COUNCIL AGENDA: 01/11/22
FILE: 21-2649
ITEM: 10.2

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Christopher Burton

SUBJECT: SEE BELOW

DATE: January 6, 2022

Approved

Date **1/6/2022**

COUNCIL DISTRICT: 3

SUPPLEMENTAL

SUBJECT: FILE NO. PDC15-067: PLANNED DEVELOPMENT REZONING FOR A MIXED-USE DEVELOPMENT ON A 2.77 GROSS-ACRE SITE LOCATED AT 1260 E. SANTA CLARA STREET

REASON FOR SUPPLEMENTAL

This memorandum responds to an untimely comment letter from Adams, Broadwell, Joseph & Cardozo, representing Silicon Valley Residents for Responsible Development, submitted to the City the afternoon prior to the Planning Commission hearing for the project on Wednesday, November 17, 2021. This letter was submitted outside of the public comment period for the IS/MND and raises information not included in any previous comments prior to or during the circulation of the IS/MND. Although staff is not obligated under the California Environmental Quality Act **(**CEQA) to respond to the untimely letter, staff prepared additional written responses to the letter as a matter of courtesy and to provide the responses to the City Council. The comment letter with staff responses is attached to this supplemental memorandum.

BACKGROUND

The City circulated the IS/MND for public review for 26 days from December 18, 2020 to January 13, 2021. The City received eight comments from community members and neighbors. The City staff responded to those comments and posted the responses on the City's website on November 5, 2021, prior to the Planning Commission hearing.

An untimely comment letter from Adams, Broadwell, Joseph & Cardozo, representing Silicon Valley Residents for Responsible Development, was submitted to staff on Wednesday, November 17, 2021, via email at 1:07 p.m., the day of the Planning Commission for the subject project.

The letter contains 25 pages of new comments with an additional 75 pages of analysis to supplement the content of the letter. The letter includes statements and concerns about the IS/MND and requests that the City prepare an environmental impact report (EIR) for the project. At the November 17, 2021 Planning Commission hearing, there were several construction trades members who stated that an EIR is necessary.

Verbal responses to these concerns were provided during the staff presentation at the Planning Commission hearing on November 17, 2021, and explained why the IS/MND is sufficient pursuant to the requirements of CEQA. Although staff is not obligated under CEQA to respond to the untimely letter, as a courtesy, staff has prepared additional written responses to the letters to supplement the information that was already disclosed and addressed in the IS/MND, staff report, and materials for this project at all public hearings for full disclosure and to provide a complete administrative record.

The IS/MND for the proposed project has been prepared in full compliance with CEQA and its implementing guidelines. The analysis in the staff response is detailed, thorough, and the conclusions are based on facts and substantial evidence in the record. Based upon the analysis disclosed in the IS/MND, associated technical reports, and all other hearing materials for the project, staff maintains that the IS/MND is adequate as the comments do not present a fair argument that the project will result in a significant and unavoidable impact requiring the preparation of an EIR. The IS/MND is a complete environmental analysis consistent with CEQA statutes, guidelines, City's policies, and requirements for CEQA compliance. Attachment B provides additional detailed responses to the November 17, 2021 Adams Broadwell letter for Council consideration and inclusion in the administrative record of the subject project.

/s/
CHRISTOPHER BURTON, DIRECTOR
Planning, Building and Code Enforcement

For questions please contact Robert Manford, Deputy Director, at (408) 535-7900.

Attachments:
A. Adams Broadwell November 17, 2021 Comment Letter
B. Responses to Adams Broadwell November 17, 2021 Comment Letter

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November 17, 2021

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Re: Comments on Agenda Item 5(a) - Empire Lumber Mixed Use Project (File Nos: PDC15-067, ER20-102)

Dear Chair Bonilla, Honorable Members of the San Jose Planning Commission, Ms. Le, and Ms. Piozet:

We write on behalf of Silicon Valley Residents for Responsible Development ("Silicon Valley Residents") to provide comments on the Initial Study/Mitigated Negative Declaration and associated Mitigation Monitoring and Reporting Program (collectively, "IS/MND") prepared by the City of San Jose ("City") for the Empire Lumber Mixed-Use Project, which includes a proposed Planned Development Rezoning and other approvals for a mixed-use development with a minimum of 60,331 square feet of commercial and up to 408 residential units on a 2.77 gross-acre site (collectively, "Project").

The Project site is located at 1260 East Santa Clara Street in San Jose (Accessor's Parcel Numbers 467-33-001, -002, -003, -004, -006, -007, and -008).[1] The Project would demolish existing structures on the Project site, and construct a new

[1] City of San Jose, Mitigated Negative Declaration ("MND"), pg. 1.

mixed-use building. The mixed-use building would be seven stories with a maximum height of 85 feet. The building would contain up to approximately 60,330 square feet of commercial space and up to 408 residential units, as well as indoor parking garage space. The proposed building would have one level of below-grade parking and two levels of above-grade parking. The commercial space and residences would wrap the parking levels on the first and second floors.

The Project also includes a Planned Development Rezoning from a Commercial General Zoning District and Light Industrial Zoning District to a Commercial Pedestrian Planned Development Zoning District.

We reviewed the IS/MND and its technical appendices with assistance of air quality and health risk experts Matt Hagemann, P.G, C.Hg. and Paul E. Rosenfeld, PhD from Soil / Water / Air Protection Enterprise ("SWAPE").[2] We also received technical assistance from noise expert Derek Watry.[3]

As explained more fully below, an EIR is required because substantial evidence supports a fair argument that the Project may result in significant impacts. As a result of its shortcomings, the IS/MND lacks substantial evidence to support its conclusions and fails to properly mitigate the Project's significant impacts to air quality and public health, and from greenhouse gases and noise. Instead, substantial evidence supports a fair argument that the Project will result in significant and unmitigated impacts in these areas. The City cannot approve the Project until the errors in the IS/MND are remedied and substantial evidence supporting its conclusions is provided in an environmental impact report ("EIR"). We reserve the right to supplement these comments at later proceedings and hearings related to the Project.[4]

I. STATEMENT OF INTEREST

Silicon Valley Residents is an unincorporated association of individuals and labor organizations that may be adversely affected by the potential public and worker health and safety hazards, and the environmental and public service impacts of the Project. Residents includes San Jose residents Ricardo Diaz and

[2] Mr. Hagemann's and Dr. Rosenfeld's technical comments and curricula vitae are attached hereto as **Exhibit A**.
[3] Mr. Watry's technical comments and curricula vitae are attached hereto as **Exhibit B**.
[4] Gov. Code § 65009(b); PRC § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield ("Bakersfield")* (2004) 124 Cal. App. 4th 1184, 1199-1203; *see Galante Vineyards v. Monterey Water Dist*. (1997) 60 Cal. App. 4th 1109, 1121.

Edwin Lopez Silva, the International Brotherhood of Electrical Workers Local 332, Plumbers & Steamfitters Local 393, Sheet Metal Workers Local 104, Sprinkler Fitters Local 483, along with their members, their families, and other individuals who live and work in the City of San Jose.

Individual members of Silicon Valley Residents live, work, recreate, and raise their families in the City and in the surrounding communities. Accordingly, they would be directly affected by the Project's environmental and health and safety impacts. Individual members may also work on the Project itself. They will be first in line to be exposed to any health and safety hazards that exist on site.

In addition, Silicon Valley Residents has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for businesses and industries to expand in the region, and by making the area less desirable for new businesses and new residents. Indeed, continued environmental degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduce future employment opportunities.

II. THE CITY FAILED TO PROVIDE TIMELY ACCESS TO DOCUMENTS REFERENCED AND INCORPORATED BY REFERENCE IN THE IS/MND

Silicon Valley Residents did not have access to all of the documents referenced and incorporated by reference in the IS/MND. As a result, Silicon Valley Residents was unable to complete its review and analysis of the IS/MND prior to submitting these comments.

On November 3rd, we submitted a request for immediate access to public records relating to the Project.[5] This request was made pursuant to the California Public Records Act,[6] and Article I, section 3(b) of the California Constitution, which provides a constitutional right of access to information concerning the conduct of government. Section 6253(a) of the Public Records Act requires public records to be "open to inspection at all times during the office hours of the state or local agency" and provides that "every person has a right to inspect any public record." Gov. Code

[5] **Exhibit C**: Letter from Adams, Broadwell, Joseph & Cardozo ("ABJC") to the City of San Jose re: Request for Immediate Access to Public Records – Empire Lumber Mixed Use Project (File Nos: PDC15-067, ER20-102) (November 3, 2021).
[6] Government Code §§ 6250, *et seq*.

§ 6253(a). Therefore, the 10-day response period applicable to a "request for a copy of records" under Section 6253(c) did not apply to this request.

On November 12th, the City responded that it would need an extension for our request, and would be able to provide access to the records by November 29th.[7]

We therefore reserve our right to submit supplemental comments on the IS/MND and the Project at a future date.

III. AN EIR IS REQUIRED

CEQA requires that lead agencies analyze any project with potentially significant environmental impacts in an EIR.[8] "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."[9] 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."[10]

CEQA's purpose and goals must be met through the preparation of an EIR, except in certain limited circumstances.[11] CEQA contains a strong presumption in favor of requiring a lead agency to prepare an EIR. This presumption is reflected in the "fair argument" standard. Under that standard, a lead agency "shall" prepare an EIR whenever substantial evidence in the whole record before the agency supports a fair argument that a project may have a significant effect on the environment.[12]

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[7] **Exhibit D**: Email from Thai-Chau Le, City of San Jose, to Janet M. Laurain, ABJC, re: Request for Immediate Access to Public Records – Empire Lumber Mixed Use Project (November 12, 2021).
[8] *See* Pub. Resources Code, § 21000; CEQA Guidelines, § 15002.
[9] *Citizens of Goleta Valley v. Bd. of Supervisors* ("*Goletta Valley*") (1990) 52 Cal.3d 553, 564, internal citations omitted.
[10] *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.
[11] *See* Pub. Resources Code, § 21100
[12] Pub. Resources Code, §§ 21080, subd. (d), 21082.2, subd. (d); CEQA Guidelines, §§ 15002, subd. (k)(3), 15064, subds. (f)(1), (h)(1); *Laurel Heights Improvement Assn. v. Regents of the Univ. of Cal.* ("*Laurel Heights II*") (1993) 6 Cal.4th 1112, 1123; *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 75, 82; *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150-151; *Quail Botanical Gardens Found., Inc. v. City of Encinitas* ("*Quail Botanical*") (1994) 29 Cal.App.4th 1597, 1601- 1602.

