A. Lozeau Drury LLP (May 20, 2021)

Comment A.1: I am writing on behalf of Laborers International Union of North America, Local Union 270 and its members living in the City of San Jose ("LIUNA"), regarding the Final Supplemental Environmental Impact Report ("SEIR") prepared for the 439 South Fourth Street Project (File No. H17-004 & ER20-262), including all actions related or referring to the construction of a 25-story residential building with 210 residential units totaling 448,474 square feet and a five-level parking garage with one level underground and four levels above ground with a 20% parking reduction and an alternative parking arrangement, located at 439 South Fourth Street, in the City of San Jose ("Project").

After reviewing the SEIR, LIUNA is concerned that the SEIR fails to adequately analyze significant environmental impacts, and fails to mitigate significant impacts that will occur as a result of the Project. LIUNA requests that the Planning Commission refrain from recommending that the City of San Jose City Council adopt resolutions certifying the SEIR and approving the Site Development Permit for the Project at this time, and instead, request staff to reconsider the analyses and require additional mitigation measures in order to address the Project's significant air quality, greenhouse gas, energy, and noise impacts.

This comment has been prepared with the assistance of indoor air quality expert Francis Offermann (Exhibit A), environmental consulting firm Soil/Water/Air Protection Enterprise ("SWAPE") (Exhibit B), and noise consulting firm Wilson Ihrig (Exhibit C). We incorporate the Offermann, SWAPE, and Wilson Ihrig comments herein by reference.

> **Response A.1:** The Draft SEIR concluded that the project would result in potential impacts to air quality, biological resources, hazards and hazardous materials, and noise. However, the project has identified mitigation measures for the project, in addition to City standard conditions and conditions of approval, that will reduce those impacts to less than significant levels with the exception of noise. Please refer to responses below for further information.

Comment A.2: PROJECT DESCRIPTION

The Project consists of a Site Development Permit to allow the applicant to demolish the existing buildings and hardscape on the project site and to construct a 25-story, 448,474 square-foot multi-family residential building and a five-level parking garage with one level underground and four levels above ground. The project would provide up to 210 residential units. The proposed building would have a maximum height of 274 feet, and a floor area ratio (FAR) of approximately 18.7. The Project will also consist of the demolition of an existing single-family residence and 30-unit multifamily apartment building totaling approximately 21,792 square feet and the removal of 10 trees for the construction of a 25-story, 210-unit multifamily residential building with a 20% parking reduction and an alternative parking arrangement on an approximately 0.52-gross-acre site.

The project site is located at 439 South 4th Street, on the west side of South 4th Street approximately 170 feet south of East San Salvador Street. The site is bordered by multifamily

residential uses on all sides. To facilitate the construction of the project, a Lot Line Adjustment is required to be approved to merge the two existing parcels into one parcel. The recordation of a Lot Line Adjustment is included as a condition of approval in the draft Site Development Permit Resolution.

> **Response A.2:** The comment above provides a description of the proposed project. To clarify, the total square footage would be 430,738 square feet without the basement and 448,474 square feet with the basement. The comment does not raise any specific issues about the adequacy of the Draft SEIR; therefore, no further response is required.

Comment A.3: The City of San José, as the lead agency for the project, prepared a Draft Supplemental Environmental Impact Report ("DSEIR") to the Downtown Strategy 2040 Environmental Impact Report (Resolution No. 78942). According to the DSEIR:

> This Draft SEIR tiers from the Downtown Strategy 2040 FEIR because the project was included in the overall development that was analyzed for that document at a program level. An SEIR is required for this project because project-specific information was not available at the time the Downtown Strategy 2040 FEIR was prepared. An Initial Study prepared for the proposed project … identified significant impacts to air quality, cultural resources, and noise and vibration. The other resources sections, including biological resources and land use and planning were included in the Draft SEIR because the project has the potential to result in impacts to these resource areas. Thus, this Draft SEIR to the Downtown Strategy 2040 FEIR has been prepared to address these potential new significant impacts. The SEIR process is outlined below.

More specifically, the Draft SEIR identified potential environmental impacts related to construction air quality, migratory nesting birds, and vibration from construction activities on fragile historic buildings. However, the DSEIR found that "with implementation of the mitigation measures specified in the Mitigation Monitoring and Reporting Program (MMRP) and prepared for the project, these impacts are reduced to less than significant levels. As part of the certification of the Final SEIR, the City Council will need to approve the associated MMRP for the project." (Staff Report (Feb. 14, 2024), p. 16.) Additionally, "[t]he Draft SEIR also found that the project would result in a significant and unavoidable impact from construction noise which would exceed the exterior threshold of 80 dBA at adjacent residential land uses. The mitigation measures to be adopted for the proposed project would not reduce this impact to below the significance threshold." (*Id.*)

> **Response A.3:** The comment does not raise any specific issues about the adequacy of the Draft SEIR; therefore, no further response is required.

Comment A.4: LEGAL STANDARD

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 ("PRC") § 21100.) "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." (*Comms. for a Better Env't 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) & (3); *see also Berkeley Jets*, 91 Cal.App.4th at 1354; *Citizens of Goleta Valley*, 52 Cal.3d at 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." (PRC § 21081; CEQA Guidelines §15092(b)(2)(A) & (B).)

The EIR is the very heart of CEQA. (*Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652.) CEQA requires that a lead agency analyze all potentially significant environmental impacts of its proposed actions in an EIR. (PRC § 21100(b)(1); CEQA 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 v. City of Hanford* (1990) 221 Cal.App.3d 692.) "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 at 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 at 1355 (quoting*, Laurel Heights Improvement Assn. v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 391 409, fn. 12).) 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, the EIR for this Project fails to adequately analyze and mitigate the Project's impacts. Here, the SEIR tiers from the Downtown Strategy 2040 FEIR because the Project was included in the overall development that was analyzed for that document at a program level. Because project-specific information was not available at the time the Downtown Strategy 2040 FEIR was prepared, the City prepared an SEIR for the Project. However, we found that the SEIR prepared by the City here is inadequate for several reasons set forth below.

> **Response A.4:** The City of San José prepared the Draft SEIR in compliance with the requirements of CEQA and the CEQA Guidelines. The comment does not raise any specific issues about the adequacy of the Draft SEIR; therefore, no further response is required.

Comment A.5: DISCUSSION

I. **THE FINAL SEIR FAILS TO ADEQUATELY DISCLOSE, ANALYZE, AND MITIGATE ALL OF THE PROJECT'S POTENTIALLY SIGNIFICANT IMPACTS.**

A. The SEIR Fails to Adequately Disclose, Analyze, and Mitigate the Project's Potentially Significant Indoor Air Quality Impacts.

Certified Industrial Hygienist, Francis Offermann, PE, CIH, has conducted a review of the proposed Project and relevant documents regarding the Project's indoor air emissions. Indoor Environmental Engineering Comments (February 13, 2024). Mr. Offermann concludes that it is likely that the Project will expose residents of the Project to significant impacts related to indoor air quality, and in particular, emissions of the cancer-causing chemical formaldehyde. Mr. Offermann is a leading expert on indoor air quality and has published extensively on the topic.

Mr. Offermann's expert comments and curriculum vitae are attached as Exhibit A.

Mr. Offermann explains that many composite wood products used in building materials and furnishings commonly found in offices, warehouses, residences, and hotels contain formaldehyde based glues which off-gas formaldehyde over a very long time period. He states, "[t]he primary source of formaldehyde indoors is composite wood products manufactured with urea formaldehyde resins, such as plywood, medium density fiberboard, and particleboard. These materials are commonly used in building construction for flooring, cabinetry, baseboards, window shades, interior doors, and window and door trims." (Ex. A, p. 2-3.)

Formaldehyde is a known human carcinogen. Mr. Offermann states that future residents of the Project would be exposed to a 120 in one million cancer risk, ***even assuming*** all materials are compliant with the California Air Resources Board's formaldehyde airborne toxics control measure. (Ex. A, pp. 3-5.) This potential exposure level exceeds the Bay Area Air Quality Management District's ("BAAQMD") CEQA significance threshold for airborne cancer risk of 10 per million.

Mr. Offermann also notes that the high cancer risk that may be posed by the Project's indoor air emissions likely will be exacerbated by the additional cancer risk that exists as a result of the Project's location near roadways with moderate to high traffic (i.e., South 3rd Street, South 4th Street, South 5th Street, I-280, East San Salvador Street, South Market Street, etc.). (Ex. A, pp. 10-11.) Yet no analysis has been conducted of the significant cumulative health impacts that will result to residents living or working at the Project. Mr. Offermann provides several feasible mitigation measures to lessen the Project's significant impacts to air quality and human health due to indoor emissions formaldehyde; none of which have been included in the SEIR or implemented by the City for purposes of this Project. (*See id.*, pp. 11-13.)

For example, Mr. Offermann identifies mitigation measures that are available to reduce these significant health risks, including the installation of air filters and a requirement that the applicant use only composite wood materials (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 in the buildings' interiors. (Ex. A, pp. 11-13). These significant environmental impacts should be analyzed in a revised draft SEIR and mitigation measures should be imposed to reduce the risk of formaldehyde exposure.

Response A.5: The commenter is incorrect in stating that the BAAQMD significance threshold related to health risks for carcinogenic Toxic Air Contaminants (TACs) of 10 in a million and 100 in a million for cumulative health risk applies to indoor formaldehyde exposure. BAAQMD does not have an adopted threshold for formaldehyde exposure from indoor building materials. While BAAQMD recognizes formaldehyde as an outdoor TAC from automobile and truck exhaust, the BAAQMD CEQA guidelines do not define a specific threshold for formaldehyde, nor does it regulate indoor air quality.

The California Supreme Court in a December 2015 opinion (*California Building Industry Association v. Bay Area Air Quality Management District*) confirmed that CEQA, with several specific exceptions, is concerned with the impacts of a project on the environment, not the effects of the existing environment may have on a project. The proposed project would be built in accordance with the most recent California Green Building Code (CALGreen), which specifies that composite wood products (such as hardwood plywood and particleboard) meet the requirements for formaldehyde as specified in the California Air Resources Board's (CARBs) Air Toxic Control Measures. In accordance with City's Green Building Ordinance (Policy 6-32), the proposed project would be designed to achieve Leadership in Energy and Environmental Design (LEED) Silver certification. LEED certification will require measures to improve indoor air quality.

Furthermore, the commenter is speculating that composite wood materials would be used in the interior of the building. Indoor building materials will not be known until the building permit stage, and as stated above, these materials will be required to comply with CARB, CALGreen, and LEED Silver certification requirements. Even

with the regulations in place, if materials containing formaldehyde were to be used, it would be speculative for the City to estimate the type and volume of building materials that may contain formaldehyde. Per Section 15145 of the CEQA guidelines, speculative analysis is not acceptable. Because there would be no way to quantify the off-gassing of materials, and because no thresholds exist, no additional CEQA analysis or mitigation measures related to formaldehyde would be required.

