick Building Investigator," *IAQ'96*, Paths to Better Building Environments, pp 132-136, ASHRAE, Atlanta, GA, 1996.

F.J. Offermann, "Standard Method of Measuring Air Change Effectiveness," *Indoor Air*, Vol 1, pp.206-211, 1999.

F. J. Offermann, A. T. Hodgson, and J. P. Robertson, "Contaminant Emission Rates from PVC Backed Carpet Tiles on Damp Concrete", Healthy Buildings 2000, Espoo, Finland, August 2000.

K.S. Liu, L.E. Alevantis, and F.J. Offermann, "A Survey of Environmental Tobacco Smoke Controls in California Office Buildings", *Indoor Air*, Vol 11, pp. 26-34, 2001.

F.J. Offermann, R. Colfer, P. Radzinski, and J. Robertson, "Exposure to Environmental Tobacco Smoke in an Automobile", *Indoor Air* 2002, Monterey, California, July 2002.

F. J. Offermann, J.P. Robertson, and T. Webster, "The Impact of Tracer Gas Mixing on Airflow Rate Measurements in Large Commercial Fan Systems", *Indoor Air* 2002, Monterey, California, July 2002.

M. J. Mendell, T. Brennan, L. Hathon, J.D. Odom, F.J. Offermann, B.H. Turk, K.M. Wallingford, R.C. Diamond, W.J. Fisk, "Causes and prevention of Symptom Complaints

in Office Buildings: Distilling the Experience of Indoor Environmental Investigators”, submitted to Indoor Air 2005, Beijing, China, September 4-9, 2005.

F.J. Offermann, “Ventilation and IAQ in New Homes With and Without Mechanical Outdoor Air Systems”, Healthy Buildings 2009, Syracuse, CA, September 14, 2009.

F.J. Offermann, “ASHRAE 62.2 Intermittent Residential Ventilation: What’s It Good For, Intermittently Poor IAQ”, IAQVEC 2010, Syracuse, CA, April 21, 2010.

F.J. Offermann and A.T. Hodgson, “Emission Rates of Volatile Organic Compounds in New Homes”, Indoor Air 2011, Austin, TX, June, 2011.

P. Jenkins, R. Johnson, T. Phillips, and F. Offermann, “Chemical Concentrations in New California Homes and Garages”, Indoor Air 2011, Austin, TX, June, 2011.

W. J. Mills, B. J. Grigg, F. J. Offermann, B. E. Gustin, and N. E. Spingarm, “Toluene and Methyl Ethyl Ketone Exposure from a Commercially Available Contact Adhesive”, Journal of Occupational and Environmental Hygiene, 9:D95-D102 May, 2012.

F. J. Offermann, R. Maddalena, J. C. Offermann, B. C. Singer, and H. Wilhelm, “The Impact of Ventilation on the Emission Rates of Volatile Organic Compounds in Residences”, HB 2012, Brisbane, AU, July, 2012.

F. J. Offermann, A. T. Hodgson, P. L. Jenkins, R. D. Johnson, and T. J. Phillips, “Attached Garages as a Source of Volatile Organic Compounds in New Homes”, HB 2012, Brisbane, CA, July, 2012.

R. Maddalena, N. Li, F. Offermann, and B. Singer, “Maximizing Information from Residential Measurements of Volatile Organic Compounds”, HB 2012, Brisbane, AU, July, 2012.

W. Chen, A. Persily, A. Hodgson, F. Offermann, D. Poppendieck, and K. Kumagai, “Area-Specific Airflow Rates for Evaluating the Impacts of VOC emissions in U.S. Single-Family Homes”, Building and Environment, Vol. 71, 204-211, February, 2014.

F. J. Offermann, A. Eagan A. C. Offermann, and L. J. Radonovich, “Infectious Disease Aerosol Exposures With and Without Surge Control Ventilation System Modifications”, Indoor Air 2014, Hong Kong, July, 2014.

F. J. Offermann, “Chemical Emissions from E-Cigarettes: Direct and Indirect Passive Exposures”, Building and Environment, Vol. 93, Part 1, 101-105, November, 2015.

F. J. Offermann, “Formaldehyde Emission Rates From Lumber Liquidators Laminate Flooring Manufactured in China”, Indoor Air 2016, Belgium, Ghent, July, 2016.