In contrast, a mitigated negative declaration may be prepared only when, after preparing an initial study, a lead agency determines that a project may have a significant effect on the environment, but:

> (1) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed negative declaration and initial study are released for public review *would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur*, and (2) there is *no substantial evidence* in light of the whole record before the public agency that the project, as revised, *may* have a significant effect on the environment.[13]

Courts have held that if "no EIR has been prepared for a nonexempt project, but substantial evidence in the record supports a fair argument that the project may result in significant adverse impacts, the proper remedy is to order preparation of an EIR."[14] The fair argument standard creates a "low threshold" favoring environmental review through an EIR, rather than through issuance of a negative declaration.[15] An agency's decision not to require an EIR can be upheld only when there is no credible evidence to the contrary.[16]

"Substantial evidence" required to support a fair argument is defined as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached."[17] According to the CEQA Guidelines, when determining whether an EIR is required, the lead agency is required to apply the principles set forth in Section 15064, subdivision (f):

> [I]n marginal cases where it is not clear whether there is substantial evidence that a project may have a significant effect on the environment, the lead agency shall be guided by the following principle: If there is disagreement

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[13] Pub. Resources Code, § 21064.5 (emphasis added).
[14] *See, e.g., Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 319-320.
[15] *Citizens Action to Serve All Students v. Thornley* (1990) 222 Cal.App.3d 748, 754
[16] *Sierra Club v. County of Sonoma* (1992) 6 Cal.App.4th, 1307, 1318; *see also Friends of B Street v. City of Hayward* (1980) 106 Cal.App.3d 988, 1002 ("*Friends of B Street*") ("If there was substantial evidence that the proposed project might have a significant environmental impact, evidence to the contrary is not sufficient to support a decision to dispense with preparation of an EIR and adopt a negative declaration, because it could be 'fairly argued' that the project might have a significant environmental impact").
[17] CEQA Guidelines, § 15384, subd. (a).

> among expert opinion supported by facts over the significance of an effect on the environment, the Lead Agency shall treat the effect as significant and shall prepare an EIR. 13 Pub. Resources Code, § 21064.5 (emphasis added).

Furthermore, CEQA documents, including EIRs and MNDs, must mitigate significant impacts through measures that are "fully enforceable through permit conditions, agreements, or other legally binding instruments."[18] Deferring formulation of mitigation measures to post-approval studies is generally impermissible.[19] Mitigation measures adopted after Project approval deny the public the opportunity to comment on the Project as modified to mitigate impacts.[20] If identification of specific mitigation measures is impractical until a later stage in the Project, specific performance criteria must be articulated and further approvals must be made contingent upon meeting these performance criteria.[21] Courts have held that simply requiring a project applicant to obtain a future report and then comply with the report's recommendations is insufficient to meet the standard for properly deferred mitigation.[22]

With respect to this Project, the MND fails to satisfy the basic purposes of CEQA. The MND fails to adequately disclose, investigate, and analyze the Project's potentially significant impacts, and fails to provide substantial evidence to conclude that impacts will be mitigated to a less than significant level. Because the MND lacks basic information regarding the Project's potentially significant impacts, the MND's conclusion that the Project will have a less than significant impact on the environment is unsupported.[23] The City failed to gather the relevant data to support its finding of no significant impacts. Moreover, substantial evidence shows that the Project may result in potentially significant impacts. Therefore, a fair argument can be made that the Project may cause significant impacts requiring the preparation of an EIR.

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[18] CEQA Guidelines, § 15126.4, subd. (a)(2).
[19] *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 308-309; Pub. Resources Code, § 21061.
[20] *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1393; *Quail Botanical*, *supra*, 29 Cal.App.4th at pg. 1604, fn. 5.
[21] *Id.*
[22] *Id.*
[23] Pub. Resources Code, § 21064.5.
5425-004acp

IV. THERE IS A FAIR ARGUMENT THAT THE PROJECT MAY CAUSE SIGNIFICANT IMPACTS THAT REQUIRE THE CITY TO PREPARE AN EIR

Under CEQA, a lead agency must prepare an EIR whenever substantial evidence in the whole record before the agency supports a fair argument that a project may have a significant effect on the environment.[24] The fair argument standard creates a "low threshold" favoring environmental review through an EIR, rather than through issuance of a negative declaration.[25] An agency's decision not to require an EIR can be upheld only when there is no credible evidence to the contrary.[26] Substantial evidence can be provided by technical experts or members of the public.[27] "If a lead agency is presented with a fair argument that a project may have a significant effect on the environment, the lead agency shall prepare an EIR even though it may also be presented with other substantial evidence that the project will not have a significant effect."[28]

As discussed below, there is a fair argument supported by substantial evidence that the Project may result in significant impacts relating to public health, air quality, greenhouse gases, and noise. The City is required to prepare an EIR to evaluate the Project's impacts and propose mitigation measures to reduce those impacts to a less-than-significant level.

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[24] Pub. Resources Code, § 21082.2; CEQA Guidelines, § 15064, subds. (f), (h); *Laurel Heights II, supra*, 6 Cal. 4th at pg. 1123; *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal. 3d 68, 75, 82; *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150-151; *Quail Botanical, supra*, 29 Cal.App.4th at pp. 1601-1602.

[25] *Citizens Action to Serve All Students v. Thornley* (1990) 222 Cal.App.3d 748, 754.

[26] *Sierra Club v. County of Sonoma* (1992) 6 Cal.App.4th, 1307, 1318; *see also Friends of B Street, supra*, 106 Cal.App.3d at pg. 1002 ("If there was substantial evidence that the proposed project might have a significant environmental impact, evidence to the contrary is not sufficient to support a decision to dispense with preparation of an [environmental impact report] and adopt a negative declaration, because it could be 'fairly argued' that the project might have a significant environmental impact").

[27] *See, e.g., Citizens for Responsible and Open Government v. City of Grand Terrace* (2008) 160 Cal.App.4th 1323, 1340 (substantial evidence regarding noise impacts included public comments at hearings that selected air conditioners are very noisy); *see also Architectural Heritage Assn. v. County of Monterey*, 122 Cal.App.4th 1095, 1117-1118 (substantial evidence regarding impacts to historic resource included fact-based testimony of qualified speakers at the public hearing); *Gabric v. City of Rancho Palos Verdes* (1977) 73 Cal.App.3d 183, 199.

[28] CEQA Guidelines, § 15062, subd. (f).

A. The IS/MND Fails to Identify, Analyze, and Mitigate the Project's Potentially Significant Health Impacts

1. The City Failed to Disclose the Project's Operational Health Risks

The City assumes the Project's health impacts from its operational emissions would be less than significant. However, the IS/MND fails to disclose operational toxic air contaminant ("TAC") emissions or evaluate the health risk impacts associated with Project operation. This failure to conduct an operational health risk analysis ("HRA") violates CEQA.

An agency must support its findings of a project's potential environmental impacts with concrete evidence, with "sufficient information to foster informed public participation and to enable the decision makers to consider the environmental factors necessary to make a reasoned decision."[29] A project's health risks "must be 'clearly identified' and the discussion must include 'relevant specifics' about the environmental changes attributable to the Project and their associated health outcomes."[30]

Courts have held that an environmental review document must disclose a project's potential health risks to a degree of specificity that would allow the public to make the correlation between the project's impacts and adverse effects to human health.[31] In *Bakersfield Citizens for Local Control v. City of Bakersfield* ("*Bakersfield*"), the court found that the EIRs' description of health risks were insufficient and that after reading them, "the public would have no idea of the health consequences that result when more pollutants are added to a nonattainment basin."[32] And in *Sierra Club v. County of Fresno* ("*Sierra Club*"), the Supreme Court of California disapproved of an EIR that failed to compare the health effects from exposure to ozone emissions against applicable thresholds.[33] The Court held that it is insufficient to merely state that "exposure to ambient levels of ozone ranging from 0.10 to 0.40 [parts per million of ozone] has been found to

[29] *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 516.
[30] *Id*. at 518.
[31] *Id*. at 518–520; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184.
[32] *Bakersfield* at 1220.
[33] (2018) 6 Cal.5th 502, 517

significantly alter lung functions" – the EIR must also compare the Project's impacts against this threshold.[34]

Here, the Project is anticipated to generate 3,169 average daily vehicle trips.[35] These trips will generate exhaust emissions and expose nearby sensitive receptors to diesel particulate matter ("DPM"), which is a TAC. However, the IS/MND completely omits disclosure of the Project's operational TAC emissions and associated health impacts. This omission is in clear violation of the requirement discussed in *Bakersfield* to disclose a project's potential health risks to a degree of specificity that would allow the public to make the correlation between the project's impacts and adverse effects to human health.[36]

The City's failure to disclose the Project's operational health impacts also violates *Sierra Club*'s requirement to compare the health effects from exposure to ozone emissions against applicable thresholds.[37] The City acknowledges that the applicable threshold is set by the Bay Area Air Quality Management District ("BAAQMD"):[38]

Table 2-1
Air Quality CEQA Thresholds of Significance*

Pollutant	Construction-Related	Operational-Related
Project-Level		
Risk and Hazards for new sources and receptors (Individual Project)*	Same as Operational Thresholds**	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient $PM_{2.5}$ increase: > 0.3 $\mu g/m^3$ annual average Zone of Influence: 1,000-foot radius from property line of source or receptor

[34] *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 519.
[35] Initial Study ("IS"), pg. 164.
[36] *Bakersfield* at 1220.
[37] (2018) 6 Cal.5th 502, 517.
[38] BAAQMD, California Environmental Quality Act Air Quality Guidelines (Revised May 2017), pg. 2-2, Table 2-1, available at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en.

As shown in the above table, BAAQMD requires projects within 1,000 feet of an existing sensitive receptor or source to evaluate the cancer risk associated with Project operation. However, the City failed to conduct this analysis. By claiming a less than significant impact without conducting a quantified operational HRA for nearby, existing sensitive receptors, the IS/MND fails to compare the excess health risk impact to the applicable BAAQMD threshold of 10 in one million. Because the City does not compare the Project's health effects against applicable thresholds, the City violates the requirements of CEQA.

The failure to prepare an operational HRA also conflicts with scientific authority. California Environmental Protection Agency's Office of Environmental Health Hazard Assessment ("OEHHA")[39] guidance recommends that exposure from projects lasting more than 6 months be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident ("MEIR").[40] The Project's operations will last more than 6 months. Therefore, an analysis of health risk impacts posed to nearby sensitive receptors from Project operation must be included in an EIR for the Project.

In light of the City's failure to disclose the Project's potential health risks, the City must prepare an EIR which includes an operational HRA.

2. A Screening-Level Analysis Shows the Project has Potentially Significant Health Impacts

Because the City did not conduct an operational HRA for the Project, SWAPE prepared a screening level HRA using AERSCREEN, a screening level air quality dispersion model.[41] AERSCREEN is included in OEHHA guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs").[42] A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality

[39] OEHHA is the organization responsible for providing recommendations and guidance on how to conduct health risk assessments in California. See OEHHA organization description, available at http://oehha.ca.gov/about/program.html.
[40] OEHHA, Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments (February
2015), pp. 8-6, 8-15.
[41] SWAPE Comments, pg. 11.
[42] *Id.*
5425-004acp

hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.[43]

SWAPE projects that over the course of Project construction and operation, the excess cancer risks posed to infants, children, and adults are approximately 7.21, 80.3, and 12.4 in one million.[44] The excess cancer risk over the course of a residential lifetime (30 years), utilizing age sensitivity factors, is approximately 98.9 in one million. The child, adult, and lifetime cancer risks exceed the BAAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the IS/MND."[45]

The Maximally Exposed Individual at an Existing Residential Receptor

Activity	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	ASF	Cancer Risk with ASFs*
Construction	0.25	0.2427	361	10	2.8E-06
3rd Trimester Duration	***0.25***			***3rd Trimester Exposure***	***2.8E-06***
Construction	0.97	0.2427	1090	10	3.3E-05
Operation	1.03	0.3027	1090	10	4.4E-05
Infant Exposure Duration	***2.00***			***Infant Exposure***	***7.6E-05***
Operation	14.00	0.3027	572	3	7.9E-05
Child Exposure Duration	***14.00***			***Child Exposure***	***7.9E-05***
Operation	14.00	0.3027	261	1	1.2E-05
Adult Exposure Duration	***14.00***			***Adult Exposure***	***1.2E-05***
Lifetime Exposure Duration	**30.00**			**Lifetime Exposure**	**1.70E-04**

Under the fair argument legal standard, an EIR is required whenever "there is substantial evidence that any aspect of the project, either individually or cumulatively, may cause a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial."[46] Since SWAPE's

[43] *Id.* at 12.
[44] SWAPE Comments, pg. 14, *see* table below.
[45] *Id.*
[46] 14 C.C.R. § 15063(b)(1).
5425-004acp

HRA identifies a significant public health impact not disclosed in the IS/MND, an EIR must be prepared.