This comment does not identify a new or more significant impact, or a new feasible project alternative or mitigation measure considerably different than identified in the Draft SEIR. For these reasons, the Draft SEIR does not need to be recirculated.

Comment A.6: B. The SEIR Fails to Properly Analyze the Project's Potentially Significant Air Quality Impacts

Matt Hagemann, P.G., C.Hg., and Dr. Paul E. Rosenfeld, Ph.D., of the environmental consulting firm SWAPE reviewed the SEIR's analysis of the Project's impacts on air quality and greenhouse gases. SWAPE's comment letter and curricula vitae are attached as Exhibit B and their comments are briefly summarized here.

1. The SEIR's air quality analysis is not based on substantial evidence because it fails to use substantiated input parameters to estimate project emissions.

SWAPE found that the SEIR incorrectly estimated the Project's constructional emissions and therefore cannot be relied upon to determine the significance of the Project's impacts on local and regional air quality. The SEIR relies on emissions calculated from the California Emissions Estimator Version CalEEMod 2020.4.0 ("CalEEMod"). (DSEIR, p. 26). This model, which is used to generate a project's construction and operational emissions, relies on recommended default values based on site specific information related to a number of factors. (Ex. B, pp. 1-2.) CEQA requires any changes to the default values to be justified by substantial evidence. (*Id.*).

SWAPE reviewed the SEIR's CalEEMod output files and found that several of the values input into the model were inconsistent with information provided in the EIR. (Ex. B, p. 2). Specifically, SWAPE found that the following values used in the DSEIR's air quality analysis were either inconsistent with information provided in the SEIR or otherwise unjustified:

1. Unsubstantiated Reduction to CO2 Intensity Factor. (Ex. B, pp. 2-3.)
2. Unsubstantiated Changes to Construction Equipment Fuel Types. (Ex. B, pp. 3-4.)
3. Unsubstantiated Changes to Wastewater System Treatment Percentages.(Ex. B, pp. 4-5.)
4. Underestimated Operational Sunday Daily Trips. (Ex. B, pp. 5-6.)

Based on the issues listed above, the SEIR's analysis of air quality cannot be relied upon to determine the significance of impacts and a revised draft SEIR must be prepared.

Response A.6: As discussed in Appendix B of the Draft SEIR, the CalEEMod model generates a default set of construction assumptions for "typical construction site

scenarios"; however, these are not appropriate for a project like this that involves demolition, excavation, and extensive vertical construction on a relatively small sized lot. The CalEEMod model was designed for horizontal projects and uses the inputs of land size in acreage, project type, and size to develop a generic set of construction inputs settings (i.e., default values) that do not recognize project specific techniques or vertical construction requirements.

Project-specific construction information (i.e., equipment list and schedule) was provided by the applicant and used in the modeling (see Attachment 2 of Appendix B of the SEIR). This information represents the best available information for modeling the construction activity and is superior information to the generic modeling default factors generated by CalEEMod. Refer to Responses A.22-A.26 for responses regarding the CalEEMod outputs.

Comment A.7: C. The SEIR Fails to Adequately Disclose, Analyze, and Mitigate the Project's Potentially Significant Greenhouse Gas Impacts.

The SEIR fails to analyze the Project's potential greenhouse gas ("GHG") impacts. As SWAPE notes:

> According to the GHG Reduction Strategy Compliance Checklist, provided as Appendix G to the DSEIR, the Project would be consistent with the City's Greenhouse Gas Reduction Strategy ("GHGRS"). However, the DSEIR fails to discuss the Project's [GHG] emissions whatsoever. As such, we are unable to verify that the Project would not have a significant GHG impact. An updated EIR should be prepared to include a GHG analysis which adequately evaluates the Project's emissions. Until such an analysis is prepared, the Project should not be approved. (Ex. B, p. 6.)
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> Additionally, in an effort to reduce the Project's emissions, SWAPE recommends:
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> [A]s it is policy of the State that eligible renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers by December 31, 2045, we emphasize the applicability of incorporating the maximum amount solar energy into the Project design. Until the feasibility of incorporating on-site renewable energy production is considered, the Project should not be approved. (*Id.*)

Because the SEIR fails to adequately disclose, analyze, and mitigate the Project's potential significant GHG impacts, a revised draft SEIR should be prepared and circulated that adequately addresses the Project's GHG emissions and mitigates such impacts accordingly.

> **Response A.7:** The 2030 Greenhouse Gas Reduction Strategy (GHGRS) is the latest update to the City's GHGRS and is designed to meet statewide greenhouse gas (GHG) reduction targets for 2030 set by Senate Bill (SB) 32. As a qualified Climate Action Plan, the 2030 GHGRS allows for tiering and streamlining of GHG analyses under CEQA. The GHGRS identifies General Plan policies and strategies to be implemented by development projects in the areas of green building/energy use,

multimodal transportation, water conservation, and solid waste reduction. Projects that comply with the policies and strategies outlined in the 2030 GHGRS, would have less than significant GHG impacts under CEQA. Project compliance with the 2030 GHGRS are discussed on pages 63-64 of Appendix A: Initial Study and Appendix G of the Draft SEIR.

In addition, the project would be designed to achieve LEED Silver certification with a goal of reaching LEED Gold or Platinum. As mentioned in Appendix G of the Draft SEIR, a solar ready system is proposed as part of the project, the project would enroll in the City's Clean Energy at the Total Green level (i.e., 100 percent carbon-free electricity), and the project would have an enhanced commissioning program to minimize energy consumption. For these reasons, the Draft SEIR does not need to be recirculated.

Comment A.8: D. The SEIR Fails to Adequately Analyze and Mitigate Significant Noise Impacts Related to Construction and Operation.

Expert noise consulting firm Wilson Ihrig reviewed the SEIR and found that its conclusions regarding less-than-significant noise impacts were incorrect. Wilson Ihrig's comment is attached as Exhibit C and summarized below.

First, Wilson Ihrig found that the SEIR's noise analysis shows a significant noise impact that the SEIR fails to mitigate. Specifically, Wilson Ihrig found:

> Table 7 of Appendix E shows that "Existing Comm[erical receptor] – west" has a DNL of 57 dBA. This is most likely referring to the receptors immediately to the west – 420 and 452 Third Street. These are residential structures, meaning they would have to meet the City of San Jose General Plan criteria of 55 dBA called out in EC-1.3 on page 11 of Appendix E. As such, the SEIR should be revised to mitigate this impact, with a full analysis of mechanical room plans and potential mitigation options, such as acoustical treatment within the mechanical room. (Ex. C, p. 2.)

Response A.8: The commenter is correct that the receptors to the west are residences. Per Appendix E of the Draft SEIR, the existing noise levels at the western property line range from 55 to 75 during the day and 44 to 61 at night. The dBA DNL was calculated to be 62. While the dBA DNL was estimated to be 57 with the project, the net increase in noise is one dBA which is not perceptible and does not increase noise levels over the existing average.

For operational noise, details regarding the equipment were not available at the time the Draft SEIR was prepared. As mentioned on pages 97-98 of the Draft SEIR (as a Condition of Approval) and in accordance with the Downtown Strategy 2040 FEIR, prior to the issuance of building permits, mechanical equipment shall be selected and designed to meet the City's 55 dBA DNL noise level requirement at the nearby noise sensitive land uses. The applicant shall retain a qualified acoustical consultant

to review the mechanical noise equipment to determine specific noise reduction measures needed to reduce equipment noise to comply with the City's noise level requirements. The findings and recommendations from the acoustical consultant for noise reduction measures shall be submitted to the Director of Planning, Building and Code Enforcement or Director's designee for review and approval, prior to the issuance of any building permits. With implementation of the Condition of Approval, the project would have a less than significant operational impact from mechanical equipment.

As discussed on pages 99-102, it was concluded that the construction noise impact would be significant and unavoidable even with implementation of the identified mitigation (MM NOI-1.1) which includes preparation of a noise logistics plan that specifies hours of construction, noise and vibration minimization measures, posting and notification of construction schedules, and designation of a noise disturbance coordinator. These measures are consistent with the requirements of the Downtown Strategy 2040 FEIR.

For these reasons, the Draft SEIR does not need to be revised.

Comment A.9: Second, according to Wilson Ihrig, the SEIR's analysis of construction and operational noise impacts is incomplete for several reasons. (See Ex. C, pp. 2-3.) These reasons include:

1. Incorrect Horizontal Geometry is Used in the Analysis. (Ex. C, pp. 2-3.)
2. Incorrect Vertical Geometry is Used in the Operational Analysis. (Ex. C, p.3.)
3. Incorrect Vertical Geometry is Used in the Construction Analysis. (Ex. C, p. 3.)

Response A.9: Refer to Responses A.30-A.32 below.

Comment A.10: Third, Wilson Ihrig's review of the SEIR's noise impact analysis found that the improper noise thresholds are applied to the Project. The SEIR states that because the City of San Jose has no applicable city or county noise limits, the Project's noise construction analysis must instead comply with the Federal Transit Administration's temporary construction noise criteria of 80 dBA. (Ex. C, p. 3.) However, Wilson Ihrig explains:

> Without further analysis, the FTA threshold could be too high, and the SEIR provides no discussion why the chosen 80 dBA construction noise threshold should be deemed acceptable. In fact, page 7 of the SEIR Appendix E states that "noise impacts would be considered significant if the project would result in ... Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project." Therefore, it is not accurate to characterize that the SEIR analysis has completely addressed CEQA standards. (Ex. C, pp. 3-4.)

Response A.10: Per General Plan Policy EC-1.7, the City considers a significant construction noise impact to occur if a project is located within 500 feet of residential uses or 200 feet of commercial/office uses and construction would occur

over a period of 12 months. Since the City does not have established quantitative noise limits for construction activities, the Federal Transit Administration (FTA) thresholds are used to determine construction noise impacts as discussed in the Draft SEIR and Appendix E of the Draft SEIR. A full analysis of construction impacts is provided on pages 98-102 of the Draft SEIR.

Comment A.11: As an example Wilson Ihrig points to the following:

> The lowest daytime ambient noise level was determined to be 55 dBA in Appendix E. In Table 6 of SEIR Appendix E, the highest calculated noise level was determined to be 82 dBA. However, adjusting this to the correct distance of 5 feet, as opposed to the 80 ft in Table 6, gives a new level of 106 dB which would cause a 51 dB increase at the closest receptor. This shows the problems with relying solely on an 80 dB absolute limit, as a 10 dB increase is generally perceived as a doubling of loudness. Even at the wrong distances in the report, the levels that they predict are up to 37 dBA above ambient. As it currently stands, there are a few instances where construction noise exceeds the FTA threshold. However, the document underrepresents the widespread instances of significant ambient noise increases that create significant and unavoidable impact. (Ex. C, p. 4.)