F. J. Offermann, “Formaldehyde and Acetaldehyde Emission Rates for E-Cigarettes”, Indoor Air 2016, Belgium, Ghent, July, 2016.

## **OTHER REPORTS:**

W.J.Fisk, P.G.Cleary, and F.J.Offermann, "Energy Saving Ventilation with Residential Heat Exchangers," a Lawrence Berkeley Laboratory brochure distributed by the Bonneville Power Administration, 1981.

F.J.Offermann, J.R.Girman, and C.D.Hollowell, "Midway House Tightening Project: A Study of Indoor Air Quality," Lawrence Berkeley Laboratory, Berkeley, CA, Report LBL-12777, 1981.

F.J.Offermann, J.B.Dickinson, W.J.Fisk, D.T.Grimrud, C.D.Hollowell, D.L.Krinkle, and G.D.Roseme, "Residential Air-Leakage and Indoor Air Quality in Rochester, New York," Lawrence Berkeley Laboratory, Berkeley, CA, Report LBL-13100, 1982.

F.J.Offermann, W.J.Fisk, B.Pedersen, and K.L.Revzan, Residential Air-to-Air Heat Exchangers: A Study of the Ventilation Efficiencies of Wall- or Window- Mounted Units," Lawrence Berkeley Laboratory, Berkeley, CA, Report LBL-14358, 1982.

F.J.Offermann, W.J.Fisk, W.W.Nazaroff, and R.G.Sextro, "A Review of Portable Air Cleaners for Controlling Indoor Concentrations of Particulates and Radon Progeny," An interim report for the Bonneville Power Administration, 1983.

W.J.Fisk, K.M.Archer, R.E.Chant, D.Hekmat, F.J.Offermann, and B.S. Pedersen, "Freezing in Residential Air-to-Air Heat Exchangers: An Experimental Study," Lawrence Berkeley Laboratory, Berkeley, CA, Report LBL-16783, 1983.

R.G.Sextro, W.W.Nazaroff, F.J.Offermann, and K.L.Revzan, "Measurements of Indoor Aerosol Properties and Their Effect on Radon Progeny," Proceedings of the American Association of Aerosol Research Annual Meeting, April, 1983.

F.J.Offermann, R.G.Sextro, W.J.Fisk, W.W. Nazaroff, A.V.Nero, K.L.Revzan, and J.Yater, "Control of Respirable Particles and Radon Progeny with Portable Air Cleaners," Lawrence Berkeley Laboratory, Berkeley, CA, Report LBL-16659, 1984.

W.J.Fisk, R.K.Spencer, D.T.Grimrud, F.J.Offermann, B.Pedersen, and R.G.Sextro, "Indoor Air Quality Control Techniques: A Critical Review," Lawrence Berkeley Laboratory, Berkeley, CA, Report LBL-16493, 1984.

F.J.Offermann, J.R.Girman, and R.G.Sextro, "Controlling Indoor Air Pollution from Tobacco Smoke: Models and Measurements," Indoor Air, Proceedings of the 3rd International Conference on Indoor Air Quality and Climate, Vol 1, pp 257-264, Swedish Council for Building Research, Stockholm (1984), Lawrence Berkeley Laboratory, Berkeley, CA, Report LBL-17603, 1984.

R.Otto, J.Girman, F.Offermann, and R.Sextro, "A New Method for the Collection and Comparison of Respirable Particles in the Indoor Environment," Lawrence Berkeley Laboratory, Berkeley, CA, Special Director Fund's Study, 1984.

A.T.Hodgson and F.J.Offermann, "Examination of a Sick Office Building," Lawrence Berkeley Laboratory, Berkeley, CA, an informal field study, 1984.

R.G.Sextro, F.J.Offermann, W.W.Nazaroff, and A.V.Nero, "Effects of Aerosol Concentrations on Radon Progeny," *Aerosols, Science, & Technology, and Industrial Applications of Airborne Particles*, editors B.Y.H.Liu, D.Y.H.Pui, and H.J.Fissan, p525, Elsevier, 1984.

K.Sexton, S.Hayward, F.Offermann, R.Sextro, and L.Weber, "Characterization of Particulate and Organic Emissions from Major Indoor Sources, Proceedings of the Third International Conference on Indoor Air Quality and Climate, Stockholm, Sweden, August 20-24, 1984.