B. The IS/MND Fails to Disclose the Project's Potentially Significant Air Quality and GHG Impacts

Under CEQA, lead agencies must consider a project's air quality and GHG emissions. The IS/MND's air quality and GHG analyses rely on emissions calculated with the California Emission Estimator Model ("CalEEMod") 2016.3.2. The model uses site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type to calculate a project's construction and operational emissions.

After reviewing the IS/MND, SWAPE concluded that "several of the values inputted into the model were not consistent with information disclosed in the IS/MND."[47] As a result, the Project's construction and operational emissions may be underestimated. An EIR must be prepared to include updated air quality and GHG analyses that accurately evaluate the Project's impacts.

First, the City's analysis underestimates parking land use size. According to the IS/MND, "[t]he parking garage would have approximately 554 parking spaces."[48] However, the air quality modeling assumes 534 parking spaces. SWAPE explains that this underestimation is relevant because the square footage of parking land uses is used for certain calculations such as determining the area to be painted and stripped (which implicates VOC emissions from architectural coatings), and volume to be ventilated (which implicates energy impacts).[49]

Second, the City's analysis fails to model all proposed land uses at the Project site. According to the IS/MND, "[a] pool deck, podium garden, and club/fitness area (approximately 2,442 square feet) are proposed on top of the parking structure on the third floor."[50] However, the City's air modeling fails to include the proposed pool and fitness area as a land use type.[51] This inconsistency is significant, as each land use type in CalEEMod is assigned a distinctive set of energy usage emission factors,

[47] SWAPE Comments, pg. 2.
[48] IS, pg. 15.
[49] SWAPE Comments, pg. 2.
[50] IS, pg. 15.
[51] SWAPE Comments, pg. 3.

and includes a specific trip rate that CalEEMod uses to calculate mobile-source emissions.[52]

Third, the City's analysis relies on inconsistent off-road construction equipment usage hours. The City's Air Quality Report states that the equipment required for construction would be operated for 8 hours per day,[53] yet the City's CalEEMod output files assume far lower usage hours.[54] By relying on these inconsistent equipment usage hours, the model may underestimate the Project's construction-related emissions.[55]

Fourth, the City underestimates the Project's operational trip rates. According to the City's Transportation Analysis, the proposed Project is expected to generate approximately 3,169 daily operational vehicle trips.[56] However, the City's CalEEMod analysis assumes 3,229.53 weekday trips, 3,081.45 Saturday trips, and 2,138.56 Sunday trips. The average of these trips (3,052.52) is lower than the number in the Transportation Analysis (3,169). By including underestimated operational vehicle trip rates, the City's CalEEMod analysis underestimates the Project's mobile-source operational emissions.

Fifth, SWAPE determined that the "pass-by" trips expected to occur throughout the Project's operation were double-counted by the IS/MND's analysis. The Project's retail use generates three types of trips: primary, diverted, and pass-by.[57] Pass-by trips are much shorter than the other types of trips, and thus have lower emissions. SWAPE's review of the City's CalEEMod model shows that the City divides the Project's trips into the three types, but then takes an additional "Pass-by trip reduction."[58] By taking pass-by reductions that were already accounted for, the City underestimates the trip lengths associated with the Project's daily vehicle trips. As a result, the City's models underestimate the Project's mobile-source operational emissions.

Sixth, the City's analysis assumes that the Project's wastewater would be treated 100% aerobically.[59] This assumption is unsubstantiated. The IS/MND

[52] SWAPE Comments, pg. 3.
[53] IS, Appendix A, pg. 14.
[54] IS, Appendix A, pp. 19, 20
[55] SWAPE Comments, pg. 5.
[56] IS, Appendix F, pg. 31, Table 4.
[57] SCAQMD, CalEEMod User's Guide, Appendix A: Calculation Details for CalEEMod, pg. 20.
[58] SWAPE Comments, pg. 7.
[59] IS, Appendix A, ppg. 4.

indicates that "[t]he wastewater generated on the project site following project occupancy would be collected and conveyed to the San José-Santa Clara Regional Wastewater Facility for treatment"[60] SWAPE's review of the San José-Santa Clara Regional Wastewater Facilities treatment process reveals the use of anaerobic bacteria in the digesters phase of treatment.[61] As such, the assumption that the Project's wastewater would be treated 100% aerobically is unsupported. This assumption may result in the Project's GHG impacts being underestimated, as each type of wastewater treatment system is associated with different GHG emission factors.[62]

SWAPE concludes that the City's air models cannot be relied on until these errors are remedied. The City thus lacks substantial evidence to conclude that air quality and GHG impacts will be less than significant. Moreover, substantial evidence supports a fair argument that the air quality and GHG impacts may be significant when the errors in the analysis are corrected. Therefore, the City must prepare an EIR.

C. The City's Greenhouse Gas Significance Thresholds are Not Supported by Substantial Evidence

Under the CEQA Guidelines, a lead agency must analyze a project's impacts on GHG emissions.[63] The Guidelines provide that "[i]n determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable."[64]

Here, the EIR presents two thresholds for determining whether the Project will result in significant impacts from GHGs: an efficiency threshold of 2.6 MT CO2e/year/service population and a bright-line threshold of 660 MT CO2e/year. These thresholds are based on BAAQMD's May 2017 CEQA Air Quality Guidelines, which recommend a GHG threshold of 1,100 metric tons or 4.6 MT

[60] IS, pg. 112.
[61] SWAPE Comments, pg. 8.
[62] *Id.*
[63] 14 C.C.R §15064.4
[64] 14 CCR § 15064.4 (b)(3).

CO2e/year/service population.[65] The BAAQMD Guidelines are state-level metrics developed to meet the 2020 GHG targets set by AB 32 (reducing GHG emissions to 1990 levels by 2020).[66] These metrics are based on statewide data.[67] For example, the 4.6 MT CO2e/year/service population metric is calculated by dividing the "Statewide Land Use Sectors Greenhouse Gas Emissions Target" by the "statewide service population."[68]

Since development of the project will occur beyond 2020, the 2020 GHG targets are inapplicable. The currently applicable targets are the statewide reduction of GHG emissions to 40% below 1990 levels by 2030.[69] The City updated its efficiency threshold by relying on metrics from an Association of Environmental Professionals whitepaper, which have not been adopted by BAAQMD.[70] The whitepaper developed an efficiency threshold of 2.6 MT CO2e/year/service population by reducing the existing emissions target by 40% and dividing a statewide service population forecasted for 2030. The City updated its bright-line threshold by setting it 40% below the existing 1,100 MT threshold.[71] These thresholds are inadequate to support a conclusion based on substantial evidence that no significant impact will occur from GHGs as a result of the Project.

In *Center for Biological Diversity v. Department of Fish & Wildlife,* the Supreme Court concluded an EIR's use of statewide emission reduction goals was a "permissible criterion of significance."[72] At the same time, the court concluded the report did not provide substantial evidence to support the conclusion the cumulative GHG emissions would be less than significant based on the project level reduction of 31 percent, even though the amount was consistent with Assembly Bill 32's statewide goal of 29 percent.[73] The court acknowledged the required percentage reduction for an individual project may not be the same as for the entire state population and economy because "a greater degree of reduction may be needed from

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[65] BAAQMD, California Environmental Quality Act Air Quality Guidelines (Revised May 2017), pg. 2-2.
[66] Executive Order No. S-03-05 (June 1, 2005); California Assembly Bill No. 32 (2005-2006 Reg. Sess.).
[67] BAAQMD Guidelines, D-22.
[68] *Id.*
[69] Executive Order No. B-30-15 (Apr. 29, 2015); Senate Bill No. 32 (September 8, 2016).
[70] Association of Environmental Professionals, Final White Paper Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California (October 18, 2016), available at https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf.
[71] Appendix A, pg. 9.
[72] (2015) 62 Cal.4th 204, 213.
[73] *Id.* at 225.
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new land use projects than from the economy as a whole."[74] In other words, using a statewide criterion requires substantial evidence and reasoned explanation to close the analytical gap left by the assumption that the "level of effort required in one [statewide] context ... will suffice in the other, a specific land use development."[75]

This principle was applied in *Golden Door Properties LLC v. County of San Diego* ("*Golden Door*").[76] In *Golden Door*, the Court held that a 4.9 MT C02e per service population per year efficiency threshold in the County of San Diego was improper because:

> [T]he service population number relies on statewide service population and GHG inventory data; it does not address San Diego County specifically, and it does not explain why using statewide data is appropriate for setting the metric for San Diego County. Additionally, the Efficiency Metric 'allows the threshold to be applied evenly to most project types,' but it does not account for variations between different types of development; nor does it explain why the per person limit would be appropriately evenly applied despite project differences. Without substantial evidence explaining why statewide GHG reduction levels would be properly used in this context, the County failed to comply with CEQA Guidelines.[77]

The City's GHG thresholds similarly lack substantial evidence. As in *Golden Door*, the City's thresholds are based on statewide data. These thresholds do not account for variations between different types of development. They do not explain why the per person limit would be appropriately evenly applied despite project differences. The City fails to provide any kind of explanation of how this data is appropriate for setting the significance thresholds for a mixed-use development in San Jose. Therefore, the City fails to comply with the CEQA Guidelines.

[74] *Id.* at 226.
[75] *Id.* at 227.
[76] (2018) 27 Cal. App. 5th 892, 904
[77] 27 Cal.App.5th 905.