Because there are several errors and omissions in the SEIR's noise analysis and since correcting these would potentially identify several significant impacts which require mitigation, a revised draft SEIR should be prepared to adequately analyze and mitigate these potential noise impacts from construction and operation.

Response A.11: As discussed on page 13 of Appendix E of the Draft SEIR, hourly average noise levels at long-term noise measurement (LT-1) typically ranged from 55 to 75 dBA Leq during the day. In addition, the distances listed in Table 3.5-5 of the Draft SEIR and Table 6 of Appendix E of the Draft SEIR are measured from the center of the construction activity by phase to the nearest property lines. To assume all construction equipment operating at once along any given property line or to try to estimate the vast number of possible construction equipment combinations along any one property line combined with other equipment elsewhere on-site would be speculative.

The Draft SEIR includes mitigation (refer to MM NOI-1.1) to address construction noise impacts to adjacent sensitive receptors. As mentioned on page 102 of the Draft SEIR, even with implementation of MM NOI-1.1, the project was found to have a significant unavoidable impact from construction noise.

Operational noise impacts were found to be less than significant with implementation of the Condition of Approval which requires mechanical equipment to be designed to meet the City's 55dBA DNL noise level requirement. Therefore, the Draft SEIR does not need to be revised.

Comment A.12: **E. The SEIR Fails to Adequately Disclose, Analyze, and Mitigate the Project's Potentially Significant Energy Impacts.**

Contrary to the SEIR, the construction and operation of the Project could potentially cause wasteful, inefficient, and unnecessary consumption of energy. (*See* DSEIR, pp. 4, 115.)

The standard under CEQA is whether the Project would result in wasteful, inefficient, or unnecessary consumption of energy resources. Failing to undertake "an investigation into renewable energy options that might be available or appropriate for a project" violates CEQA. (*California Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173, 213.) Energy conservation under CEQA is defined as the "wise and efficient use of energy." (CEQA Guidelines, app. F, § I.) The "wise and efficient use of energy" is achieved by "(1) decreasing overall per capita energy consumption, (2) decreasing reliance on fossil fuels such as coal, natural gas and oil, and (3) increasing reliance on renewable energy resources." (*Id.*)

Noting compliance with CALGreen requirements, the City's Council Policy 6-32, and the City's Green Building Ordinance does not constitute an adequate analysis of energy. (*Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 Cal.App.4th 256, 264-65.) Similarly, the Court in City of Woodland held as unlawful an energy analysis that relied on compliance with Title 24, that failed to assess transportation energy impacts, and that failed to address renewable energy impacts. (*City of Woodland*, 225 Cal.App.4th at pp. 209-13.) As such, the SEIR's reliance on compliance with CALGreen, City's Council Policy 6-32, and the City's Green Building Ordinance does not satisfy the requirements for an adequate discussion of the Project's energy impacts.

> **Response A.12:** As discussed on page 45 of the Draft SEIR, the overall construction schedule and process is already designed to be efficient to avoid excess monetary costs. Equipment and fuel would not be used wastefully on-site because of the added expense associated with renting the equipment, maintaining it, and fueling it.
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> As mentioned in the Draft SEIR and in Appendix G of the Draft SEIR, the proposed project would be built in accordance with the most recent CALGreen requirements, City's Green Building Ordinance, Energy and Water Building Performance Ordinance, and Reach Code. In addition, the project would enroll in San José Clean Energy (SJCE) at the TotalGreen level (100 percent renewable energy). Project design features will be reviewed during the permitting. Regulatory compliance measures are required by law and have systems in place to ensure implementation during project operation.

Comment A.13: The SEIR summarily concludes that the Project would not result in the inefficient, wasteful, and unnecessary consumption of energy. There is no discussion of the Project's cost effectiveness in terms of energy requirements. There is no discussion of energy consuming equipment and processes that will be used during the construction or operation of the Project. The Project's energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, and maintenance were not identified. The effect of the Project on peak and base period demands for electricity has not been addressed. The lack of an adequate

greenhouse gas (GHG) discussion in the SEIR results in its failure to address GHG emissions resulting from energy production and energy savings measures, as well energy conservation. As such, the SEIR's conclusions are unsupported by the necessary discussions of the Project's energy impacts under CEQA.

As noted above, the effect of the Project on peak and base period demands for electricity has not been addressed. This is of particular concern given recent years where California's electric grid has been significantly impacted by high energy demand as a result of prolonged, record-breaking heat waves that have affected the entire State of California for multiple days. For example, at the start of September 2022, California experienced extreme heat, with temperatures across the state 10 to 20 degrees hotter than normal, driving up energy demand and straining power generation equipment as people ran their air conditioning. On September 6, 2022, as a result of electricity supplies running low in the face of record heat and demand, the California Independent System Operator (Cal-ISO) issued an Energy Emergency Alert (EEA) 3, the highest energy alert, authorizing the grid operator to order rotating power outages to lower demand and stabilize the system if necessary. As grid conditions worsened, energy supplies were determined to be insufficient to cover demand and reserves, and an EEA 3 was declared, meaning controlled power outages were imminent or in process according to each utility's emergency plan. The EEA 3 was in response to an evening peak electricity demand that was forecasted at more than 52,000 megawatts, which Cal-ISO stated was "a new historic all-time high for the grid, as the state endured the hottest day in this prolonged, record-breaking heat wave." Here, the SEIR fails to adequately analyze energy conservation. As such, the SEIR's conclusions are unsupported by the necessary discussions of the Project's energy impacts under CEQA.

> **Response A.13:** CEQA does not require an analysis of a project's impact on peak energy demand periods, only the wasteful, inefficient, or unnecessary consumption of energy. Because the project would comply with all applicable policies to reduce energy use, the proposed project would have a less than significant impact. Refer to Response A.12.

Comment A.14: Moreover, under *League to Save Lake Tahoe*, the agency has to implement all feasible energy mitigation measures unless it has substantial evidence to show that the proposed measures are infeasible. (*Save Lake Tahoe*, 75 Cal.App.5th at 166-168; *see also, id*., pp. 159-163.) An example of a feasible mitigation measure, which has recently been adopted as a new ordinance in San Francisco, and recently under consideration as a new ordinance by the San Jose City Council, is the requirement that 100% of parking spaces have electric vehicle (EV) charging stations. Since requiring all parking stalls to be EV stalls is likely feasible, the City must implement it as an energy efficient mitigation measure for the proposed Project, instead of its current proposal to include 168 parking spaces without any EV charging stations, or, at minimum, provide substantial evidence that implementing such a mitigation measure is unfeasible. As such, the EIR's conclusion is unsupported by the necessary discussions of the Project's energy impacts under CEQA.

In conclusion, because the SEIR failed to adequately analyze and mitigate the Project's potentially wasteful, inefficient, and unnecessary consumption of energy, an SEIR should be prepared to

address the Project's potential significant energy impacts, and to mitigate those impacts accordingly.

Response A.14: The City does not have an adopted ordinance that requires all parking spaces to have electric vehicle (EV) charging stations. The City's Reach Code (Ordinance No. 30311) and CALGreen have residential mandatory measures for EV charging for new construction. The proposed project would be built in accordance with the most recent CALGreen requirements, City's Green Building Ordinance, Energy and Water Building Performance Ordinance, and Reach Code. Currently, the San José City Council has not adopted an ordinance to require 100 percent EV charging stations for residential projects. Because there is no ordinance in place and no significant energy impact, there is no nexus to require 100 percent EV parking as mitigation. The Draft SEIR does not need to be revised.

Comment A.15: II. THE CITY SHOULD PREPARE AND RECIRCULATE A REVISED DRAFT SEIR.

A revised draft SEIR ("RDSEIR") should be prepared and circulated for full public review to address the impacts identified above and to propose feasible mitigation measures. CEQA requires recirculation of an EIR when significant new information is added to the EIR following public review but before certification. (PRC § 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 a RDSEIR that is recirculated for public review.

CONCLUSION

For the foregoing reasons, the Final SEIR is inadequate. LIUNA urges the City to make the above changes, and recirculate a revised DSEIR to the public for review. The SEIR should analyze all feasible mitigation measures to reduce or avoid the Project's significant adverse environmental impacts. LIUNA reserves the right to supplement these comments, including but not limited to at public hearings concerning the Project. (*Galante Vineyards v. Monterey Peninsula Water Management Dist.*, 60 Cal. App. 4th 1109, 1121 (1997).)

Response A.15: See responses A.1 to A.14 above.

EXHIBIT A – MEMO FROM INDOOR ENVIRONMENTAL ENGINEERING

Comment A.16: Indoor Air Quality Impacts

Indoor air quality (IAQ) directly impacts the comfort and health of building occupants, and the achievement of acceptable IAQ in newly constructed and renovated buildings is a well-recognized design objective. For example, IAQ is addressed by major high-performance building rating systems and building codes (California Building Standards Commission, 2014; USGBC, 2014). Indoor air

quality in homes is particularly important because occupants, on average, spend approximately ninety percent of their time indoors with the majority of this time spent at home (EPA, 2011). Some segments of the population that are most susceptible to the effects of poor IAQ, such as the very young and the elderly, occupy their homes almost continuously. Additionally, an increasing number of adults are working from home at least some of the time during the workweek. Indoor air quality also is a serious concern for workers in hotels, offices and other business establishments.

The concentrations of many air pollutants often are elevated in homes and other buildings relative to outdoor air because many of the materials and products used indoors contain and release a variety of pollutants to air (Hodgson et al., 2002; Offermann and Hodgson, 2011). With respect to indoor air contaminants for which inhalation is the primary route of exposure, the critical design and construction parameters are the provision of adequate ventilation and the reduction of indoor sources of the contaminants.

Indoor Formaldehyde Concentrations Impact. In the California New Home Study (CNHS) of 108 new homes in California (Offermann, 2009), 25 air contaminants were measured, and formaldehyde was identified as the indoor air contaminant with the highest cancer risk as determined by the California Proposition 65 Safe Harbor Levels (OEHHA, 2017a), No Significant Risk Levels (NSRL) for carcinogens. The NSRL is the daily intake level calculated to result in one excess case of cancer in an exposed population of 100,000 (i.e., ten in one million cancer risk) and for formaldehyde is 40 µg/day. The NSRL concentration of formaldehyde that represents a daily dose of 40 µg is 2 µg/m^3, assuming a continuous 24-hour exposure, a total daily inhaled air volume of 20 m^3, and 100% absorption by the respiratory system. All of the CNHS homes exceeded this NSRL concentration of 2 µg/m^3. The median indoor formaldehyde concentration was 36 µg/m^3, and ranged from 4.8 to 136 µg/m^3, which corresponds to a median exceedance of the 2 µg/m^3 NSRL concentration of 18 and a range of 2.3 to 68.