F.J.Offermann, "Tracer Gas Measurements of Laboratory Fume Entrainment at a Semiconductor Manufacturing Plant," an Indoor Environmental Engineering R&D Report, 1986.

F.J.Offermann, "Tracer Gas Measurements of Ventilation Rates in a Large Office Building," an Indoor Environmental Engineering R&D Report, 1986.

F.J.Offermann, "Measurements of Volatile Organic Compounds in a New Large Office Building with Adhesive Fastened Carpeting," an Indoor Environmental Engineering R&D Report, 1986.

F.J.Offermann, "Designing and Operating Healthy Buildings", an Indoor Environmental Engineering R&D Report, 1986.

F.J.Offermann, "Measurements and Mitigation of Indoor Spray-Applied Pesticides", an Indoor Environmental Engineering R&D Report, 1988.

F.J.Offermann and S. Loiselle, "Measurements and Mitigation of Indoor Mold Contamination in a Residence", an Indoor Environmental Engineering R&D Report, 1989.

F.J.Offermann and S. Loiselle, "Performance Measurements of an Air Cleaning System in a Large Archival Library Storage Facility", an Indoor Environmental Engineering R&D Report, 1989.

F.J. Offermann, J.M. Daisey, L.A. Gundel, and A.T. Hodgson, S. A. Loiselle, "Sampling, Analysis, and Data Validation of Indoor Concentrations of Polycyclic Aromatic Hydrocarbons", Final Report, Contract No. A732-106, California Air Resources Board, March, 1990.

L.A. Gundel, J.M. Daisey, and F.J. Offermann, "A Sampling and Analytical Method for Gas Phase Polycyclic Aromatic Hydrocarbons", Proceedings of the 5th International Conference on Indoor Air Quality and Climate, Indoor Air '90, July 29-August 1990.

A.T. Hodgson, J.M. Daisey, and F.J. Offermann "Development of an Indoor Sampling and Analytical Method for Particulate Polycyclic Aromatic Hydrocarbons", Proceedings of the 5th International Conference on Indoor Air Quality and Climate, Indoor Air '90, July 29-August, 1990.

F.J. Offermann, J.O. Sateri, "Tracer Gas Measurements in Large Multi-Room Buildings", Indoor Air '93, Helsinki, Finland, July 4-8, 1993.

F.J. Offermann, M. T. O'Flaherty, and M. A. Waz "Validation of ASHRAE 129 - Standard Method of Measuring Air Change Effectiveness", Final Report of ASHRAE Research Project 891, December 8, 1997.

S.E. Guffey, F.J. Offermann et. al., "Proceedings of the Workshop on Ventilation Engineering Controls for Environmental Tobacco smoke in the Hospitality Industry", U.S. Department of Labor Occupational Safety and Health Administration and ACGIH, 1998.

F.J. Offermann, R.J. Fiskum, D. Kosar, and D. Mudaari, "A Practical Guide to Ventilation Practices & Systems for Existing Buildings", *Heating/Piping/Air Conditioning Engineering* supplement to April/May 1999 issue.

F.J. Offermann, P. Pasanen, "Workshop 18: Criteria for Cleaning of Air Handling Systems", Healthy Buildings 2000, Espoo, Finland, August 2000.

F.J. Offermann, Session Summaries: Building Investigations, and Design & Construction, Healthy Buildings 2000, Espoo, Finland, August 2000.

F.J. Offermann, "The IAQ Top 10", Engineered Systems, November, 2008.

L. Kincaid and F.J. Offermann, "Unintended Consequences: Formaldehyde Exposures in Green Homes, AIHA Synergist, February, 2010.

F.J. Offermann, "IAQ in Air Tight Homes", ASHRAE Journal, November, 2010.

F.J. Offermann, "The Hazards of E-Cigarettes", ASHRAE Journal, June, 2014.

### **PRESENTATIONS :**

"Low-Infiltration Housing in Rochester, New York: A Study of Air Exchange Rates and Indoor Air Quality," Presented at the International Symposium on Indoor Air Pollution, Health and Energy Conservation, Amherst, MA, October 13-16, 1981.