D. The IS/MND Fails to Adequately Analyze and Mitigate the Project's Significant Noise Impacts

1. The City's Reliance on a Maximum Noise Threshold is Unsupported

The City recognizes that mechanical equipment associated with the Project could generate noise in excess of the City's noise policy goal of 55 dBA DNL.[78] However, the City states that this is a less than significant impact due to compliance with the 55 dBA DNL limit.[79]

The courts have held that reliance on a maximum noise level as the sole threshold of significance for noise impacts violates CEQA because it fails to consider whether the magnitude of changes in noise levels is significant.[80] In *Keep our Mountains Quiet v. County of Santa Clara*,[81] neighbors of a wedding venue sued over the County of Santa Clara's failure to prepare an EIR for a proposed project to allow use permits for wedding and other party events at a residential property abutting an open space preserve. Neighbors and their noise expert contended that previous events at the facility had caused significant noise impacts that reverberated in neighbors' homes and disrupted the use and enjoyment of their property.[82] Similar to the IS/MND in this case, the County's EIR relied on the noise standards set forth in its noise ordinance as its thresholds for significant noise exposure from the project, deeming any increase to be insignificant so long as the absolute noise level did not exceed those standards.[83] The Court examined a long line of CEQA cases which have uniformly held that conformity with land use regulations is not conclusive of whether or not a project has significant noise impacts[84] in holding that the County's reliance on the project's compliance with

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[78] IS, Appendix, pg. 20.
[79] IS, pp. 131-132.
[80] *King & Gardiner Farms, LLC,* 45 Cal.App.5th at 865.
[81] *Keep our Mountains Quiet v. County of Santa Clara* (2015) 236 Cal.App.4th 714.
[82] *Id.* at 724.
[83] *Id.* at 732.
[84] *Id., citing Citizens for Responsible & Open Government v. City of Grand Terrace* (2008) 160 Cal.App.4th 1323, 1338; *Oro Fino Gold Mining Corp. v. County of El Dorado* (1990) 225 Cal.App.3d 872, 881–882; *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1416 (project's effects can be significant even if "they are not greater than those deemed acceptable in a general plan"); *Environmental Planning & Information Council v. County of El Dorado* (1982) 131 Cal.App.3d 350, 354, ("CEQA nowhere calls for evaluation of the impacts of a proposed project on an existing general plan").

noise regulations did not constitute substantial evidence supporting the County's finding of no significant impacts.[85]

Here, the City also relies on a maximum noise level as the threshold of significance for noise impacts. As in *Keep our Mountains Quiet*, the City's reliance on this threshold fails to assess the severity of noise impacts on surrounding receptors as a result of the increased noise from the Project in conjunction with all relevant sources of noise that impact those receptors. The IS/MND's conclusion that noise impacts are less than significant is based on an illusory threshold and is therefore unsupported.

2. The City Fails to Consider and Disclose the Project's Total Operational Noise Impacts

The City relies on compliance with General Plan Policies EC-1.2 and EC-1.3 to conclude the Project will not have significant noise impacts:

> EC-1.2 Minimize the noise impacts of new development on land uses sensitive to increased noise levels (Categories 1, 2, 3 and 6) by limiting noise generation and by requiring use of noise attenuation measures such as acoustical enclosures and sound barriers, where feasible. The City considers significant noise impacts to occur if a project would:
> - Cause the DNL at noise sensitive receptors to increase by five dBA DNL or more where the noise levels would remain "Normally Acceptable;" or
> - Cause the DNL at noise sensitive receptors to increase by three dBA DNL or more where noise levels would equal or exceed the "Normally Acceptable" level.
>
> EC-1.3 Mitigate noise generation of new nonresidential land uses to 55 dBA DNL at the property line when located adjacent to existing or planned noise-sensitive residential and public/quasi-public land uses.[86]

These policies require the City to analyze the Project's total operational noise, and determine whether this noise exceeds thresholds. But the IS/MND incorrectly assesses each of the Project's noise sources separately. The IS/MND considers

[85] *Id*. at 732-734; see also *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, 893, as modified on denial of rehearing (Mar. 20, 2020).
[86] IS, pg. 127.

Project-generated traffic noise impacts separately from operational noise impacts such as air conditioning units and large exhaust fans. To comply with CEQA and the General Plan, the City first must quantify the Project's operational noise impacts, then consider them in conjunction with the Project's traffic noise impacts. Due to the City's failure of analysis, it is unknown whether the Project's operational noise impacts exceed significance thresholds. Since the City admits that mechanical equipment alone could generate noise in excess of the City's noise policy goal of 55 dBA, the total operational noise impacts may be potentially significant, requiring the City to analyze these impacts in an EIR.

3. The IS/MND Does Not Plainly Compare the Project's Construction Noise Impacts Against Applicable Thresholds.

CEQA is designed to inform decision-makers and the public about the potential, significant environmental effects of a project.[87] "CEQA's fundamental goal [is] fostering informed decision-making."[88]

However, the IS/MND does not clearly compare metrics such as existing noise levels at the Project site, the Project's construction noise impacts, the applicable threshold of significance, and the Project's decibel increase over the thresholds. Plainly communicating the relationship between these metrics is critical to understanding the extent of the Project's noise impacts. But this information is dispersed throughout the IS/MND and the Noise Study, hindering analysis. Dr. Watry compiled this information into the table below, which indicates the extent unmitigated construction noise is expected to exceed existing ambient noise levels:[89]

[87] 14 Cal. Code Regs. ("CEQA Guidelines") § 15002, subd. (a)(1).
[88] *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 402.
[89] Watry Comments, pg. 3.

Receptor	Relevant Baseline Location	Existing Daytime Level(s) (dBA, Leq)	Threshold of Significance(1) (dBA, Leq)	Range of Construction Noise Levels (dBA, Leq)	Decibels above Threshold (dBA, Leq)
Residences to South	ST-1	53	58	73 – 83	15 – 25
Residences to West	ST-2	57	62	73 – 83	11 – 21
Residences to East	ST-3	55	60	61 – 70(2)	1 – 10
Commercial to East	LT-1	59 – 61	64 – 66	71 – 78(3)	5 – 14
Commercial to North	LT-2	70 – 76	75 – 81	71 – 80(3)	0 – 5

Notes:
(1) In conjunction with construction noise level at residence exceeding 60 dBA Leq and at commercial exceeding 70 dBA Leq.
(2) Only construction noise levels above 60 dBA Leq considered.
(3) Only construction noise levels above 70 dBA Leq considered.

As can be seen in the table above, unmitigated construction noise is expected to exceed the thresholds of significance by up to 25 dBA Leq at residences and 14 dBA Leq at commercial establishments in the project vicinity. The extent of this increase over thresholds was not forthrightly disclosed by the City. The City's disclosure was that:

> Construction noise would also exceed ambient noise levels at residences to the east, west, and south by at least 5 dBA Leq for the majority of construction. Construction noise would exceed ambient noise levels at commercial uses to the south, southeast, and southwest by at least 10 dBA Leq.

By stating that the exceedance is at least 5 dBA Leq at residences and at least 10 dBA Leq at commercial uses, when the actual exceedance is up to 25 dBA Leq and up to 14 dBA Leq, respectively, the City underplays the severity of the Project's potentially significant construction noise impacts. The City should revise its disclosure of the Project's potentially significant noise impacts in an EIR.

4. The City's Noise Mitigation is Not Supported by Substantial Evidence

The IS/MND establishes that unmitigated construction noise levels will exceed the adopted thresholds of significance by up to 25 dBA. However, the City does not support with any quantitative analysis that the City of San José's Standard Permit Conditions and/or the proposed measures in MM-NOI-1 will reduce those noise levels such that they are lower than the thresholds of significance. Dr. Watry reviewed the Standard Permit Conditions and MM-NOI-1, and determined that they will not provide the requisite noise reduction necessary to render the noise impact less-than-significant.[90]

A reviewing court will not defer to a lead agency's determination that mitigation measures will work when their efficacy is not apparent and there is no evidence in the record showing they will be effective in remedying the identified environmental problem.[91] When the effectiveness of a mitigation measure is not apparent, the environmental document should include facts and analysis supporting its characterization of the expected result.[92] Mitigation measures that are unrealistic and unlikely to be implemented create an illusory analysis and should not be included in an environmental document.[93]

Here, the City fails to conduct any quantitative analysis showing that the Standard Permit Conditions and mitigation measures will mitigate the Project's construction noise impacts to a less-than-significant level. This failure is unjustified in light of the severity of the Project's exceedance over noise thresholds. If the Project barely exceeded thresholds, it might be reasonable to expect that adopting a long list of mitigation measures would address the problem. But here, the Project will exceed the adopted thresholds of significance by up to 25 dBA. Thus, an EIR is required to develop mitigation measures that can be shown to mitigate the Project's significant impacts.

Further, many of the City's mitigation measures in the Standard Permit Conditions will be ineffective because they are either already accounted for in the Noise Study's characterization of the Project's impacts, or because they are

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[90] Watry Comments, pg. 4.
[91] *King v. Gardiner Farms, LLC v. County of Kern* (2020) 45 CA5th 814, 866 (EIR discussion of mitigation measure that has uncertain effect must identify and explain the uncertainty in measure's effectiveness and the reasons for that uncertainty).
[92] *Sierra Club v. County of Fresno* (2018) 6 CA5th 502, 522.
[93] *Cleveland Nat'l Forest Found. v. San Diego Ass'n of Gov'ts* (2017) 17 CA5th 413, 433.

inapplicable to this Project. Dr. Watry explains that prohibiting pile-driving will not reduce impacts because pile-driving is not required.[94] Use of mufflers as a mitigation measure is ineffective because equipment operating today in urban settings is commonly muffled from the factory.[95] Limiting construction hours to between 7:00 a.m. and 7:00 p.m., Monday through Friday, will not reduce impacts because the construction noise analysis already accounts for this restriction.[96] Limiting idling will not likely reduce noise impacts because the City's noise analysis already accounts for typical idling times.[97] Overall, there is no evidence in the record that these mitigation measures will be effective at reducing the potentially significant noise impacts.

Dr. Watry also explains that many of the Standard Permit Conditions and mitigation measures are ineffective because they are simply too minute to mitigate a 25 dBA exceedance. Noise reductions from limiting noise from workers' radios, using manual hammers rather than electric hammers, substituting graders for bulldozers,[98] and using electric tools rather than pneumatic tools are likely insignificant.

The City lacks evidence to conclude that measures like strategically locating cranes and generators will resolve noise impacts, as it is not possible to know where this equipment was assumed to be placed for the City's noise analysis.[99] In any case, noise reductions from these sources would have no effect on the two loudest phases of the Project's construction: demolition and grading/excavation.

Other mitigation measures the City relies on are of unclear feasibility. The City states that impacts will be reduced to a less-than-significant level by constructing sound barriers. The IS/MND fails to explain how building such a sound barrier will be feasible. Dr. Watry explains it would be impractical to construct a barrier that would provide up to 25 dB of noise attenuation at the nearby residences.[100] His comments include calculations showing that it is "somewhat difficult" to build a 10 dB barrier, "very difficult" to build a 15 dB barrier, and "essentially impossible" to build a 20 dB barrier.[101] Dr. Watry's analysis constitutes

[94] Watry Comments, pg. 4.
[95] *Id.*
[96] *Id.*
[97] *Id.*
[98] *Id.* at 6 (a grader and a dozer emit the same noise level (85 dBA)).
[99] *Id.*
[100] *Id.* at 4.
[101] *Id.* at 7-8.

substantial evidence showing that the Project's noise impacts are unmitigated. An EIR must be prepared to analyze and adequately mitigate these significant impacts.

5. The IS/MND Fails to Analyze Cumulative Noise Impacts

The CEQA Guidelines require an environmental document to describe and analyze cumulative impacts if the impact is significant and the project's incremental effect is cumulatively considerable.[102] No analysis is required if the impact is insignificant or the project's incremental contribution is not cumulatively considerable.[103] If a lead agency finds that a project's incremental effect or the cumulative impact is not cumulatively considerable, the environmental document must briefly describe the basis for its findings.[104]

CEQA requires that an adequate discussion of significant cumulative impacts must include either (A) a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) a summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect.[105]

Here, the City fails to conduct a cumulative impacts analysis in one of the two authorized ways: the City fails to provide a list of related projects that will have construction or operational noise impacts, and the City fails to otherwise describe or evaluate conditions contributing to a cumulative effect.[106] This lack of a cumulative impacts analysis is not justified by the City, in violation of CEQA.[107] The City must analyze whether there are other proposed developments in the Project's vicinity which would build upon the Project's noise impacts. If so, the City must analyze these impacts in an EIR.