Therefore, the cancer risk of a resident living in a California home with the median indoor formaldehyde concentration of 36 µg/m^3, is 180 per million as a result of formaldehyde alone. The CEQA significance threshold for airborne cancer risk is 10 per million, as established by the Bay Area Air Quality Management District (BAAQMD, 2017).

Response A.16: As mentioned in Response A.5, while BAAQMD recognizes formaldehyde as an outdoor TAC from automobile and truck exhaust, the BAAQMD CEQA guidelines do not define a specific threshold for formaldehyde, nor does it regulate indoor air quality. The commenter has provided no documentation to show that the TAC threshold of 10 in a million and 100 in a million for cumulative health risk applies to indoor formaldehyde exposure.

In addition, CEQA is primarily concerned with the impacts of a project on the environment and generally does not require agencies to analyze the impact of existing conditions on a project's future users or residents unless the project risks exacerbate those environmental hazards or risks that already exist. Furthermore, the project would be built in accordance with the most recent CALGreen

requirements, City's Green Building Ordinance, Reach Code, and would be designed to achieve LEED Silver certification.

Comment A.17: Besides being a human carcinogen, formaldehyde is also a potent eye and respiratory irritant. In the CNHS, many homes exceeded the non-cancer reference exposure levels (RELs) prescribed by California Office of Environmental Health Hazard Assessment (OEHHA, 2017b). The percentage of homes exceeding the RELs ranged from 98% for the Chronic REL of 9 $\mu g/m^3$ to 28% for the Acute REL of 55 $\mu g/m^3$.

The primary source of formaldehyde indoors is composite wood products manufactured with urea-formaldehyde resins, such as plywood, medium density fiberboard, and particleboard. These materials are commonly used in building construction for flooring, cabinetry, baseboards, window shades, interior doors, and window and door trims.

In January 2009, the California Air Resources Board (CARB) adopted an airborne toxics control measure (ATCM) to reduce formaldehyde emissions from composite wood products, including hardwood plywood, particleboard, medium density fiberboard, and also furniture and other finished products made with these wood products (California Air Resources Board 2009). While this formaldehyde ATCM has resulted in reduced emissions from composite wood products sold in California, they do not preclude that homes built with composite wood products meeting the CARB ATCM will have indoor formaldehyde concentrations below cancer and non-cancer exposure guidelines.

A follow up study to the California New Home Study (CNHS) was conducted in 2016-2018 (Singer et. al., 2019), and found that the median indoor formaldehyde in new homes built after 2009 with CARB Phase 2 Formaldehyde ATCM materials had lower indoor formaldehyde concentrations, with a median indoor concentrations of 22.4 $\mu g/m^3$ (18.2 ppb) as compared to a median of 36 $\mu g/m^3$ found in the 2007 CNHS. Unlike in the CNHS study where formaldehyde concentrations were measured with pumped DNPH samplers, the formaldehyde concentrations in the HENGH study were measured with passive samplers, which were estimated to under-measure the true indoor formaldehyde concentrations by approximately 7.5%. Applying this correction to the HENGH indoor formaldehyde concentrations results in a median indoor concentration of 24.1 $\mu g/m^3$, which is 33% lower than the 36 $\mu g/m^3$ found in the 2007 CNHS.

Thus, while new homes built after the 2009 CARB formaldehyde ATCM have a 33% lower median indoor formaldehyde concentration and cancer risk, the median lifetime cancer risk is still 120 per million for homes built with CARB compliant composite wood products. This median lifetime cancer risk is more than 12 times the OEHHA 10 in a million cancer risk threshold (OEHHA, 2017a).

With respect to South Fourth Street Project, San Jose, CA, the buildings consist of residential 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 24.1 $\mu g/m^3$ (Singer et. al., 2020).

Assuming that the residential occupants inhale 20 m^3 of air per day, the average 70-year lifetime formaldehyde daily dose is 482 µg/day for continuous exposure in the residences. This exposure represents a cancer risk of 120 per million, which is more than 12 times the 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 6 times the CEQA cancer risk of 10 per million).

In addition, we note that the average outdoor air concentration of formaldehyde in California is 3 ppb, or 3.7 $\mu g/m^3$, (California Air Resources Board, 2004), and thus represents an average pre-existing background airborne cancer risk of 1.85 per million. Thus, the indoor air formaldehyde exposures describe above exacerbate this pre-existing risk resulting from outdoor air formaldehyde exposures.

Appendix A, Indoor Formaldehyde Concentrations and the CARB Formaldehyde ATCM, provides analyses that show utilization of CARB Phase 2 Formaldehyde ATCM materials will not ensure acceptable cancer risks with respect to formaldehyde emissions from composite wood products.

Even composite wood products manufactured with CARB certified ultra low emitting formaldehyde (ULEF) resins do not insure that the indoor air will have concentrations of formaldehyde the meet the OEHHA cancer risks that substantially exceed 10 per million. The permissible emission rates for ULEF composite wood products are only 11-15% lower than the CARB Phase 2 emission rates. Only use of composite wood products made with no-added formaldehyde resins (NAF), such as resins made from soy, polyvinyl acetate, or methylene diisocyanate can insure that the OEHHA cancer risk of 10 per million is met.

Response A.17: As mentioned in Responses A.5 and A.16, BAAQMD CEQA guidelines do not define a specific threshold for formaldehyde, nor does it regulate indoor air quality. The California Supreme Court in a December 2015 opinion (*California Building Industry Association v. Bay Area Air Quality Management District*) confirmed that CEQA, with several specific exceptions, is concerned with the impacts of a project on the environment, not the effects of the existing environment may have on a project. The proposed project would be built in accordance with the most recent CALGreen requirements, which specifies that composite wood products (such as hardwood plywood and particleboard) meet the requirements for formaldehyde as specified in the CARBs Air Toxic Control Measures. In addition, the project would be required to comply with the City's Green Building Ordinance and would be designed to achieve LEED Silver certification.

Furthermore, the commenter is speculating that composite wood materials would be used in the interior of the building. Indoor building materials will not be known until the building permit stage and, as stated above, these materials will be required to comply with CARB, CALGreen requirements, and LEED certification requirements. Lastly, even with the regulations in place, if materials containing formaldehyde were to be used, it would be speculative for the City to estimate the type and volume of building materials that may contain formaldehyde. Per Section 15145 of the CEQA guidelines, speculative analysis is not acceptable. Because there would be no way to quantify the off-gassing of materials, and because no thresholds exist, no additional analysis or mitigation measures related to formaldehyde would be required.

Comment A.18: The following describes a method that should be used, prior to construction in the environmental review under CEQA, for determining whether the indoor concentrations resulting from the formaldehyde emissions of specific building materials/furnishings selected exceed cancer and non-cancer guidelines. Such a design analyses can be used to identify those materials/furnishings prior to the completion of the City's CEQA review and project approval, that have formaldehyde emission rates that contribute to indoor concentrations that exceed cancer and non-cancer guidelines, so that alternative lower emitting materials/furnishings may be selected and/or higher minimum outdoor air ventilation rates can be increased to achieve acceptable indoor concentrations and incorporated as mitigation measures for this project.

Pre-Construction Building Material/Furnishing Formaldehyde Emissions Assessment

This formaldehyde emissions assessment should be used in the environmental review under CEQA to assess the indoor formaldehyde concentrations from the proposed loading of building materials/furnishings, the area-specific formaldehyde emission rate data for building materials/furnishings, and the design minimum outdoor air ventilation rates. This assessment allows the applicant (and the City) to determine, before the conclusion of the environmental review process and the building materials/furnishings are specified, purchased, and installed, if the total chemical emissions will exceed cancer and non-cancer guidelines, and if so, allow for changes in the selection of specific material/furnishings and/or the design minimum outdoor air ventilations rates such that cancer and non-cancer guidelines are not exceeded.

1.) Define Indoor Air Quality Zones. Divide the building into separate indoor air quality zones, (IAQ Zones). IAQ Zones are defined as areas of well-mixed air. Thus, each ventilation system with recirculating air is considered a single zone, and each room or group of rooms where air is not recirculated (e.g. 100% outdoor air) is considered a separate zone. For IAQ Zones with the same construction material/furnishings and design minimum outdoor air ventilation rates. (e.g. hotel rooms, apartments, condominiums, etc.) the formaldehyde emission rates need only be assessed for a single IAQ Zone of that type.

2.) Calculate Material/Furnishing Loading. For each IAQ Zone, determine the building material and furnishing loadings (e.g., m^2 of material/m^2 floor area, units of furnishings/m2 floor area) from an inventory of all potential indoor formaldehyde sources, including flooring, ceiling tiles, furnishings,

finishes, insulation, sealants, adhesives, and any products constructed with composite wood products containing urea-formaldehyde resins (e.g., plywood, medium density fiberboard, particleboard).

3.) Calculate the Formaldehyde Emission Rate. For each building material, calculate the formaldehyde emission rate (µg/h) from the product of the area-specific formaldehyde emission rate (µg/m^2-h) and the area (m^2) of material in the IAQ Zone, and from each furnishing (e.g. chairs, desks, etc.) from the unit-specific formaldehyde emission rate (µg/unit-h) and the number of units in the IAQ Zone.

NOTE: As a result of the high-performance building rating systems and building codes (California Building Standards Commission, 2014; USGBC, 2014), most manufacturers of building materials furnishings sold in the United States conduct chemical emission rate tests using the California Department of Health "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers," (CDPH, 2017), or other equivalent chemical emission rate testing methods. Most manufacturers of building furnishings sold in the United States conduct chemical emission rate tests using ANSI/BIFMA M7.1 Standard Test Method for Determining VOC Emissions (BIFMA, 2018), or other equivalent chemical emission rate testing methods.

CDPH, BIFMA, and other chemical emission rate testing programs, typically certify that a material or furnishing does not create indoor chemical concentrations in excess of the maximum concentrations permitted by their certification. For instance, the CDPH emission rate testing requires that the measured emission rates when input into an office, school, or residential model do not exceed one-half of the OEHHA Chronic Exposure Guidelines (OEHHA, 2017b) for the 35 specific VOCs, including formaldehyde, listed in Table 4-1 of the CDPH test method (CDPH, 2017). These certifications themselves do not provide the actual area-specific formaldehyde emission rate (i.e., µg/m^2-h) of the product, but rather provide data that the formaldehyde emission rates do not exceed the maximum rate allowed for the certification. Thus, for example, the data for a certification of a specific type of flooring may be used to calculate that the area-specific emission rate of formaldehyde is less than 31 µg/m^2-h, but not the actual measured specific emission rate, which may be 3, 18, or 30 µg/m^2-h. These area-specific emission rates determined from the product certifications of CDPH, BIFA, and other certification programs can be used as an initial estimate of the formaldehyde emission rate.