"Ventilation Efficiencies of Wall- or Window-Mounted Residential Air-to-Air Heat Exchangers," Presented at the American Society of Heating, Refrigeration, and Air Conditioning Engineers Summer Meeting, Washington, DC, June, 1983.

"Controlling Indoor Air Pollution from Tobacco Smoke: Models and Measurements," Presented at the Third International Conference on Indoor Air Quality and Climate, Stockholm, Sweden, August 20-24, 1984.

"Indoor Air Pollution: An Emerging Environmental Problem", Presented to the Association of Environmental Professionals, Bar Area/Coastal Region 1, Berkeley, CA, May 29, 1986.

"Ventilation Measurement Techniques," Presented at the Workshop on Sampling and Analytical Techniques, Georgia Institute of Technology, Atlanta, Georgia, September 26, 1986 and September 25, 1987.

"Buildings That Make You Sick: Indoor Air Pollution", Presented to the Sacramento Association of Professional Energy Managers, Sacramento, CA, November 18, 1986.

"Ventilation Effectiveness and Indoor Air Quality", Presented to the American Society of Heating, Refrigeration, and Air Conditioning Engineers Northern Nevada Chapter, Reno, NV, February 18, 1987, Golden Gate Chapter, San Francisco, CA, October 1, 1987, and the San Jose Chapter, San Jose, CA, June 9, 1987.

"Tracer Gas Techniques for Studying Ventilation," Presented at the Indoor Air Quality Symposium, Georgia Tech Research Institute, Atlanta, GA, September 22-24, 1987.

"Indoor Air Quality Control: What Works, What Doesn't," Presented to the Sacramento Association of Professional Energy Managers, Sacramento, CA, November 17, 1987.

"Ventilation Effectiveness and ADPI Measurements of a Forced Air Heating System," Presented at the American Society of Heating, Refrigeration, and Air Conditioning Engineers Winter Meeting, Dallas, Texas, January 31, 1988.

"Indoor Air Quality, Ventilation, and Energy in Commercial Buildings", Presented at the Building Owners & Managers Association of Sacramento, Sacramento, CA, July 21, 1988.

"Controlling Indoor Air Quality: The New ASHRAE Ventilation Standards and How to Evaluate Indoor Air Quality", Presented at a conference "Improving Energy Efficiency and Indoor Air Quality in Commercial Buildings," National Energy Management Institute, Reno, Nevada, November 4, 1988.

"A Study of Diesel Fume Entrainment Into an Office Building," Presented at Indoor Air '89: The Human Equation: Health and Comfort, American Society of Heating, Refrigeration, and Air Conditioning Engineers, San Diego, CA, April 17-20, 1989.

"Indoor Air Quality in Commercial Office Buildings," Presented at the Renewable Energy Technologies Symposium and International Exposition, Santa Clara, CA June 20, 1989.

"Building Ventilation and Indoor Air Quality", Presented to the San Joaquin Chapter of the American Society of Heating, Refrigeration, and Air Conditioning Engineers, September 7, 1989.

"How to Meet New Ventilation Standards: Indoor Air Quality and Energy Efficiency," a workshop presented by the Association of Energy Engineers; Chicago, IL, March 20-21, 1989; Atlanta, GA, May 25-26, 1989; San Francisco, CA, October 19-20, 1989; Orlando, FL, December 11-12, 1989; Houston, TX, January 29-30, 1990; Washington D.C., February 26-27, 1990; Anchorage, Alaska, March 23, 1990; Las Vegas, NV, April 23-24, 1990; Atlantic City, NJ, September 27-28, 1991; Anaheim, CA, November 19-20, 1991; Orlando, FL, February 28 - March 1, 1991; Washington, DC, March 20-21, 1991; Chicago, IL, May 16-17, 1991; Lake Tahoe, NV, August 15-16, 1991; Atlantic City, NJ, November 18-19, 1991; San Jose, CA, March 23-24, 1992.

"Indoor Air Quality," a seminar presented by the Anchorage, Alaska Chapter of the American Society of Heating, Refrigeration, and Air Conditioning Engineers, March 23, 1990.

"Ventilation and Indoor Air Quality", Presented at the 1990 HVAC & Building Systems Congress, Santa Clara, CA, March 29, 1990.