V. LAND USE

The Project is located directly adjacent to the future Five Wounds Trail. However, the Project currently does not integrate the trail into its design, which conflicts with the following policies in the Envision San José 2040 General Plan and the Roosevelt Park Urban Village Plan.

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[102] 14 Cal. Code Regs. § 15130.
[103] *City of Long Beach v. Los Angeles Unified Sch. Dist.* (2009) 176 CA4th 889, 909.
[104] 14 Cal. Code Regs. § 15130(a).
[105] 14 CCR § 15130(b).
[106] *Id.*
[107] 14 Cal. Code Regs. § 15130(a).

Village Plan Land Use Policy 6 provides: "New residential development adjacent to the Five Wounds Trail corridor should provide primary unit entries, stoops, and porches facing the trail." There is currently no indication that the Project will have primary unit entries, stoops, and porches facing the trail.

Village Plan Land Use Policy 7 provides: "New residential development adjacent to the Five Wounds Trail corridor should provide ground floor units that face the trail." The Project design currently does not plan for ground-floor units facing the trail.

General Plan Policy CD-3.3 provides: "Within new development, create a pedestrian-friendly environment by connecting the internal components with safe, convenient, accessible, and pleasant pedestrian facilities and by requiring pedestrian connections between building entrances, other site features, and adjacent public streets." There is currently no indication that the Project will connect its own pedestrian facilities with the trail.

General Plan Policy PR-1.9 provides: "As Village and Corridor areas redevelop, incorporate urban open space and parkland recreation areas through a combination of high-quality, publicly accessible outdoor spaces provided as a part of new development projects; privately or in limited instances publicly, owned and maintained pocket parks; neighborhood parks where possible; as well as through access to trails and other park and recreation amenities." There is currently no indication that the Project will connect its own facilities with the trail.

The City must demonstrate that these policies are complied with for the Project to be approved.

VI. CONCLUSION

There is substantial evidence supporting a fair argument that the Project will have potentially significant, unmitigated impacts on public health, air quality, greenhouse gases, and noise. Due to the IS/MND's deficiencies, the City cannot conclude that the Project's impacts have been mitigated to a less than significant level.

The CEQA Guidelines require that an EIR be prepared if there is substantial evidence supporting a fair argument that any aspect of a project, either individually or cumulatively, may cause a significant effect on the environment, regardless of

whether the overall effect of the project is adverse or beneficial.[108] As discussed in detail above, there is more than a fair argument based on substantial evidence that the Project would result in significant adverse impacts not identified in the IS/MND. Moreover, there is substantial evidence the proposed mitigation measures will not reduce potentially significant impacts to a level of insignificance.

We urge the City to fulfill its responsibilities under CEQA by withdrawing the IS/MND and preparing an EIR to address the issues raised in this comment letter, the attached comments from SWAPE and Mr. Watry, and other public comments in the record. This is the only way the City and the public can ensure the Project's significant environmental impacts are mitigated to less than significant levels.

Sincerely,

Aidan P. Marshall

APM:acp

Attachments

[108] CEQA Guidelines § 15063(b)(1).

EXHIBIT A

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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November 15, 2021

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Subject: Comments on the Empire Lumber Mixed-Use Project

Dear Mr. Marshall,

We have reviewed the December 2020 Initial Study and Mitigated Negative Declaration ("IS/MND") for the Empire Lumber Mixed-Use Project ("Project") located in the City of San Jose ("City"). The Project proposes to demolish all existing structures and associated parking as well as construct 60,330-SF of commercial space, up to 408 residential units, 2,442-SF of pool and fitness area, and 554 parking spaces on the 2.77-acre site.

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

Air Quality

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The IS/MND's air quality analysis relies on emissions calculated with CalEEMod.2016.3.2 (p. 40).[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

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

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 April 2020 Air Quality Report ("AQ Report") as Appendix A to the IS/MND, we found that several model inputs were not consistent with information disclosed in the IS/MND. As a result, the Project's construction and operational emissions are underestimated. As a result, 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.

Underestimated Parking Land Use Size

According to the IS/MND:

> "The parking garage would have approximately 554 parking spaces" (IS, pp. 15).

As such, the models should have included 554 parking spaces. However, review of the CalEEMod output files demonstrates that the "1260 E Santa Clara Street Update, San Jose" and "1260 E Santa Clara Street Update, San Jose - 2030" models include only 534 parking spaces (see excerpt below) (Appendix A, pp. 16, 65).

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	534.00	Space	0.00	213,600.00	0
Apartments Mid Rise	408.00	Dwelling Unit	2.77	408,000.00	1167
Strip Mall	60.33	1000sqft	0.00	60,331.00	0

As you can see in the excerpt above, the proposed parking is underestimated by 20 spaces. This underestimation presents an issue, as the square footage of parking land uses is used for certain calculations such as determining the area to be painted and stripped (i.e., VOC emissions from architectural coatings) and volume to be ventilated (i.e., energy impacts).[2] Thus, by underestimating the number of proposed parking spaces, the models underestimate the Project's construction-related and operational emissions and should not be relied upon to determine Project significance.

Failure to Model All Proposed Land Uses

According to the IS/MND:

> "A pool deck, podium garden, and club/fitness area (approximately 2,442 square feet) are proposed on top of the parking structure on the third floor" (IS, pp. 15).

[2] "CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2.

As demonstrated above, the model should have included 2,442-SF of "Health Club" land use space. However, review of the CalEEMod output files demonstrates that the "1260 E Santa Clara Street Update, San Jose" and "1260 E Santa Clara Street Update, San Jose - 2030" models fail to include the proposed pool and fitness area (see excerpt below) (Appendix A, pp. 16, 65).

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	534.00	Space	0.00	213,600.00	0
Apartments Mid Rise	408.00	Dwelling Unit	2.77	408,000.00	1167
Strip Mall	60.33	1000sqft	0.00	60,331.00	0

As you can see in the excerpt above, the models fail to distinguish between the warehouse and office land uses. This inconsistency presents an issue, as CalEEMod includes 63 different land use types that are each assigned a distinctive set of energy usage emission factors.[3] Furthermore, each land use type includes a specific trip rate that CalEEMod uses to calculate mobile-source emissions.[4] Thus, by failing to include all proposed land use types, the models may underestimate the Project's construction-related and operational emissions and should not be relied upon to determine Project significance.

Unsubstantiated Off-Road Construction Equipment Usage Hours

Review of the CalEEMod output files demonstrates that the "1260 E Santa Clara Street Update, San Jose" model includes several reductions to the default off-road construction equipment usage hours (see excerpt below) (Appendix A, pp. 19, 20).

[3] "CalEEMod User's Guide, Appendix D." CAPCOA, September 2016, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/05_appendix-d2016-3-1.pdf?sfvrsn=2.
[4] CalEEMod User's Guide, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/01_user-39-s-guide2016-3-1.pdf?sfvrsn=2, p. 14.

Table Name	Column Name	Default Value	New Value
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	3.30
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	3.00
tblOffRoadEquipment	UsageHours	8.00	2.10
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	2.10
tblOffRoadEquipment	UsageHours	8.00	2.10
tblOffRoadEquipment	UsageHours	8.00	1.20
tblOffRoadEquipment	UsageHours	8.00	1.50
tblOffRoadEquipment	UsageHours	7.00	1.50
tblOffRoadEquipment	UsageHours	8.00	1.50
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.30
tblOffRoadEquipment	UsageHours	8.00	0.00

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[5] According to the "User Entered Comments and Non-Default Data" table, the justification provided for these changes is: "Provided constructino equip & hours" (Appendix A, pp. 17). However, the AQ Report provides the following construction-related input parameters (Appendix A, pp. 14):

[5] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2, 9

Project Name: 1260 Santa Clara St.					
Construction Phase	**Equipment** (*See next page for example of commonly used equipment*)	**Quantity**	**Average Hours Used Per Day**	**How Many Work Days**	**Fuel Type - if other than Diesel**
Demolition	• Concrete/Industrial Saws	1	8	3	Gas
	• Dump Trucks	3	8	14	
	• Rubber-Tired Dozers	1	6	14	
Start Date: 4/15/17					
End Date: 5/15/17					
Site Preparation	• Rubber Tired Dozers	1	8	3	
	• Tractors/Loaders/Backhoes	1	8	3	
Start Date: 5/15/17					
End Date: 6/15/17					
Grading/Excavation	• Excavators	2	8	15	
	• Rubber Tired Dozers	2	8	26	
	• Tractors/Loaders/Backhoes	2	8	23	
Start Date: 6/15/17	• Dump Trucks (based on 52,800CY)	8	6	63	
End Date: 9/01/17					
Trenching	• Excavator	1	8	2	
	• Tractor/Loader/Backhoe	1	8	3	
Start Date: 8/01/17					
End Date: 10/01/17					
Building – Exterior	• Cranes	1	8	80	
	• Forklifts	1	8	80	
	• Generator Sets	1	8	80	
	• Tractors/Loader/Backhoe				
	• Welders				
Start Date: 10/01/17					
End Date: 5/15/19					
Building – Interior/ Architectural Coating	• Air Compressors	1	8	80	
Start Date: 3/15/18					
End Date: 5/15/19					
Paving					
	• Cement and Mortar Mixers	1	8	14	
	• Pavers				
	• Paving Equipment	1	8	2	
	• Rollers				
	• Tractors/Loaders/Backhoes	1	8	14	
Start Date: 3/01/19					
End Date: 5/15/19					

As demonstrated above, the equipment required for construction would be operated for 8 hours per day. As such, the model is inconsistent with the information provided in AQ Report. Thus, the revised off-road construction usage hours are incorrect and underestimated within the model.

These underestimations present an issue, as CalEEMod uses off-road equipment usage hours to calculate the emissions associated with off-road construction equipment.[6] By including incorrect changes to the default off-road construction equipment usage hours, the model may underestimate the Project's construction-related emissions and should not be relied upon to determine Project significance.

[6] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 32.

Underestimated Saturday and Sunday Operational Vehicle Trip Rates

According to the Transportation Analysis ("TA"), provided as Appendix F to the IS/MND, the proposed Project is expected to generate approximately 3,169 daily operational vehicle trips (see excerpt below) (p. 31, Table 4).