If the actual area-specific emission rates of a building material or furnishing is needed (i.e. the initial emission rates estimates from the product certifications are higher than desired), then that data can be acquired by requesting from the manufacturer the complete chemical emission rate test report. For instance if the complete CDPH emission test report is requested for a CDHP certified product, that report will provide the actual area-specific emission rates for not only the 35 specific VOCs, including formaldehyde, listed in Table 4-1 of the CDPH test method (CDPH, 2017), but also all of the cancer and reproductive/developmental chemicals listed in the California Proposition 65 Safe Harbor Levels (OEHHA, 2017a), all of the toxic air contaminants (TACs) in the California Air Resources Board Toxic Air Contamination List (CARB, 2011), and the 10 chemicals with the greatest emission rates.

Alternatively, a sample of the building material or furnishing can be submitted to a chemical emission rate testing laboratory, such as Berkeley Analytical Laboratory (https://berkeleyanalytical.com) to measure the formaldehyde emission rate.

4.) Calculate the Total Formaldehyde Emission Rate. For each IAQ Zone, calculate the total formaldehyde emission rate (i.e. µg/h) from the individual formaldehyde emission rates from each of the building material/furnishings as determined in Step 3.

5.) Calculate the Indoor Formaldehyde Concentration. For each IAQ Zone, calculate the indoor formaldehyde concentration (µg/m^3) from Equation 1 by dividing the total formaldehyde emission rates (i.e. µg/h) as determined in Step 4, by the design minimum outdoor air ventilation rate (m^3/h) for the IAQ Zone.

$$C_{in} = \frac{E_{total}}{Q_{oa}} \quad \text{(Equation 1)}$$

where:

C_{in} = indoor formaldehyde concentration (µg/m^3)

E_{total} = total formaldehyde emission rate (µg/h) into the IAQ Zone.

Q_{oa} = design minimum outdoor air ventilation rate to the IAQ Zone (m^3/h)

The above Equation 1 is based upon mass balance theory, and is referenced in Section 3.10.2 "Calculation of Estimated Building Concentrations" of the California Department of Health "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers", (CDPH, 2017).

6.) Calculate the Indoor Exposure Cancer and Non-Cancer Health Risks. For each IAQ Zone, calculate the cancer and non-cancer health risks from the indoor formaldehyde concentrations determined in Step 5 and as described in the OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines; Guidance Manual for Preparation of Health Risk Assessments (OEHHA, 2015).

7.) Mitigate Indoor Formaldehyde Exposures of exceeding the CEQA Cancer and/or Non-Cancer Health Risks. In each IAQ Zone, provide mitigation for any formaldehyde exposure risk as determined in Step 6, that exceeds the CEQA cancer risk of 10 per million or the CEQA non-cancer Hazard Quotient of 1.0.

Provide the source and/or ventilation mitigation required in all IAQ Zones to reduce the health risks of the chemical exposures below the CEQA cancer and non-cancer health risks.

Source mitigation for formaldehyde may include:

1.) reducing the amount materials and/or furnishings that emit formaldehyde
2.) substituting a different material with a lower area-specific emission rate of formaldehyde

Ventilation mitigation for formaldehyde emitted from building materials and/or furnishings may include:

1.) increasing the design minimum outdoor air ventilation rate to the IAQ Zone.

NOTE: Mitigating the formaldehyde emissions through use of less material/furnishings, or use of lower emitting materials/furnishings, is the preferred mitigation option, as mitigation with increased outdoor air ventilation increases initial and operating costs associated with the heating/cooling systems.
Further, we are not asking that the builder "speculate" on what and how much composite materials be used, but rather at the design stage to select composite wood materials based on the formaldehyde emission rates that manufacturers routinely conduct using the California Department of Health "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers," (CDPH, 2017), and use the procedure described earlier above (i.e. Pre-Construction Building Material/Furnishing Formaldehyde Emissions Assessment) to insure that the materials selected achieve acceptable cancer risks from material off gassing of formaldehyde.

Response A.18: See Response A.17.

Comment A.19: Outdoor Air Ventilation Impact. Another important finding of the CNHS, was that the outdoor air ventilation rates in the homes were very low. Outdoor air ventilation is a very important factor influencing the indoor concentrations of air contaminants, as it is the primary removal mechanism of all indoor air generated contaminants. Lower outdoor air exchange rates cause indoor generated air contaminants to accumulate to higher indoor air concentrations. Many homeowners rarely open their windows or doors for ventilation as a result of their concerns for security/safety, noise, dust, and odor concerns (Price, 2007). In the CNHS field study, 32% of the homes did not use their windows during the 24-hour Test Day, and 15% of the homes did not use their windows during the entire preceding week. Most of the homes with no window usage were homes in the winter field session. Thus, a substantial percentage of homeowners never open their windows, especially in the winter season. The median 24-hour measurement was 0.26 air changes per hour (ach), with a range of 0.09 ach to 5.3 ach. A total of 67% of the homes had outdoor air exchange rates below the minimum California Building Code (2001) requirement of 0.35 ach. Thus, the relatively tight envelope construction, combined with the fact that many people never open their windows for ventilation, results in homes with low outdoor air exchange rates and higher indoor air contaminant concentrations.

According to the Draft Supplementary Environmental Impact Report - South Fourth Street Project, San Jose, CA (City of San Jose. 2022), the Project is close to roads with moderate to high traffic (e.g., South 3rd Street, South 4th Street, South 5th Street, I-280, East San Salvador Street, South Market Street, etc.).

In Table 3.5-2 of the Draft Supplementary Environmental Impact Report - South Fourth Street Project, San Jose, CA (City of San Jose. 2022), the existing ambient noise levels in 2015 ranged from 62-69 dBA DNL.

In order to design the building for this Project such that interior noise levels are acceptable, an acoustic study with actual on-site measurements of the existing 2022 ambient noise levels and modeled future ambient noise levels needs to be conducted. The acoustic study of the existing ambient noise levels should be conducted over a one-week period. and report the dBA CNEL or Ldn. This study will allow for the selection of a building envelope and windows with a sufficient STC such that the indoor noise levels are acceptable. A mechanical supply of outdoor air ventilation to allow for a habitable interior environment with closed windows and doors will also be requires. Such a ventilation system would allow windows and doors to be kept closed at the occupant's discretion to control exterior noise within building interiors.

Response A.19: As discussed in Appendix E of the Draft SEIR, the existing traffic volumes along the local roadways were provided by the traffic consultants. The existing traffic volumes were compared to existing traffic volumes included in previous traffic studies completed for the project. The change in traffic volumes in December 2021 resulted in a one A-weighted decibel (dBA) day-night level (DNL) or less increase in noise levels over previous years. Therefore, the measurements made in 2015 were used to represent the existing noise environment in 2021.

Per the California Supreme Court in a December 2015 opinion (*California Building Industry Association v. Bay Area Air Quality Management District*) confirmed that CEQA, with several specific exceptions, is concerned with the impacts of a project on the environment, not the effects of the existing environment may have on a project's future users or residents unless the project risks exacerbate those environmental hazards or risks that already exist. The City's standard for interior noise levels in residences, hotels, motels, residential care facilities, and hospitals is 45 dBA DNL (refer to General Plan Policy EC-1.1). As discussed on page 112 of the Draft SEIR, future residents would be exposed to an interior noise level of up to 54 dBA DNL, which exceeds the City's 45 dBA DNL interior noise threshold. As a Condition of Approval, the project would be required to implement the identified measures listed on pages 112-113 which include:

- Residential units along the eastern building façade facing South Fourth Street shall require windows and doors with a minimum Sound Transmission Class (STC) rating of 31 (with the incorporation of adequate forced-air mechanical ventilation) to meet the interior noise threshold of 45 dBA DNL.
- Residential units along the northern and southern building façades within 120 feet of the centerline of South Fourth Street, the windows and doors shall have a minimum STC rating of 28 to 31 (with the incorporation of adequate forced-air mechanical ventilation).
- The project's design shall provide a suitable form of forced-air mechanical ventilation, as determined by the local building official, for all residential units on-site, so windows can be kept closed at the occupant's discretion to control interior noise and achieve the interior noise standards.
- A qualified acoustical specialist shall review the final site plan, building elevations, and floor plans to ensure compliance with the most recent

California Building Code and City noise standards prior to construction. A project-specific acoustical analysis shall be prepared to ensure that interior noise levels are reduced to 45 dBA or lower within the residential units. The project applicant shall conform with any special building construction techniques requested by the Director of Planning, Building and Code Enforcement or the Director's designee, which may include sound-rated windows and doors, sound-rated wall constructions, and acoustical caulking.

With these Conditions of Approval, the project would meet the mandated interior noise levels. The analysis cannot speculate on the frequency of future residences utilizing windows for ventilation. The project will be required to be built in accordance with all applicable regulations, including the CBC, to ensure proper ventilation of the structure.

Comment A.20: $PM_{2.5}$ Outdoor Concentrations Impact. An additional impact of the nearby motor vehicle traffic associated with this project, are the outdoor concentrations of $PM_{2.5}$. According to the Draft Supplementary Environmental Impact Report - South Fourth Street Project, San Jose, CA, (City of San Jose. 2022) the Project is located in the San Francisco Bay Area Basin, which is a State and Federal non-attainment area for $PM_{2.5}$.

An air quality analyses should be conducted to determine the concentrations of $PM_{2.5}$ in the outdoor and indoor air that people inhale each day. This air quality analyses needs to consider the cumulative impacts of the project related emissions, existing and projected future emissions from local $PM_{2.5}$ sources (e.g., stationary sources, motor vehicles, and airport traffic) upon the outdoor air concentrations at the Project site. If the outdoor concentrations are determined to exceed the California and National annual average $PM_{2.5}$ exceedence concentration of 12 $\mu g/m^3$, or the National 24-hour average exceedence concentration of 35 $\mu g/m^3$, then the buildings need to have a mechanical supply of outdoor air that has air filtration with sufficient removal efficiency, such that the indoor concentrations of outdoor $PM_{2.5}$ particles is less than the California and National PM2.5 annual and 24-hour standards.

It is my experience that based on the projected high traffic noise levels, the annual average concentration of $PM_{2.5}$ will exceed the California and National $PM_{2.5}$ annual and 24-hour standards and warrant installation of high efficiency air filters (i.e., MERV 13 or higher) in all mechanically supplied outdoor air ventilation systems.

Response A.20: It is unclear if the commenter is referring to particles that have a diameter of 2.5 micrometers or less ($PM_{2.5}$) impacts to future residents on-site or off-site receptors. For off-site receptors, air pollution by its nature is largely a cumulative impact and no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. The Draft SEIR concluded that the project would not exceed the BAAQMD significance threshold for construction and operational criteria emissions.

Refer to page 28 of the Draft SEIR for more information.