"Ventilation Standards for Office Buildings", Presented to the South Bay Property Managers Association, Santa Clara, May 9, 1990.

"Indoor Air Quality", Presented at the Responsive Energy Technologies Symposium & International Exposition (RETSIE), Santa Clara, CA, June 20, 1990.

"Indoor Air Quality - Management and Control Strategies", Presented at the Association of Energy Engineers, San Francisco Bay Area Chapter Meeting, Berkeley, CA, September 25, 1990.

"Diagnosing Indoor Air Contaminant and Odor Problems", Presented at the ASHRAE Annual Meeting, New York City, NY, January 23, 1991.

"Diagnosing and Treating the Sick Building Syndrome", Presented at the Energy 2001, Oklahoma, OK, March 19, 1991.

"Diagnosing and Mitigating Indoor Air Quality Problems" a workshop presented by the Association of Energy Engineers, Chicago, IL, October 29-30, 1990; New York, NY, January 24-25, 1991; Anaheim, April 25-26, 1991; Boston, MA, June 10-11, 1991; Atlanta, GA, October 24-25, 1991; Chicago, IL, October 3-4, 1991; Las Vegas, NV, December 16-17, 1991; Anaheim, CA, January 30-31, 1992; Atlanta, GA, March 5-6, 1992; Washington, DC, May 7-8, 1992; Chicago, IL, August 19-20, 1992; Las Vegas,

NV, October 1-2, 1992; New York City, NY, October 26-27, 1992, Las Vegas, NV, March 18-19, 1993; Lake Tahoe, CA, July 14-15, 1994; Las Vegas, NV, April 3-4, 1995; Lake Tahoe, CA, July 11-12, 1996; Miami, FL, December 9-10, 1996.

"Sick Building Syndrome and the Ventilation Engineer", Presented to the San Jose Engineers Club, May, 21, 1991.

"Duct Cleaning: Who Needs It ? How Is It Done ? What Are The Costs ?" What Are the Risks ?, Moderator of Forum at the ASHRAE Annual Meeting, Indianapolis ID, June 23, 1991.

"Operating Healthy Buildings", Association of Plant Engineers, Oakland, CA, November 14, 1991.

"Duct Cleaning Perspectives", Moderator of Seminar at the ASHRAE Semi-Annual Meeting, Indianapolis, IN, June 24, 1991.

"Duct Cleaning: The Role of the Environmental Hygienist," ASHRAE Annual Meeting, Anaheim, CA, January 29, 1992.

"Emerging IAQ Issues", Fifth National Conference on Indoor Air Pollution, University of Tulsa, Tulsa, OK, April 13-14, 1992.

"International Symposium on Room Air Convection and Ventilation Effectiveness", Member of Scientific Advisory Board, University of Tokyo, July 22-24, 1992.

"Guidelines for Contaminant Control During Construction and Renovation Projects in Office Buildings," Seminar paper at the ASHRAE Annual Meeting, Chicago, IL, January 26, 1993.

"Outside Air Economizers: IAQ Friend or Foe", Moderator of Forum at the ASHRAE Annual Meeting, Chicago, IL, January 26, 1993.

"Orientation to Indoor Air Quality," an EPA two and one half day comprehensive indoor air quality introductory workshop for public officials and building property managers; Sacramento, September 28-30, 1992; San Francisco, February 23-24, 1993; Los Angeles, March 16-18, 1993; Burbank, June 23, 1993; Hawaii, August 24-25, 1993; Las Vegas, August 30, 1993; San Diego, September 13-14, 1993; Phoenix, October 18-19, 1993; Reno, November 14-16, 1995; Fullerton, December 3-4, 1996; Fresno, May 13-14, 1997.

"Building Air Quality: A Guide for Building Owners and Facility Managers," an EPA one half day indoor air quality introductory workshop for building owners and facility managers. Presented throughout Region IX 1993-1995.

"Techniques for Airborne Disease Control", EPRI Healthcare Initiative Symposium; San Francisco, CA; June 7, 1994.

“Diagnosing and Mitigating Indoor Air Quality Problems”, CIHC Conference; San Francisco, September 29, 1994.