Land Use	ITE Land Use Code	Location	% of Vehicle Mode Share	VMT[3] Existing	VMT[3] Project	% Reduction	Size	Daily Rate	Daily Trip
Proposed Land Uses									
Multifamily Housing (Mid-Rise)[1]	221						408 Dwelling Units	5.44	2,220
- Residential - Retail Internal Reduction[2]									*-342*
- Location Based Reduction[3]		*Urban Low-Transit*	*87%*			*13%*			*-244*
- VMT Reduction[4]				*6.87*	*6.5*	*5%*			*-88*
Shopping Center[1]	820						60,330 Square Feet	37.75	2,277
- Residential - Retail Internal Reduction[2]						*15%*			*-342*
- Location Based Reduction[3]		*Urban Low-Transit*	*87%*			*13%*			*-252*
- Pass-by Trip Reduction[5]						*34%*			*-60*
Baseline Vehicle Trips (Before Reductions)									4,497
Trips at Project Driveways (without pass-by reduction)									*3,230*
Net Project Trips									**3,169**

As such, the models should have included trip rates that reflect the estimated number of average daily vehicle trips. However, review of the CalEEMod output files demonstrates that the "1260 E Santa Clara Street Update, San Jose" and "1260 E Santa Clara Street Update, San Jose - 2030" models include only 3,081.45 Saturday and 2,138.56 Sunday vehicle trips (see excerpt below) (Appendix C, pp. 359):

Land Use	Weekday	Saturday	Sunday
Apartments Mid Rise	1,546.32	1,485.12	1362.72
Enclosed Parking with Elevator	0.00	0.00	0.00
Strip Mall	1,683.21	1,596.33	775.84
Total	3,229.53	3,081.45	2,138.56

As demonstrated above, the Saturday and Sunday trips are each underestimated by approximately 88 and 1,030 vehicle trips, respectively. As such, the trip rates inputted into the models are underestimated and inconsistent with the information provided by the TIS. By including underestimated operational vehicle trip rates, the models underestimate the Project's mobile-source operational emissions and should not be relied upon to determine Project significance.

Use of Incorrect Trip Purpose Percentages

Review of the CalEEMod output files demonstrates that the trip purpose percentages in the "1260 E Santa Clara Street Update, San Jose" and "1260 E Santa Clara Street Update, San Jose - 2030" models were divided amongst the primary, diverted, and pass-by trip types for the Project's proposed retail land use (see excerpts below) (Appendix A, pp. 57, 85).

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

However, review of the TA demonstrates that pass-by trips for the proposed shopping center were already accounted for in the Project's trip generation calculations (see excerpt below) (p. 31, Table 4).

Land Use	ITE Land Use Code	Location	% of Vehicle Mode Share	VMT[3] Existing	VMT[3] Project	% Reduction	Size	Daily Rate	Daily Trip
Proposed Land Uses									
Multifamily Housing (Mid-Rise)[1]	221						408 Dwelling Units	5.44	2,220
- Residential - Retail Internal Reduction[2]									*-342*
- Location Based Reduction[3]		*Urban Low-Transit*	*87%*			*13%*			*-244*
- VMT Reduction[4]				*6.87*	*6.5*	*5%*			*-88*
Shopping Center[1]	820						60,330 Square Feet	37.75	2,277
- Residential - Retail Internal Reduction[2]						*15%*			*-342*
- Location Based Reduction[3]		*Urban Low-Transit*	*87%*			*13%*			*-252*
- Pass-by Trip Reduction[3]						*34%*			*-60*
Baseline Vehicle Trips (Before Reductions)									4,497
Trips at Project Driveways (without pass-by reduction)									*3,230*
Net Project Trips									**3,169**

Thus, as the TA already includes pass-by trip reductions for the proposed retail land use, the CalEEMod model should have divided the trip purpose between primary and diverted trips, as pass-by trips are already accounted for in the Project's projected trip generation total.

According to Appendix A of the CalEEMod User's Guide, primary trips utilize the complete trip lengths associated with each trip type category. Diverted trips are assumed to take a slightly different path than a primary trip and are assumed to be 25% of the primary trip lengths. Pass-by trips are assumed to be 0.1 miles in length and are a result of no diversion from the primary route.[7] Thus, by including pass-by reductions that were already accounted for in the TA, the models underestimate the trip lengths associated with the Project's daily vehicle trips. As a result, by incorrectly spreading the trip purpose percentages amongst the three categories, the models underestimate the Project's mobile-source operational emissions and should not be relied upon to determine Project significance.

Unsubstantiated Changes to Wastewater Treatment System Percentages

Review of the CalEEMod output files demonstrates that the "1260 E Santa Clara Street Update, San Jose" and "1260 E Santa Clara Street Update, San Jose - 2030" models include several changes to the default wastewater treatment system percentages (see excerpt below) (Appendix A, pp. 34, 83).

[7] "CalEEMod User's Guide, Appendix A: Calculation Details for CalEEMod." SCAQMD, *available at:* http://www.caleemod.com/, p. 20

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

As you can see in the excerpt above, the models assume 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.[8] According to the "User Entered Comments and Non-Default Data" table, the justification provided for these changes is: "WTP treatment 100% aerobic" (Appendix A, pp. 17, 66). Furthermore, the AQ Report states:

> "Water/wastewater use were changed to 100% aerobic conditions to represent wastewater treatment plant conditions" (Appendix A, p. 4).

However, these changes remain unsupported. The IS/MND indicates that "[t]he wastewater generated on the project site following project occupancy would be collected and conveyed to the San José-Santa Clara Regional Wastewater Facility for treatment" (p. 112). Review of the San José-Santa Clara Regional Wastewater Facilities treatment process reveals the use of anaerobic bacteria in the digesters phase of treatment. [9] As such, the assumption that the Project's wastewater would be treated 100% aerobically is incorrect and overestimated within the models.

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.[10] Thus, by including unsubstantiated changes to the default wastewater treatment system percentages, the models may underestimate the Project's GHG emissions and should not be relied upon to determine Project significance.

Incorrect Application of Operational Mitigation Measures

Review of the CalEEMod output files demonstrates that the "1260 E Santa Clara Street Update, San Jose" and "1260 E Santa Clara Street Update, San Jose - 2030" models includes the following energy-related mitigation measure (see excerpt below) (Appendix A, pp. 57, 86).

[8] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2, 9
[9] https://www.google.com/url?q=https://www.sanjoseca.gov/your-government/environment/water-utilities/regional-wastewater-facility/treatment-process&sa=D&source=docs&ust=1635443327123000&usg=AOvVaw3iBx5wItSPPUUcK4kJmjxv
[10] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 45.

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

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 this inclusion is: "SJCE 100% carbon free renewable energy" (Appendix A, pp. 17, 88). Furthermore, the IS/MND states:

> "SJCE customers are automatically enrolled in the GreenSource program, which provides 80 percent GHG emission-free electricity. Customers can choose to enroll in SJCE's TotalGreen program at any time to receive 100 percent GHG emission-free electricity form entirely renewable sources" (p. 72).

However, these justifications remain insufficient, as the above-mentioned energy-related mitigation measure refers to renewable energy generation *on-site*.[12] As such, electricity from the grid is not applicable and the inclusion of the energy-related operational mitigation measure in the models is incorrect. By incorrectly including an operational mitigation measure, the models overestimate the reduction to the Project's operational emissions and should not be relied upon to determine Project significance.

Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

The IS/MND estimates that the mitigated residential child cancer risk posed to nearby, existing sensitive receptors as a result of Project construction would be 6.7 in one million, which would not exceed the BAAQMD significance threshold of 10 in one million (p. 44). However, the IS/MND fails to mention operational toxic air contaminant ("TAC") emissions or evaluate the health risk impacts associated with Project operation. The IS/MND's evaluation of the Project's potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is incorrect for five reasons.

First, by failing to prepare a quantified operational HRA, the Project is inconsistent with CEQA's requirement to correlate the increase in emissions that the Project would generate to the adverse impacts on human health caused by those emissions. According to the TA, the Project is anticipated to generate 3,169 average daily vehicle trips which will generate additional exhaust emissions and expose nearby sensitive receptors to diesel particulate matter ("DPM") emissions regardless (p. 44). However, the IS/MND fails to evaluate the potential TACs associated with Project operation or the concentrations at which such pollutants would trigger adverse health effects. Thus, without making a reasonable effort to connect the Project's operational TAC emissions to the potential health risks posed to nearby receptors, the Project is inconsistent with CEQA's requirement to correlate the increase in TAC emissions with potential adverse impacts on human health.

[11] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2, 9
[12] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 58-59.

Second, the Office of Environmental Health Hazard Assessment ("OEHHA"), the organization responsible for providing guidance on conducting HRAs in California, released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments* in February 2015, as referenced by the IS/MND (p. 43).[13] The OEHHA document recommends that exposure from projects lasting more than 6 months be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident ("MEIR").[14] Even though we were not provided with the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, we recommend that health risk impacts from Project operation also be evaluated, as a 30-year exposure duration vastly exceeds the 6-month requirement set forth by OEHHA. This recommendation reflects the most recent state health risk policies, and as such, we recommend that an analysis of health risk impacts posed to nearby sensitive receptors from Project operation be included in an EIR for the Project.

Third, the BAAQMD requires projects within 1,000 feet of an existing sensitive receptor or source to evaluate the cancer risk associated with Project operation (see excerpt below):[15]

Table 2-1
Air Quality CEQA Thresholds of Significance*

Pollutant	Construction-Related	Operational-Related
Project-Level		
Risk and Hazards for new sources and receptors (Individual Project)*	Same as Operational Thresholds**	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient $PM_{2.5}$ increase: > 0.3 µg/m^3 annual average Zone of Influence: 1,000-foot radius from property line of source or receptor

Furthermore, the IS/MND demostrates that there are existing sensitive receptors at the residential developments immediately adjacent to the Project site (p. 43). As such, pursuant to the BAAQMD, an analysis of the health risk posed to nearby, existing receptors from both Project operation should have been conducted.

Fourth, by claiming a less than significant impact without conducting a quantified operational HRA for nearby, existing sensitive receptors, the IS/MND fails to compare the excess health risk impact to the

[13] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/hotspots2015.html
[14] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf, p. 8-6, 8-15
[15] "California Environmental Quality Act Air Quality Guidelines." BAAQMD, May 2017, *available at*: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, p. 2-2, Table 2-1.

applicable BAAQMD threshold of 10 in one million.[16] Specifically, regarding the operational TAC emissions threshold, the BAAQMD states:

> "The Lead Agency shall determine whether operational-related TAC and $PM_{2.5}$ emissions generated as part of a proposed project siting a new source or receptor would expose existing or new receptors to levels that exceed BAAQMD's applicable Thresholds of Significance stated below:
>
> - Compliance with a qualified Community Risk Reduction Plan;
> - An excess cancer risk level of more than 10 in one million…"[17]

Thus, pursuant to CEQA and the BAAQMD, an analysis of the health risk posed to nearby, existing receptors from Project operation should have been conducted.

Fifth, while the IS/MND includes an HRA evaluating the health risk impacts to nearby, existing receptors as a result of Project construction, the HRA fails to evaluate the cumulative lifetime cancer risk to nearby, existing receptors as a result of Project construction and operation together. According to OEHHA guidance, as referenced by the IS/MND, "the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk at the receptor location" (p. 43).[18] However, the IS/MND's HRA fails to sum each age bin to evaluate the total cancer risk over the course of the Project's total construction and operation. This is incorrect and thus, an updated analysis should quantify the entirety of the Project's construction and operational health risks and then sum them to compare to the BAAQMD threshold of 10 in one million, as referenced by the IS/MND (p. 43).

Screening-Level Analysis Demonstrates Significant Impacts

In order to conduct our screening-level risk assessment, we relied upon AERSCREEN, a screening level air quality dispersion model.[19] The model replaced SCREEN3, and AERSCREEN is included in the OEHHA[20] and the California Air Pollution Control Officers Associated ("CAPCOA")[21] guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality

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[16] "California Environmental Quality Act Air Quality Guidelines." BAAQMD, May 2017, *available at*: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, p. 2-5.