The maximum annual fine particulate matter where $PM_{2.5}$ from project construction and operation at the off-site maximum exposed individual (MEI) would exceed the BAAMQD significance threshold for $PM_{2.5}$ at the project-level. The proposed project would be required to comply with the Standard Permit Conditions and Conditions of Approval listed on pages 28-29 of the Draft SEIR and implement Mitigation Measure AIR-1.1 to reduce toxic air contaminant (TAC) emissions impacts to below BAAQMD significance thresholds for $PM_{2.5}$. The commenter does not provide any documentation for the need for high efficiency air filters nor the correlation between traffic noise and $PM_{2.5}$ levels.

If the commenter is referring to impacts to future project residents, this discussion has been included for informational purposes under the non-CEQA effects discussion (refer to pages 39-40 of the Draft SEIR). The maximum cancer risk, annual $PM_{2.5}$ concentrations, and hazard index (HI) from nearby temporary sources (e.g., nearby developments) would not exceed the single-source thresholds as shown in Table 3.1-8 of the Draft SEIR, but the combined temporary sources (construction of nearby projects) would almost exceed the $PM_{2.5}$ concentration threshold. The analysis assumes all noted projects would be under construction at the same time. Because construction of the nearby developments would be temporary and the construction schedules of these developments are unknown and may not overlap with the proposed project, the impacts to future site receptors would likely be less than what is shown in Table 3.1-8 of the Draft SEIR. No additional project design features are required since the project would comply with applicable Downtown Strategy 2040 policies and regulations.

Comment A.21: Indoor Air Quality Impact Mitigation Measures

The following are recommended mitigation measures to minimize the impacts upon indoor quality:

Indoor Formaldehyde Concentrations Mitigation. Use only composite wood materials (e.g. hardwood plywood, medium density fiberboard, particleboard) for all interior finish systems that are made with CARB approved no-added formaldehyde (NAF) resins (CARB, 2009). CARB Phase 2 certified composite wood products, or ultra-low emitting formaldehyde (ULEF) resins, do not insure indoor formaldehyde concentrations that are below the CEQA cancer risk of 10 per million. Only composite wood products manufactured with CARB approved no-added formaldehyde (NAF) resins, such as resins made from soy, polyvinyl acetate, or methylene diisocyanate can insure that the OEHHA cancer risk of 10 per million is met.

Alternatively, conduct the previously described Pre-Construction Building Material/Furnishing Chemical Emissions Assessment, to determine that the combination of formaldehyde emissions from building materials and furnishings do not create indoor formaldehyde concentrations that exceed the CEQA cancer and non-cancer health risks.

It is important to note that we are not asking that the builder "speculate" on what and how much composite materials be used, but rather at the design stage to select composite wood materials based on the formaldehyde emission rates that manufacturers routinely conduct using the California Department of Health "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers", (CDPH, 2017), and use the procedure described above (i.e. Pre-Construction Building Material/Furnishing Formaldehyde Emissions Assessment) to insure that the materials selected achieve acceptable cancer risks from material off gassing of formaldehyde.

Outdoor Air Ventilation Mitigation. Provide each habitable room with a continuous mechanical supply of outdoor air that meets or exceeds the California 2016 Building Energy Efficiency Standards (California Energy Commission, 2015) requirements of the greater of 15 cfm/occupant or 0.15 cfm/ft^2 of floor area. Following installation of the system conduct testing and balancing to insure that required amount of outdoor air is entering each habitable room and provide a written report documenting the outdoor airflow rates. Do not use exhaust only mechanical outdoor air systems, use only balanced outdoor air supply and exhaust systems or outdoor air supply only systems. Provide a manual for the occupants or maintenance personnel, that describes the purpose of the mechanical outdoor air system and the operation and maintenance requirements of the system.

$PM_{2.5}$ Outdoor Air Concentration Mitigation. Install air filtration with sufficient $PM_{2.5}$ removal efficiency (e.g. MERV 13 or higher) to filter the outdoor air entering the mechanical outdoor air supply systems, such that the indoor concentrations of outdoor $PM_{2.5}$ particles are less than the California and National $PM_{2.5}$ annual and 24-hour standards. Install the air filters in the system such that they are accessible for replacement by the occupants or maintenance personnel. Include in the mechanical outdoor air ventilation system manual instructions on how to replace the air filters and the estimated frequency of replacement.

Response A.21: As discussed in Responses A.5 and A.17, there is no method available to quantify the off-gassing of materials and there is no adopted threshold for formaldehyde by which to measure an effect. Therefore, no impact has been identified and there is no nexus by which to require mitigation for the project. In addition, if materials containing formaldehyde were to be used, it would be speculative for the City to estimate the type and volume of building materials that may contain formaldehyde. Per Section 15145 of the CEQA guidelines, speculative analysis is not acceptable.

As mentioned previously, the proposed project would not exceed the BAAQMD significance threshold for construction and operational criteria emissions. While the project was found to have a significant $PM_{2.5}$ impact community risk impact, implementation of the Standard Permit Conditions and Conditions of Approval listed on pages 28-29 of the Draft SEIR and Mitigation Measure AIR-1.1 would reduce $PM_{2.5}$ impact to below BAAQMD significance thresholds.

The project would be built in accordance with the California Building Code (CBC) and most recent CALGreen requirements. Per CALGreen, composite wood products

(such as hardwood plywood and particleboard) shall meet the requirements for formaldehyde as specified in the CARBs Air Toxic Control Measures. In addition, the project would be required to comply with the City's Green Building Ordinance and would be designed to achieve LEED Silver certification.

EXHIBIT B – MEMO FROM SWAPE

Comment A.22: We have reviewed the April 2023 Draft Supplemental Environmental Impact Report ("DSEIR") for the 439 South Fourth Street Project ("Project") located in the City of San Jose ("City"). The Project proposes to construct 210 residential units and 168 parking spaces on the 0.52-acre site.

Our review concludes that the DSEIR fails to adequately evaluate the Project's air quality and greenhouse gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project may be underestimated and inadequately addressed. A revised Environmental Impact Report ("EIR") should be prepared to adequately assess and mitigate the potential air quality and greenhouse gas impacts that the project may have on the environment.

Air Quality

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The DSEIR's air quality analysis relies on emissions calculated with California Emissions Estimator Model ("CalEEMod") Version 2020.4.0 (p. 26).[1] 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. 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 are utilized in calculating the Project's air pollutant emissions and make known which default values are changed as well as provide justification for the values selected.

When reviewing the Project's CalEEMod output files, provided in the Air Quality Assessment ("AQ Assessment") as Appendix B to the DSEIR, we found that several model inputs are not consistent with information disclosed in the DSEIR. As a result, the Project's construction and operational emissions may be underestimated. An EIR 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.

[1] "CaleeMod Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: http://www.aqmd.gov/caleemod/download-model.

Response A.22: Project-specific construction information (i.e., equipment list and schedule) was provided by the applicant and used in the modeling (see Attachment 2 of Appendix B of the SEIR). This information represents the best available information for modeling the construction activity and is superior information to the generic modeling default factors generated by CalEEMod.

The City of San José prepared the Draft SEIR in compliance with the requirements of CEQA and the CEQA Guidelines. Recirculation of an EIR is required when significant new information is added to the EIR (CEQA Guidelines Section 15088.5). As discussed in the following responses below, the comments raised in this attachment do not identify a new or more significant impact, or a new feasible project alternative or mitigation measure considerably different than identified in the Draft SEIR. For these reasons, the Draft SEIR does not need to be revised.

Comment A.23: Unsubstantiated Reduction to CO2 Intensity Factor
Review of the CalEEMod output files demonstrates that the "439 & 451 South 4th Street Apartments" model includes a manual reduction to the default CO_2 intensity factor (see excerpt below) (Appendix B, pp. 53).

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CO2IntensityFactor	807.98	178

As demonstrated above, the CO_2 intensity factor is decreased from the default value of 807.98 to 178-pounds per megawatt hour ("lbs/MWh). As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[2] According to the "User Entered Comments & Non-Default Data" table, the justification provided for this change is:

"SJCE = 178" (Appendix B, pp. 49).

However, this justification is insufficient, as the AQ Assessment fails to provide an adequate source that demonstrates how the revised CO_2 intensity factor was calculated. Furthermore, the DSEIR fails to mention or justify the revised CO_2 intensity factor whatsoever. This is incorrect, as according to the CalEEMod User's Guide:

> "CalEEMod was also 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."[3]

Here, as the DSEIR and associated documents fail to provide substantial evidence to support the revised CO_2 intensity factor, we cannot verify the reduction.

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[2] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: https://www.aqmd.gov/caleemod/user's-guide, p. 1, 14.
[3] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: https://www.aqmd.gov/caleemod/user's-guide, p. 13, 14.

This unsubstantiated reduction presents an issue, as CalEEMod uses the CO_2 intensity factor to calculate the Project's GHG emissions associated with electricity use.[4] By including an unsubstantiated reduction to the default CO_2 intensity factor, the model may underestimate the Project's potential GHG emissions and should not be relied upon to determine Project significance.

Response A.23: Refer to Response A.6. As mentioned in Appendix B of the Draft SEIR, an emission factor of 178 pounds of CO_2 per megawatt of electricity produced was entered into CalEEMod, which is based on SJCE 2020 emissions rate. SJCE is the electricity provider for residents and businesses in the City.

Additionally, GHG emissions were not quantified for the project. As discussed under Response A.7, projects that comply with the policies and strategies outlined in the 2030 GHGRS, would have less than significant GHG impacts under CEQA. Refer to Appendix G of the Draft SEIR and page 63 for a discussion of project consistency with the GHG measures.

This comment does not identify a new or more significant impact than identified in the Draft SEIR; therefore, the Draft SEIR does not need to be recirculated.

Comment A.24: *Unsubstantiated Changes to Construction Equipment Fuel Types*
Review of the CalEEMod output files demonstrates that the "439 & 451 South 4th Street Apartments" model includes several changes to the default construction equipment fuel types (see excerpt below) (Appendix B, pp. 50).

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[5] According to the "User Entered Comments & Non-Default Data" table, the justification provided for these changes is:

"Enhanced BMPs, Tier 4 final mitigation, electric portable, aerial lifts, and crane Fleet Mix - EMFAC2021 fleet mix Santa Clara Co 2025" (Appendix A, pp. 50).

[4] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: https://www.aqmd.gov/caleemod/user's-guide, p. 17.
[5] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: https://www.aqmd.gov/caleemod/user's-guide, p. 1, 14.

Furthermore, the DSEIR incorporates mitigation measure ("MM") Air-1.1 which states:

> "All diesel-powered off-road equipment (larger than 25 horsepower) operating on-site for more than two days continuously or 20 hours total shall, at a minimum, meet U.S. Environmental Protection Agency (EPA) Tier 4 final emission standards for fine particulate matter (PM2.5) and Coarse Particulate Matter (PM10).
>
> - Alternatively, equipment that meet U.S. EPA emissions for Tier 3 engines and is equipped with California Air Resources Board-certified Level 3 Diesel Particulate Filters that altogether achieve a 90 percent reduction in diesel particulate matter emissions would meet this requirement.
>
> - *Use of alternatively fueled or electric equipment*" (emphasis added) (p. iv).