”Indoor Air Quality: Tools for Schools,” an EPA one day air quality management workshop for school officials, teachers, and maintenance personnel; San Francisco, October 18-20, 1994; Cerritos, December 5, 1996; Fresno, February 26, 1997; San Jose, March 27, 1997; Riverside, March 5, 1997; San Diego, March 6, 1997; Fullerton, November 13, 1997; Santa Rosa, February 1998; Cerritos, February 26, 1998; Santa Rosa, March 2, 1998.

ASHRAE 62 Standard “Ventilation for Acceptable IAQ”, ASCR Convention; San Francisco, CA, March 16, 1995.

“New Developments in Indoor Air Quality: Protocol for Diagnosing IAQ Problems”, AIHA-NC; March 25, 1995.

"Experimental Validation of ASHRAE SPC 129, Standard Method of Measuring Air Change Effectiveness", 16th AIVC Conference, Palm Springs, USA, September 19-22, 1995.

“Diagnostic Protocols for Building IAQ Assessment”, American Society of Safety Engineers Seminar: ‘Indoor Air Quality – The Next Door’; San Jose Chapter, September 27, 1995; Oakland Chapter, 9, 1997.

“Diagnostic Protocols for Building IAQ Assessment”, Local 39; Oakland, CA, October 3, 1995.

“Diagnostic Protocols for Solving IAQ Problems”, CSU-PPD Conference; October 24, 1995.

“Demonstrating Compliance with ASHRAE 62-1989 Ventilation Requirements”, AIHA; October 25, 1995.

“IAQ Diagnostics: Hands on Assessment of Building Ventilation and Pollutant Transport”, EPA Region IX; Phoenix, AZ, March 12, 1996; San Francisco, CA, April 9, 1996; Burbank, CA, April 12, 1996.

“Experimental Validation of ASHRAE 129P: Standard Method of Measuring Air Change Effectiveness”, Room Vent ‘96 / International Symposium on Room Air Convection and Ventilation Effectiveness”; Yokohama, Japan, July 16-19, 1996.

“IAQ Diagnostic Methodologies and RFP Development”, CCEHSA 1996 Annual Conference, Humboldt State University, Arcata, CA, August 2, 1996.

“The Practical Side of Indoor Air Quality Assessments”, California Industrial Hygiene Conference ‘96, San Diego, CA, September 2, 1996.

“ASHRAE Standard 62: Improving Indoor Environments”, Pacific Gas and Electric Energy Center, San Francisco, CA, October 29, 1996.

“Operating and Maintaining Healthy Buildings”, April 3-4, 1996, San Jose, CA; July 30, 1997, Monterey, CA.

“IAQ Primer”, Local 39, April 16, 1997; Amdahl Corporation, June 9, 1997; State Compensation Insurance Fund’s Safety & Health Services Department, November 21, 1996.

“Tracer Gas Techniques for Measuring Building Air Flow Rates”, ASHRAE, Philadelphia, PA, January 26, 1997.

“How to Diagnose and Mitigate Indoor Air Quality Problems”; Women in Waste; March 19, 1997.

“Environmental Engineer: What Is It?”, Monte Vista High School Career Day; April 10, 1997.

“Indoor Environment Controls: What’s Hot and What’s Not”, Shaklee Corporation; San Francisco, CA, July 15, 1997.

“Measurement of Ventilation System Performance Parameters in the US EPA BASE Study”, Healthy Buildings/IAQ’97, Washington, DC, September 29, 1997.

“Operations and Maintenance for Healthy and Comfortable Indoor Environments”, PASMA; October 7, 1997.

“Designing for Healthy and Comfortable Indoor Environments”, Construction Specification Institute, Santa Rosa, CA, November 6, 1997.

“Ventilation System Design for Good IAQ”, University of Tulsa 10<sup>th</sup> Annual Conference, San Francisco, CA, February 25, 1998.

“The Building Shell”, Tools For Building Green Conference and Trade Show, Alameda County Waste Management Authority and Recycling Board, Oakland, CA, February 28, 1998.

“Identifying Fungal Contamination Problems In Buildings”, The City of Oakland Municipal Employees, Oakland, CA, March 26, 1998.

“Managing Indoor Air Quality in Schools: Staying Out of Trouble”, CASBO, Sacramento, CA, April 20, 1998.

“Indoor Air Quality”, CSOOC Spring Conference, Visalia, CA, April 30, 1998.