[17] "California Environmental Quality Act Air Quality Guidelines." BAAQMD, May 2017, *available at*: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, p. 5-3.

[18] "Guidance Manual for preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 8-4

[19] U.S. EPA (April 2011) AERSCREEN Released as the EPA Recommended Screening Model, http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf

[20] OEHHA (February 2015) Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments, https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

[21] "Health Risk Assessments for Proposed Land Use Projects." CAPCOA, July 2009, *available at:* http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf.

hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

We prepared a preliminary HRA of the Project's operational health risk impact to nearby sensitive receptors using the Project's 2030 annual PM_{10} exhaust estimates. Consistent with recommendations set forth by OEHHA, we assumed residential exposure begins during the third trimester stage of life. Subtracting the 760-day construction period from the total residential duration of 30 years, we assumed that after Project construction, the sensitive receptor would be exposed to the Project's operational DPM for an additional 27.92 years, approximately. The IS/MND's annual CalEEMod output file indicates that operational activities will generate approximately 90 pounds of DPM per year throughout operation.[22] The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project operation, we calculated an average DPM emission rate by the following equation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{90.2\ lbs}{365\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.00130\ g/s}$$

Using this equation, we estimated an operational emission rate of 0.00130 g/s. Construction and operational activity was simulated as a 2.77-acre rectangular area source in AERSCREEN with approximate dimensions of 150 by 75 meters. A release height of three meters was selected to represent the height of exhaust stacks on operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution. The population of San Jose was obtained from U.S. 2020 Census data.[23]

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10%.[24] According to the IS/MND, the nearest sensitive receptors are single-family residences located directly adjacent to the Project site (p. 43). However, review of the AERSCREEN output files demonstrates that the maximally exposed individual resident ("MEIR") is located approximately 75 meters from the Project site. Thus, the single-hour concentration estimated by AERSCREEN for Project construction is approximately 3.079 µg/m^3 DPM at approximately 75 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.3079 µg/m^3 for Project operation at the MEIR.

[22] See Attachment A for calculations.
[23] "San Jose." Data Commons, 2020, *available at:* https://datacommons.org/place/geoId/0668000
[24] "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised." EPA, 1992, *available at*: http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf; *see also* "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 4-36.

We calculated the excess cancer risk to the MEIR using applicable HRA methodologies prescribed by OEHHA, as referenced by the AQ & GHG Assessment (Appendix A, p. 2). Consistent with the 760-day construction schedule utilized in the Project's CalEEMod output files, the annualized averaged concentration for operation was used for the latter 0.17 years of the infant stage of life (0 – 2 years), as well as the entire child (2 – 16 years) and adult (16 – 30 years) stages of life.

Consistent with OEHHA, and as recommended by BAAQMD guidance, we used Age Sensitivity Factors ("ASFs") to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution.[25, 26] According to this guidance, the quantified cancer risk should be multiplied by a factor of ten during the third trimester of pregnancy and during the first two years of life (infant) as well as multiplied by a factor of three during the child stage of life (2 – 16 years). Furthermore, in accordance with the guidance set forth by OEHHA, we used the 95th percentile breathing rates for infants.[27] Finally, according to BAAQMD guidance, we used a Fraction of Time At Home ("FAH") value of 0.85 for the 3rd trimester and infant receptors, 0.72 for child receptors, and 0.73 for the adult receptors.[28] We used a cancer potency factor of 1.1 (mg/kg-day)$^{-1}$ and an averaging time of 25,550 days. The results of our calculations are shown below.

[25] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.
[26] "California Environmental Quality Act Air Quality Guidelines." BAAQMD, May 2017, *available at:* http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, p. 56; see also "Recommended Methods for Screening and Modeling Local Risks and Hazards." BAAQMD, May 2011, *available at:* http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20Modeling%20Approach.ashx, p. 65, 86.
[27] "Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics 'Hot Spots' Information and Assessment Act," June 5, 2015, *available at:* http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588-risk-assessment-guidelines.pdf?sfvrsn=6, p. 19.
"Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf
[28] "Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines." BAAQMD, January 2016, *available at:* http://www.baaqmd.gov/~/media/files/planning-and-research/rules-and-regs/workshops/2016/reg-2-5/hra-guidelines_clean_jan_2016-pdf.pdf?la=en

The Maximally Exposed Individual at an Existing Residential Receptor							
Age Group	**Emissions Source**	**Duration** (years)	**Concentration** (ug/m3)	**Breathing Rate** (L/kg-day)	**Cancer Risk** (without ASFs*)	**ASF**	**Cancer Risk** (with ASFs*)
3rd Trimester	Construction	0.25	*	361	*	10	*
Infant (Age 0 - 2)	*Construction*	*1.83*	*	*1090*	*	10	**7.21E-06**
	Operation	*0.17*	*0.3079*	*1090*	*7.21E-07*		
	Total	2			7.21E-07		
Child (Age 2 - 16)	Operation	14	0.3079	572	2.68E-05	3	**8.03E-05**
Adult (Age 16 - 30)	Operation	14	0.3079	261	1.24E-05	1	**1.24E-05**
Lifetime		**30**			**3.98E-05**		**9.98E-05**

* Construction cancer risk calculated separately in the IS/MND.

As demonstrated in the table above, the excess cancer risks to infants, children, and adults at the MEIR located approximately 75 meters away, over the course of Project operation, are approximately 7.21, 80.3, and 12.4 in one million, respectively. The excess cancer risk associated with the Project operation over the course of a residential lifetime is approximately 98.9 in one million. When summing the Project's operational cancer risk, as estimated by SWAPE, with the IS/MND's construction-related cancer risk of 6.7 in one million, we estimate an excess cancer risk of approximately 105.6 in one million over the course of a residential lifetime (30 years) (p. 44).[29] As such, the lifetime cancer risk greatly exceeds the BAAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the IS/MND.

An agency must include an analysis of health risks that connects the Project's air emissions with the health risk posed by those emissions. Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection. [30] The purpose of the screening-level construction and operational HRA shown above is to demonstrate the link between the proposed Project's emissions and the potential health risk. Our screening-level HRA demonstrates that construction and operation of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. Therefore, since our screening-level HRA indicates a potentially significant impact, an EIR should be prepared and include updated, quantified air pollution model as well as an updated, quantified refined HRA which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

[29] Calculated: 98.9 in one million+ 6.7 in one million = 105.6 in one million

[30] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 1-5

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.

Sincerely,

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

Paul E. Rosenfeld, Ph.D.

Attachment A: Health Risk Calculations
Attachment B: AERSCREEN Output Files
Attachment C: Matt Hagemann CV
Attachment D: Paul E. Rosenfeld CV

Operation	
Emission Rate	
Annual Emissions (tons/year)	0.0451
Daily Emissions (lbs/day)	0.247123288
Emission Rate (g/s)	0.001297397
Total DPM (lbs)	90.2
Release Height (meters)	3
Total Acreage	2.77
Max Horizontal (meters)	149.73
Min Horizontal (meters)	74.87
Initial Vertical Dimension (meters)	1.5
Setting	Urban
Population	1,013,240
Start Date	4/15/2021
End Date	5/15/2023
Total Construction Days	760
Total Years of Construction	2.08
Total Years of Operation	27.92

Start date and time 11/10/21 10:34:07

AERSCREEN 21112

1260 E Santa Clara Street Update, San Jose - 2030

1260 E Santa Clara Street Update, San Jose - 2030

---------- DATA ENTRY VALIDATION ----------

	METRIC	ENGLISH
** AREADATA **	---	---
Emission Rate:	0.130E-02 g/s	0.103E-01 lb/hr
Area Height:	3.00 meters	9.84 feet
Area Source Length:	149.73 meters	491.24 feet
Area Source Width:	74.87 meters	245.64 feet
Vertical Dimension:	1.50 meters	4.92 feet
Model Mode:	URBAN	
Population:	1013240	
Dist to Ambient Air:	1.0 meters	3. feet

** BUILDING DATA **

No Building Downwash Parameters

** TERRAIN DATA **

No Terrain Elevations

Source Base Elevation: 0.0 meters 0.0 feet

Probe distance: 5000. meters 16404. feet

No flagpole receptors

No discrete receptors used

** FUMIGATION DATA **

No fumigation requested

** METEOROLOGY DATA **

Min/Max Temperature: 250.0 / 310.0 K -9.7 / 98.3 Deg F

Minimum Wind Speed: 0.5 m/s

Anemometer Height: 10.000 meters

Dominant Surface Profile: Urban

Dominant Climate Type: Average Moisture

Surface friction velocity (u*): not adjusted

DEBUG OPTION ON

AERSCREEN output file:

2021.11.10_EmpireLumber_AERSCREEN_Operations.out

*** AERSCREEN Run is Ready to Begin

No terrain used, AERMAP will not be run

****

SURFACE CHARACTERISTICS & MAKEMET

Obtaining surface characteristics...

Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season	Albedo	Bo	zo
Winter	0.35	1.50	1.000
Spring	0.14	1.00	1.000
Summer	0.16	2.00	1.000
Autumn	0.18	2.00	1.000

Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl

Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl

Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl

Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl

Buildings and/or terrain present or rectangular area source, skipping probe

FLOWSECTOR started 11/10/21 10:36:21

****

Running AERMOD

Processing Winter

Processing surface roughness sector 1

```
**************************************************

Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   0

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************

Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   5

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************

Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  10

    ********   WARNING MESSAGES   ********
               ***  NONE  ***
```

```
**************************************************

Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  15

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   5

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  20

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  25

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************
```

```
Processing wind flow sector   7

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  30

    ********   WARNING MESSAGES    ********

               ***  NONE  ***

 ******************************************

  Running AERMOD

 Processing Spring

Processing surface roughness sector  1

**************************************************

Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   0

    ********   WARNING MESSAGES    ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   5
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  20
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 ****************************************


  Running AERMOD

 Processing Summer


Processing surface roughness sector  1
```

```
**************************************************

Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   0

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   5

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  10

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************
```

```
Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  15

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   5

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  20

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  25

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   7
```

```
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 *****************************************


  Running AERMOD

 Processing Autumn


Processing surface roughness sector  1


**************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   5
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  20


    ********   WARNING MESSAGES   ********
```

```
               ***  NONE  ***

**************************************************
Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  25

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   7

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  30

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

FLOWSECTOR   ended 11/10/21 10:36:30

REFINE       started 11/10/21 10:36:30

 AERMOD Finishes Successfully for REFINE stage 3 Winter sector   0

    ********   WARNING MESSAGES   ********
```

*** NONE ***

REFINE ended 11/10/21 10:36:31

****

AERSCREEN Finished Successfully

With no errors or warnings

Check log file for details

****

Ending date and time 11/10/21 10:36:33

Concentration	Distance	Elevation	Diag	Season/Month	Zo sector	Date	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	HT	REF TA	HT
0.23779E+01	1.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.26516E+01	25.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.29020E+01	50.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.30791E+01	75.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
* 0.30815E+01	76.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.19793E+01	100.00	0.00	20.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.13745E+01	125.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.10539E+01	150.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.84432E+00	175.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.69870E+00	200.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.59174E+00	225.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.51074E+00	250.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.44729E+00	275.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.39647E+00	300.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.35470E+00	325.00	0.00	5.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.32023E+00	350.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.29128E+00	375.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.26649E+00	400.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.24509E+00	425.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.22656E+00	450.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.21039E+00	475.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.19608E+00	500.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.18332E+00	525.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.17196E+00	550.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.16179E+00	575.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0
0.15263E+00	600.00	0.00	0.0	Winter	0-360	10011001	-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50	10.0	310.0	2.0