However, the changes remain unsubstantiated, as the mitigation measure fails to specify what time of electric equipment would be used, or what kind of alternative fuel would be used. As a result, we cannot verify that the above changes are accurate.

These unsubstantiated changes present an issue, as CalEEMod uses the off-road equipment input parameters to calculate the emissions associated with off-road construction equipment.[6] By including unsubstantiated changes to the default off-road construction equipment fuel types, the models may underestimate the Project's construction-related emissions and should not be relied upon to determine Project significance.

> **Response A.24:** The Best Management Practices (BMPs) listed on pages 28-29 of the Draft SEIR are Standard Permit Conditions required for all projects in the City. This is consistent with the City's General Plan Policy MS-13.1. The sub bullets the commenter listed above provide alternative ways that the project can meet the 90 percent reduction in diesel particulate matter (DPM) emissions if Tier 4 equipment is not available. Furthermore, as mentioned under Mitigation Measure AIR-1.1 of the Draft SEIR, the project applicant shall submit a construction operations plan that demonstrates that the off-road equipment used for construction of the project would achieve a fleetwide average of at least 90 percent reduction in diesel particulate matter (DPM) emissions to the City of San José Director of Planning, Building and Code Enforcement or the Director's designee for review and approval prior to the issuance of any demolition, grading, or building permits (whichever occurs earliest).
>
> This comment does not identify a new or more significant impact than identified in

[6] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: https://www.aqmd.gov/caleemod/user's-guide, p. 33, 34.

the Draft SEIR; therefore, the Draft SEIR does not need to be recirculated.

Comment A.25: *Unsubstantiated Changes to Wastewater System Treatment Percentages*
Review of the CalEEMod output files demonstrates that the "439 & 451 South 4th Street Apartments" model includes several changes to the default wastewater treatment system percentage (see excerpt below) (Appendix B, pp. 70).

Table Name	Column Name	Default Value	New Value
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

As demonstrated in the excerpt above, the model assumes that the Project's wastewater would be treated 100% aerobically. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[7] According to the "User Entered Comments & Non-Default Data" table, the justification provided for these changes is:

> "Wastewater treatment 100% aerobic, no lagoons or septic tanks" (Appendix B, pp. 50).

Regarding wastewater, the AQ Assessment states:

> "Water/wastewater use was changed to 100% aerobic conditions to represent wastewater treatment plant conditions" (p. 19).

However, review of the San Jose-Santa Clara Regional Wastewater Facilities treatment process reveals the use of anaerobic bacteria in the digesters phase of wastewater treatment. Specifically, the City states:

> "In the digester tanks, naturally occurring anaerobic bacteria digest sludge and produce methane gas that helps meet 60 percent of the Facility's energy needs."[8]

As such, the assumption that the Project's wastewater would be treated 100% aerobically is incorrect.

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[7] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: https://www.aqmd.gov/caleemod/user's-guide, p. 1, 14.
[8] "Treatment Process." San Jose-Santa Clara Regional Wastewater Facility, available at: https://www.sanjoseca.gov/your-government/departments-offices/environmental-services/water-utilities/regional-wastewater-facility/treatment-process.

These unsubstantiated changes present an issue, as each type of wastewater treatment system is associated with different GHG emission factors, which are used by CalEEMod to calculate the Project's total GHG emissions.[9] By including unsubstantiated changes to the default wastewater treatment system percentages, the model may underestimate the Project's GHG emissions and should not be relied upon to determine Project significance.

Response A.25: Wastewater treatment systems only cause indirect emissions of greenhouse gases and do not affect criteria air pollutant emissions.[10] Default assignments of percentage of treatment type in CalEEMod reflect statewide averages and not conditions in San José. The CalEEMod model provides three options to enter for wastewater treatment: (1) through septic systems, (2) anerobic treatment, and (3) facultative lagoons. The septic systems and facultative lagoons are aerobic treatment techniques that typically occur in rural areas and not in San José. The project plans do not include this treatment type. Wastewater would be sent to the San José Wastewater Treatment plant. It is correct that biosolids removed from the wastewater treatment would be processed using anaerobic digesters, but they would capture these emissions. In any event, the difference in GHG emissions from operation of the project with and without this change is minor.

This comment does not identify a new or more significant impact than identified in the Draft SEIR; therefore, the Draft SEIR does not need to be recirculated.

Comment A.26: *Underestimated Operational Sunday Daily Trips*
Review of the CalEEMod output files demonstrates that the "439 & 451 South 4th Street Apartments" model includes several changes to default daily vehicle trip rates (see excerpt below) (Appendix B, pp. 54).

Table Name	Column Name	Default Value	New Value
tblVehicleTrips	ST_TR	4.53	3.12
tblVehicleTrips	SU_TR	3.59	2.47
tblVehicleTrips	WD_TR	4.45	3.07

As a result of these changes, the model includes the following daily trip rates (see excerpt below) (Appendix B, pp. 94).

	Average Daily Trip Rate		
Land Use	Weekday	Saturday	Sunday
Apartments High Rise	644.70	655.20	518.70
Enclosed Parking with Elevator	0.00	0.00	0.00
Total	644.70	655.20	518.70

[9] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: https://www.aqmd.gov/caleemod/user's-guide, p. 45.
[10] Personal Communication: Illingworth & Rodkin, June 11, 2021.

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[11] According to the "User Entered Comments & Non-Default Data" table, the justification provided for these changes is:

> "Traffic provided trip gen w/ reductions" (Appendix B, pp. 50).

Regarding daily trip rates, the DSEIR states:

> "The proposed project would generate 644 new daily trips" (p. 33).

As demonstrated above, the model should include a daily trip rate of at least 644 as described in the DSEIR. However, the model incorrectly underestimates the Sunday daily trip rate by 125.3 trips per day.[12] As such, the Sunday trip rates are inconsistent with the information provided by the DSEIR.

These inconsistencies present an issue, as CalEEMod uses the operational vehicle trip rates to calculate the emissions associated with the operational on-road vehicles.[13] By including underestimated Sunday operational vehicle trips, the model underestimates the Project's mobile-source operational emissions and should not be relied upon to determine Project significance.

Response A.26: Sunday trips are not equivalent to weekday trips. The use of the same 644 trips for Sundays would be inaccurate since daily trips during the weekday would be higher compared to trips during the weekend. In addition, the weekday trips were calculated by the traffic engineer using the Institute of Transportation Engineers' (ITE) rates which were confirmed by City staff. As mentioned in Appendix B of the Draft SEIR, CalEEMod allows the user to enter specific vehicle trip generation rates; therefore, the project-specific daily trip generation rate (provided by the traffic consultant) was entered into the model. The Saturday and Sunday trip rates were adjusted by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips to the default weekday rate with the project-specific daily weekday trip rate. The default trip lengths and trip types specified by CalEEMod were used.

This comment does not identify a new or more significant impact than identified in the Draft SEIR; therefore, the Draft SEIR does not need to be recirculated.

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[11] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: https://www.aqmd.gov/caleemod/user's-guide, p. 1, 14.
[12] Calculated: 644 proposed daily vehicle trips – 518.7 modeled daily vehicle trips = 125.3 daily vehicle trips underestimated
[13] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: https://www.aqmd.gov/caleemod/user's-guide, p. 36.

Comment A.27: Greenhouse Gas
Failure to Adequately Evaluate Greenhouse Gas Impacts

According to the GHG Reduction Strategy Compliance Checklist, provided as Appendix G to the DSEIR, the Project would be consistent with the City's Greenhouse Gas Reduction Strategy ("GHGRS"). However, the DSEIR fails to discuss the Project's greenhouse gas ("GHG") emissions whatsoever. As such, we are unable to verify that the Project would not have a significant GHG impact. An updated EIR should be prepared to include a GHG analysis which adequately evaluates the Project's emissions. Until such an analysis is prepared, the Project should not be approved. Furthermore, as it is policy of the State that eligible renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers by December 31, 2045, we emphasize the applicability of incorporating the maximum amount solar energy into the Project design. Until the feasibility of incorporating on-site renewable energy production is considered, the Project should not be approved.

Disclaimer
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 A.27: GHG emissions were not quantified for the project. As discussed in Response A.7, the 2030 GHGRS is the latest update to the City's GHGRS and is designed to meet statewide GHG reduction targets for 2030 set by SB 32. As a qualified Climate Action Plan, the 2030 GHGRS allows for tiering and streamlining of GHG analyses under CEQA. Projects that comply with the policies and strategies outlined in the 2030 GHGRS, would have less than significant GHG impacts under CEQA. As mentioned in Appendix G of the Draft SEIR, the project would enroll in SJCE program at the TotalGreen level (i.e., 100 percent carbon-free electricity) and the project would have an enhanced commissioning program to minimize energy consumption. For these reasons, the Draft SEIR does not need to be recirculated.

This comment does not identify a new or more significant impact than identified in the Draft SEIR; therefore, the Draft SEIR does not need to be recirculated.

EXHIBIT C – WILSON IHRIG COMMENTS ON NOISE ANALYSIS

Comment A.28: Per your request, we have reviewed the Supplemental Environmental Impact Report (SEIR) for 439 South Street development in the City of San Jose. The proposed project would

construct a 25-story 209-unit apartment building south of Downtown San Jose. The site is surrounded by sensitive uses, most notably multi-family residences directly adjacent to the site both to the west and the north, as well as a single-family residence directly to the south. All comments are based on the following document, prepared by Illingworth and Rodkin, Inc, which is found in the SEIR as Appendix E.:

439 & 451 SOUTH 4TH STREET PROJECT
NOISE AND VIBRATION ASSESSMENT

Adverse Effects of Noise[14]

Although the health effects of noise are not taken as seriously in the United States as they are in other countries, they are real and, in many parts of the country, pervasive.

Noise-Induced Hearing Loss. If a person is repeatedly exposed to loud noises, he or she may experience noise-induced hearing impairment or loss. In the United States, both the Occupational Health and Safety Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) promote standards and regulations to protect the hearing of people exposed to high levels of industrial noise.

Speech Interference. Another common problem associated with noise is speech interference. In addition to the obvious issues that may arise from misunderstandings, speech interference also leads to problems with concentration fatigue, irritation, decreased working capacity, and automatic stress reactions. For complete speech intelligibility, the sound level of the speech should be 15 to 18 dBA higher than the background noise. Typical indoor speech levels are 45 to 50 dBA at 1 meter, so any noise above 30 dBA begins to interfere with speech intelligibility. The common reaction to higher background noise levels is to raise one's voice. If this is required persistently for long periods of time, stress reactions and irritation will likely result.