“Particulate and Gas Phase Air Filtration”, ACGIH/OSHA, Ft. Mitchell, KY, June 1998.

“Building Air Quality Facts and Myths”, The City of Oakland / Alameda County Safety Seminar, Oakland, CA, June 12, 1998.

“Building Engineering and Moisture”, Building Contamination Workshop, University of California Berkeley, Continuing Education in Engineering and Environmental Management, San Francisco, CA, October 21-22, 1999.

“Identifying and Mitigating Mold Contamination in Buildings”, Western Construction Consultants Association, Oakland, CA, March 15, 2000; AIG Construction Defect Seminar, Walnut Creek, CA, May 2, 2001; City of Oakland Public Works Agency, Oakland, CA, July 24, 2001; Executive Council of Homeowners, Alamo, CA, August 3, 2001.

“Using the EPA BASE Study for IAQ Investigation / Communication”, Joint Professional Symposium 2000, American Industrial Hygiene Association, Orange County & Southern California Sections, Long Beach, October 19, 2000.

“Ventilation,” Indoor Air Quality: Risk Reduction in the 21<sup>st</sup> Century Symposium, sponsored by the California Environmental Protection Agency/Air Resources Board, Sacramento, CA, May 3-4, 2000.

“Workshop 18: Criteria for Cleaning of Air Handling Systems”, Healthy Buildings 2000, Espoo, Finland, August 2000.

“Closing Session Summary: ‘Building Investigations’ and ‘Building Design & Construction’”, Healthy Buildings 2000, Espoo, Finland, August 2000.

“Managing Building Air Quality and Energy Efficiency, Meeting the Standard of Care”, BOMA, MidAtlantic Environmental Hygiene Resource Center, Seattle, WA, May 23<sup>rd</sup>, 2000; San Antonio, TX, September 26-27, 2000.

“Diagnostics & Mitigation in Sick Buildings: When Good Buildings Go Bad,” University of California Berkeley, September 18, 2001.

“Mold Contamination: Recognition and What To Do and Not Do”, Redwood Empire Remodelers Association; Santa Rosa, CA, April 16, 2002.

“Investigative Tools of the IAQ Trade”, Healthy Indoor Environments 2002; Austin, TX; April 22, 2002.

“Finding Hidden Mold: Case Studies in IAQ Investigations”, AIHA Northern California Professionals Symposium; Oakland, CA, May 8, 2002.

“Assessing and Mitigating Fungal Contamination in Buildings”, Cal/OSHA Training; Oakland, CA, February 14, 2003 and West Covina, CA, February 20-21, 2003.

“Use of External Containments During Fungal Mitigation”, Invited Speaker, ACGIH Mold Remediation Symposium, Orlando, FL, November 3-5, 2003.

Building Operator Certification (BOC), 106-IAQ Training Workshops, Northwest Energy Efficiency Council; Stockton, CA, December 3, 2003; San Francisco, CA, December 9, 2003; Irvine, CA, January 13, 2004; San Diego, January 14, 2004; Irwindale, CA, January 27, 2004; Downey, CA, January 28, 2004; Santa Monica, CA, March 16, 2004; Ontario, CA, March 17, 2004; Ontario, CA, November 9, 2004, San Diego, CA, November 10, 2004; San Francisco, CA, November 17, 2004; San Jose, CA, November 18, 2004; Sacramento, CA, March 15, 2005.

“Mold Remediation: The National QUEST for Uniformity Symposium”, Invited Speaker, Orlando, Florida, November 3-5, 2003.

“Mold and Moisture Control”, Indoor Air Quality workshop for The Collaborative for High Performance Schools (CHPS), San Francisco, December 11, 2003.

“Advanced Perspectives In Mold Prevention & Control Symposium”, Invited Speaker, Las Vegas, Nevada, November 7-9, 2004.

“Building Sciences: Understanding and Controlling Moisture in Buildings”, American Industrial Hygiene Association, San Francisco, CA, February 14-16, 2005.

“Indoor Air Quality Diagnostics and Healthy Building Design”, University of California Berkeley, Berkeley, CA, March 2, 2005.

“Improving IAQ = Reduced Tenant Complaints”, Northern California Facilities Exposition, Santa Clara, CA, September 27, 2007.