Sleep Disturbance. Noise can disturb sleep by making it more difficult to fall asleep, by waking someone after they are asleep, or by altering their sleep stage, e.g., reducing the amount of rapid eye movement (REM) sleep. Noise exposure for people who are sleeping has also been linked to increased blood pressure, increased heart rate, increase in body movements, and other physiological effects. Not surprisingly, people whose sleep is disturbed by noise often experience secondary effects such as increased fatigue, depressed mood, and decreased work performance.

Cardiovascular and Physiological Effects. Human's bodily reactions to noise are rooted in the "fight or flight" response that evolved when many noises signaled imminent danger. These include increased blood pressure, elevated heart rate, and vasoconstriction. Prolonged exposure to acute noises can result in permanent effects such as hypertension and heart disease.

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[14] More information on these and other adverse effects of noise may be found in Guidelines for Community Noise, eds B Berglund, T Lindvall, and D Schwela, World Health Organization, Geneva, Switzerland, 1999. (https://www.who.int/docstore/peh/noise/Comnoise-1.pdf)

Impaired Cognitive Performance. Studies have established that noise exposure impairs people's abilities to perform complex tasks (tasks that require attention to detail or analytical processes), and it makes reading, paying attention, solving problems, and memorizing more difficult. Therefore, there are standards for classroom background noise levels and why offices and libraries are designed to provide quiet work environments. One societal change brought about by the COVID-19 pandemic is that many people now routinely work and learn from home, and this has given rise to more noise complaints from loud activities such as construction work.

Response A.28: The project is proposing a 25-story residential building with up to 210 residential units. The comment does not raise any specific issues about the adequacy of the Draft SEIR; therefore, no further response is required.

Comment A.29: Analysis Shows Significant Impact without Mitigation.

Table 7 of Appendix E shows that "Existing Comm[erical receptor] – west" has a DNL of 57 dBA. This is most likely referring to the receptors immediately to the west – 420 and 452 Third Street. These are residential structures, meaning they would have to meet the City of San Jose General Plan criteria of 55 dBA called out in EC-1.3 on page 11 of Appendix E. As such, the SEIR should be revised to mitigate this impact, with a full analysis of mechanical room plans and potential mitigation options, such as acoustical treatment within the mechanical room.

Response A.29: The commenter is correct that the receptors to the west are residences. Per Appendix E of the Draft SEIR, the existing noise levels at the western property line range from 55 to 75 during the day and 44 to 61 at night. The dBA DNL was calculated to be 62. While the dBA DNL was estimated to be 57 with the project, the net increase in noise is one dBA which is not perceptible and does not increase noise levels over the existing average.

For operational noise, details regarding the equipment were not available at the time the Draft SEIR was prepared. As mentioned on pages 97-98 of the Draft SEIR (as a Condition of Approval) and in accordance with the Downtown Strategy 2040 FEIR, prior to the issuance of building permits, mechanical equipment shall be selected and designed to meet the City's 55 dBA DNL noise level requirement at the nearby noise sensitive land uses. The applicant shall retain a qualified acoustical consultant to review the mechanical noise equipment to determine specific noise reduction measures needed to reduce equipment noise to comply with the City's noise level requirements. The findings and recommendations from the acoustical consultant for noise reduction measures shall be submitted to the Director of Planning, Building and Code Enforcement or Director's designee for review and approval, prior to the issuance of any building permits. With implementation of the Condition of Approval, the project would have a less than significant operational impact from mechanical equipment.

As discussed on pages 99-102, it was concluded that the construction noise impact would be significant and unavoidable even with implementation of the identified

mitigation (MM NOI-1.1) which includes preparation of a noise logistics plan that specifies hours of construction, noise and vibration minimization measures, posting and notification of construction schedules, and designation of a noise disturbance coordinator. These measures are consistent with the requirements of the Downtown Strategy 2040 FEIR.

For these reasons, the Draft SEIR does not need to be revised.

Comment A.30: Impact Analysis is Incomplete.
Incorrect Horizontal Geometry is Used in the Analysis

The distances between noise sources and sensitives receptors in Appendix E of the SIER are greatly underestimated. For example, Table 6 in Appendix E states that the closest receiver to the north is 95 feet away – in actuality it is 5 feet – which Appendix E even cites correctly in figure 5. Table 1 below shows a summary of all distances used in the analysis, along with estimations of the proper distances, based on different scenarios. The 'Demolished Building' scenario was taken from Table 10 of Appendix E.

Table 1: Distances Used in SEIR Compared to Measured Distances

Receptor	Direction from Project	Distance in Table 6	Distance in Figure 5	Measured Distance to Main Receptor Structure from…	
				Edge of Construction Site	Demolished Building
405 S 4th Street	North	95 ft	5 ft	5 ft	5 ft
420 S 3rd Street	West	80 ft	n/a	10 ft	20 ft
459 S 4th Street	South	85 ft	n/a	5 ft	10 ft
442 S 4th Street	East	140 ft	n/a	95 ft	100 ft

These incorrect distances can wildly underestimate levels – for example the construction noise at 405 S 4th Street could be as high as 106 dBA, instead of the 82 dBA listed in the report. The SEIR should be amended with proper screening distances to accurately reflect the noise and vibration environment.

Response A.30: As mentioned on page 99 of the Draft SEIR and in Appendix E of the Draft SEIR, the distance is measured from the center of the construction site to adjacent uses. Therefore, the correct distances were used and the Draft SEIR does not need to be revised. Refer to Response A.11.

Comment A.31: *Incorrect Vertical Geometry is Used in the Operational Analysis*

Table 7 in Appendix E of the SIER shows Distance from Center of the Rooftop Equipment to the mechanical room of the proposed project. However, The Mark Residential apartments, approved in July 2021 (see table 3.0-1 in the SEIR), will be 23 stories high and adjacent to the property. This means the distance between the rooftop equipment and closest receptor could be as close as 35 feet, based on the two-story difference and an estimation of 25 feet horizontal space between the two buildings.

Table 7 establishes that an hourly Leq is 7 dBA below the corresponding DNL, which is used as a significance threshold at 55 dBA. Performing distance attenuation calculations, translating the source level of 69 dBA in the document from 3 feet to 35 feet gives a new level right at this threshold of 55 dBA DNL. As such, the evaluation should be re-calculated with the approved residential building, with a full analysis of mechanical room plans and potential mitigation options, such as acoustical treatment within the mechanical room.

Response A.31: Per Section 15125 of the CEQA Statute & Guidelines, an EIR must include a description of the physical environmental conditions in the vicinity of the project; this environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. Per Section 15125(a)(1), the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation (NOP) is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective.

The project baseline is the existing conditions at the time the second NOP began circulation (February 2022). While the adjacent project was approved in 2021, no construction activities occurred on-site, and no grading or construction permits have been filed at the time the NOP began circulation. Therefore, the Draft SEIR does not need to be revised.

Comment A.32: *Incorrect Vertical Geometry is Used in the Construction Analysis*

Mitigation Measure 1a states the project should construct “solid plywood fences around construction sites adjacent to operational business, residences, or other noise-sensitive land uses” and that a “temporary 8-foot noise barrier shall be constructed along the south property line” However, the presence of multistory buildings may reduce the effectiveness of this sound barrier at higher elevations that can see over the barrier. The adjacent apartment complex to the north is 3 stories tall – meaning the top story can see over the barrier into the center of construction site with no reduction effects and may reduce the effectiveness of Mitigation Measure 1a.

Response A.32: Solid plywood fencing is included as a noise suppression device and technique under MM NOI-1.1 and the temporary eight-foot noise barrier shall be constructed along the southern property line of the project site to shield adjacent residential land uses from ground-level construction equipment and activities. As

discussed on page 99 of the Draft SEIR, a qualified acoustic consultant shall prepare a construction noise logistics plan that specifies hours of construction, noise and vibration minimization measures, posting and notification of construction schedules, and designation of a noise disturbance coordinator, to the Director of Planning, Building and Code Enforcement or the Director's Designee prior to issuance of a demolition, grading, or building permit whichever occurs earliest. This mitigation is consistent with the Municipal Code and the Downtown Strategy 2040 FEIR, particularly General Plan Policy EC-1.7. As mentioned in the Draft SEIR, even with implementation of MM NOI-1.1, the project's impact from construction generated noise would remain significant and unavoidable.

For these reasons, the Draft SEIR does not need to be revised.

Comment A.33: Improper Noise Thresholds are Applied to Project

Appendix E of the SEIR states that since there are no applicable city or county noise limits, the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual*[15] is used as an applicable limit. The cited FTA Manual is a guidance document, and it discourages projects against using its absolute criteria values without consideration of local conditions stating, "Project construction noise criteria should account for the existing noise environment" (FTA page 179). Without further analysis, the FTA threshold could be too high, and the SEIR provides no discussion why the chosen 80 dBA construction noise threshold should be deemed acceptable. In fact, page 7 of the SEIR Appendix E states that "noise impacts would be considered significant if the project would result in … Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project." Therefore, it is not accurate to characterize that the SEIR analysis has completely addressed CEQA standards.

The lowest daytime ambient noise level was determined to be 55 dBA in Appendix E. In Table 6 of SEIR Appendix E, the highest calculated noise level was determined to be 82 dBA. However, adjusting this to the correct distance of 5 feet, as opposed to the 80 ft in Table 6, gives a new level of 106 dB which would cause a 51 dB increase at the closest receptor. This shows the problems with relying solely on an 80 dB absolute limit, as a 10 dB increase is generally perceived as a doubling of loudness[16]. Even at the wrong distances in the report, the levels that they predict are up to 37 dBA above ambient. As it currently stands, there are a few instances where construction noise exceeds the FTA threshold. However, the document underrepresents the widespread instances of significant ambient noise increases that create significant and unavoidable impact.

Conclusions

There are several errors and omissions in the noise analysis. Correcting these would potentially identify several significant impacts which require mitigation.

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[15] https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

[16] https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf Page 6-5

Response A.33: While the City has a General Plan policy for what the City considers as a significant construction noise impact (General Plan Policy EC-1.7), the City does not have established noise level thresholds for construction activities. Therefore, the FTA thresholds were used.

As mentioned in Response A.11, the distances listed in Table 3.5-5 of the Draft SEIR and Table 6 of Appendix E of the Draft SEIR are measured from the nearest property lines from the center of the construction activity by phase. The Draft SEIR determined that construction noise levels would exceed the exterior threshold of 80 equivalent continuous noise level (dBA L_{eq}) at residential land uses to the south during demolition, grading, trenching, paving, and pile driving activities and that the 90 dBA L_{eq} threshold for commercial land uses would be exceeded during pile driving activities. Even with incorporation of mitigation, the project was found to have a significant unavoidable impact from construction noise.

For these reasons, the Draft SEIR does not need to be revised.