“Defining Safe Building Air”, Criteria for Safe Air and Water in Buildings, ASHRAE Winter Meeting, Chicago, IL, January 27, 2008.

“Update on USGBC LEED and Air Filtration”, Invited Speaker, NAFA 2008 Convention, San Francisco, CA, September 19, 2008.

“Ventilation and Indoor air Quality in New California Homes”, National Center of Healthy Housing, October 20, 2008.

“Indoor Air Quality in New Homes”, California Energy and Air Quality Conference, October 29, 2008.

“Mechanical Outdoor air Ventilation Systems and IAQ in New Homes”, ACI Home Performance Conference, Kansas City, MO, April 29, 2009.

“Ventilation and IAQ in New Homes with and without Mechanical Outdoor Air Systems”, Healthy Buildings 2009, Syracuse, CA, September 14, 2009.

“Ten Ways to Improve Your Air Quality”, Northern California Facilities Exposition, Santa Clara, CA, September 30, 2009.

“New Developments in Ventilation and Indoor Air Quality in Residential Buildings”, Westcon meeting, Alameda, CA, March 17, 2010.

“Intermittent Residential Mechanical Outdoor Air Ventilation Systems and IAQ”, ASHRAE SSPC 62.2 Meeting, Austin, TX, April 19, 2010.

“Measured IAQ in Homes”, ACI Home Performance Conference, Austin, TX, April 21, 2010.

“Respiration: IEQ and Ventilation”, AIHce 2010, How IH Can LEED in Green buildings, Denver, CO, May 23, 2010.

“IAQ Considerations for Net Zero Energy Buildings (NZEB)”, Northern California Facilities Exposition, Santa Clara, CA, September 22, 2010.

“Energy Conservation and Health in Buildings”, Berkeley High School Green Career Week, Berkeley, CA, April 12, 2011.

“What Pollutants are Really There ?”, ACI Home Performance Conference, San Francisco, CA, March 30, 2011.

“Energy Conservation and Health in Residences Workshop”, Indoor Air 2011, Austin, TX, June 6, 2011.

“Assessing IAQ and Improving Health in Residences”, US EPA Weatherization Plus Health, September 7, 2011.

“Ventilation: What a Long Strange Trip It’s Been”, Westcon, May 21, 2014.

“Chemical Emissions from E-Cigarettes: Direct and Indirect Passive Exposures”, Indoor Air 2014, Hong Kong, July, 2014.

“Infectious Disease Aerosol Exposures With and Without Surge Control Ventilation System Modifications”, Indoor Air 2014, Hong Kong, July, 2014.

“Chemical Emissions from E-Cigarettes”, IMF Health and Welfare Fair, Washington, DC, February 18, 2015.

“Chemical Emissions and Health Hazards Associated with E-Cigarettes”, Roswell Park Cancer Institute, Buffalo, NY, August 15, 2014.

“Formaldehyde Indoor Concentrations, Material Emission Rates, and the CARB ATCM”, Harris Martin’s Lumber Liquidators Flooring Litigation Conference, WQ Minneapolis Hotel, May 27, 2015.

“Chemical Emissions from E-Cigarettes: Direct and Indirect Passive Exposure”, FDA Public Workshop: Electronic Cigarettes and the Public Health, Hyattsville, MD June 2, 2015.

“Creating Healthy Homes, Schools, and Workplaces”, Chautauqua Institution, Athenaeum Hotel, August 24, 2015.

“Diagnosing IAQ Problems and Designing Healthy Buildings”, University of California Berkeley, Berkeley, CA, October 6, 2015.

“Diagnosing Ventilation and IAQ Problems in Commercial Buildings”, BEST Center Annual Institute, Lawrence Berkeley National Laboratory, January 6, 2016.

“A Review of Studies of Ventilation and Indoor Air Quality in New Homes and Impacts of Environmental Factors on Formaldehyde Emission Rates From Composite Wood Products”, AIHce2016, May, 21-26, 2016.

“Admissibility of Scientific Testimony”, Science in the Court, Proposition 65 Clearinghouse Annual Conference, Oakland, CA, September 15, 2016.

“Indoor Air Quality and Ventilation”, ASHRAE Redwood Empire, Napa, CA, December 1, 2016.