1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.14436E+00 625.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.13680E+00 650.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.12991E+00 675.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.12361E+00 700.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.11781E+00 725.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.11244E+00 750.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.10749E+00 775.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.10291E+00 800.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.98670E-01 825.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.94717E-01 850.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.91035E-01 875.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.87594E-01 900.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.84376E-01 925.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.81358E-01 950.01 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.78525E-01 975.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.75854E-01 1000.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.73343E-01 1025.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.70974E-01 1050.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.68736E-01 1075.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.66619E-01 1100.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.64613E-01 1125.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.62710E-01 1150.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.60896E-01 1175.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.59169E-01 1200.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.57527E-01 1225.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.55958E-01 1250.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.54456E-01 1275.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0

1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.53024E-01 1300.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.51656E-01 1325.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.50347E-01 1350.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.49096E-01 1375.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.48097E-01 1400.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.46943E-01 1425.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.45837E-01 1450.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.44776E-01 1475.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.43757E-01 1500.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.42777E-01 1525.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.41835E-01 1550.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.40927E-01 1575.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.40053E-01 1600.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.39210E-01 1625.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.38398E-01 1650.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.37615E-01 1675.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.36858E-01 1700.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.36128E-01 1725.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.35423E-01 1750.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.34741E-01 1775.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.34081E-01 1800.00 0.00 10.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.33443E-01 1825.00 0.00 10.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.32825E-01 1850.00 0.00 10.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.32226E-01 1875.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.31647E-01 1900.00 0.00 10.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.31085E-01 1924.99 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.30540E-01 1950.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0

1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.30012E-01 1975.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.29499E-01 2000.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.29001E-01 2025.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.28517E-01 2050.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.28048E-01 2075.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.27591E-01 2100.00 0.00 15.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.27148E-01 2125.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.26716E-01 2150.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.26296E-01 2175.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.25888E-01 2200.00 0.00 20.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.25490E-01 2224.99 0.00 15.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.25103E-01 2250.00 0.00 15.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.24726E-01 2275.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.24359E-01 2300.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.24001E-01 2325.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.23651E-01 2350.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.23311E-01 2375.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.22979E-01 2400.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.22656E-01 2425.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.22340E-01 2449.99 0.00 25.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.22031E-01 2475.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.21730E-01 2500.00 0.00 15.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.21436E-01 2525.00 0.00 20.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.21148E-01 2550.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.20868E-01 2575.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.20593E-01 2600.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.20326E-01 2625.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0

1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.20063E-01 2650.00 0.00 15.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.19807E-01 2675.00 0.00 25.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.19556E-01 2700.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.19311E-01 2725.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.19071E-01 2750.00 0.00 10.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.18836E-01 2775.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.18606E-01 2800.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.18381E-01 2825.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.18161E-01 2850.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.17945E-01 2875.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.17734E-01 2900.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.17526E-01 2925.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.17323E-01 2950.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.17125E-01 2975.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.16929E-01 3000.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.16738E-01 3025.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.16551E-01 3050.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.16367E-01 3075.00 0.00 10.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.16186E-01 3100.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.16009E-01 3125.00 0.00 10.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.15836E-01 3150.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.15665E-01 3174.99 0.00 10.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.15498E-01 3200.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.15334E-01 3225.00 0.00 10.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.15173E-01 3250.00 0.00 10.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.15014E-01 3275.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.14859E-01 3300.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0

1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.14706E-01 3325.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.14556E-01 3350.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.14409E-01 3375.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.14264E-01 3400.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.14122E-01 3425.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.13982E-01 3450.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.13844E-01 3475.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.13709E-01 3500.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.13576E-01 3525.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.13446E-01 3550.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.13317E-01 3575.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.13191E-01 3600.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.13066E-01 3625.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.12944E-01 3650.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.12824E-01 3675.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.12705E-01 3700.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.12589E-01 3725.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.12474E-01 3750.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.12361E-01 3775.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.12250E-01 3800.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.12140E-01 3825.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.12033E-01 3850.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.11927E-01 3875.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.11822E-01 3900.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.11719E-01 3925.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.11618E-01 3950.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.11518E-01 3975.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0

1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.11420E-01 4000.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.11323E-01 4025.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.11227E-01 4050.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.11133E-01 4075.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.11040E-01 4100.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.10949E-01 4125.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.10859E-01 4150.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.10770E-01 4175.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.10682E-01 4200.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.10596E-01 4225.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.10510E-01 4250.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.10426E-01 4275.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.10344E-01 4300.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
0.10262E-01 4325.00 0.00 0.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
1.000 1.50 0.35 0.50 10.0 310.0 2.0
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0.96465E-02 4525.00 0.00 5.0 Winter 0-360 10011001 -1.30 0.043 -9.000 0.020 -999. 21. 6.0
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SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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

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

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 30 years of experience in environmental policy, contaminant assessment and remediation, stormwater compliance, and CEQA review. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) and directed efforts to improve hydrogeologic characterization and water quality monitoring. For the past 15 years, as a founding partner with SWAPE, Matt has developed extensive client relationships and has managed complex projects that include consultation as an expert witness and a regulatory specialist, and a manager of projects ranging from industrial stormwater compliance to CEQA review of impacts from hazardous waste, air quality and greenhouse gas emissions.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2104, 2017;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

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

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of over 300 environmental impact reports and negative declarations since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at more than 100 industrial facilities.
- Expert witness on numerous cases including, for example, perfluorooctanoic acid (PFOA) contamination of groundwater, MTBE litigation, air toxins at hazards at a school, CERCLA compliance in assessment and remediation, and industrial stormwater contamination.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.

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

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

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.
- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

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

Hydrogeology:

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

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

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

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

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted

public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

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

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

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

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

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

Policy:

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

Activities included the following:

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

principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

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

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

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

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

Teaching:

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

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

Matt is currently a part time geology instructor at Golden West College in Huntington Beach, California where he taught from 2010 to 2014 and in 2017.

Invited Testimony, Reports, Papers and Presentations:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Other Experience:

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

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on volatile organic compound filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

Professional Experience

Dr. Rosenfeld has over 25 years' experience conducting environmental investigations and risk assessments for evaluating impacts to human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risk, exposure assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from oil spills, landfills, boilers and incinerators, process stacks, storage tanks, confined animal feeding operations, industrial, military and agricultural sources, unconventional oil drilling operations, and locomotive and construction engines. His project experience ranges from monitoring and modeling of pollution sources to evaluating impacts of pollution on workers at industrial facilities and residents in surrounding communities. Dr. Rosenfeld has also successfully modeled exposure to contaminants distributed by water systems and via vapor intrusion.

Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing lead, heavy metals, mold, bacteria, particulate matter, petroleum hydrocarbons, chlorinated solvents, pesticides, radioactive waste, dioxins and furans, semi- and volatile organic compounds, PCBs, PAHs, creosote, perchlorate, asbestos, per- and poly-fluoroalkyl substances (PFOA/PFOS), unusual polymers, fuel oxygenates (MTBE), among other pollutants. Dr. Rosenfeld also has experience evaluating greenhouse gas emissions from various projects and is an expert on the assessment of odors from industrial and agricultural sites, as well as the evaluation of odor nuisance impacts and technologies for abatement of odorous emissions. As a principal scientist at SWAPE, Dr. Rosenfeld directs air dispersion modeling and exposure assessments. He has served as an expert witness and testified about pollution sources causing nuisance and/or personal injury at sites and has testified as an expert witness on numerous cases involving exposure to soil, water and air contaminants from industrial, railroad, agricultural, and military sources.

Professional History:

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H_2O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist

Publications:

Remy, L.L., Clay T., Byers, V., **Rosenfeld P. E.** (2019) Hospital, Health, and Community Burden After Oil Refinery Fires, Richmond, California 2007 and 2012. *Environmental Health.* 18:48

Simons, R.A., Seo, Y. **Rosenfeld, P**., (2015) Modeling the Effect of Refinery Emission On Residential Property Value. Journal of Real Estate Research. 27(3):321-342

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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Rosenfeld, P. E. (1991). How to Build a Small Rural Anaerobic Digester & Uses Of Biogas In The First And Third World. Bachelors Thesis. University of California.

Presentations:

Rosenfeld, P.E., "The science for Perfluorinated Chemicals (PFAS): What makes remediation so hard?" Law Seminars International, (May 9-10, 2018) 800 Fifth Avenue, Suite 101 Seattle, WA.

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

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

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

Rosenfeld, P. E. (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23rd Annual International*

Conferences on Soils Sediment and Water. Platform lecture conducted from University of Massachusetts, Amherst MA.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Teaching Experience:

UCLA Department of Environmental Health (Summer 2003 through 20010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

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

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

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

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

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

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

Academic Grants Awarded:

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

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

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

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

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

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

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

Deposition and/or Trial Testimony:

In the Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 0i9-L-2295
Rosenfeld Deposition, 5-14-2021
Trial, October 8-4-2021

In the Circuit Court of Cook County Illinois
Joseph Rafferty, Plaintiff vs. Consolidated Rail Corporation and National Railroad Passenger Corporation d/b/a AMTRAK,
Case No.: No. 18-L-6845
Rosenfeld Deposition, 6-28-2021

In the United States District Court For the Northern District of Illinois
Theresa Romcoe, Plaintiff vs. Northeast Illinois Regional Commuter Railroad Corporation d/b/a METRA Rail, Defendants
Case No.: No. 17-cv-8517
Rosenfeld Deposition, 5-25-2021

In the Superior Court of the State of Arizona In and For the Cunty of Maricopa
Mary Tryon et al., Plaintiff vs. The City of Pheonix v. Cox Cactus Farm, L.L.C., Utah Shelter Systems, Inc.
Case Number CV20127-094749
Rosenfeld Deposition: 5-7-2021

In the United States District Court for the Eastern District of Texas Beaumont Division
Robinson, Jeremy et al *Plaintiffs*, vs. CNA Insurance Company et al.
Case Number 1:17-cv-000508
Rosenfeld Deposition: 3-25-2021

In the Superior Court of the State of California, County of San Bernardino
Gary Garner, Personal Representative for the Estate of Melvin Garner vs. BNSF Railway Company.
Case No. 1720288
Rosenfeld Deposition 2-23-2021

In the Superior Court of the State of California, County of Los Angeles, Spring Street Courthouse
Benny M Rodriguez vs. Union Pacific Railroad, A Corporation, et al.
Case No. 18STCV01162
Rosenfeld Deposition 12-23-2020

In the Circuit Court of Jackson County, Missouri
Karen Cornwell, *Plaintiff,* vs. Marathon Petroleum, LP, *Defendant.*
Case No.: 1716-CV10006
Rosenfeld Deposition. 8-30-2019

In the United States District Court For The District of New Jersey
Duarte et al, *Plaintiffs,* vs. United States Metals Refining Company et. al. *Defendant.*
Case No.: 2:17-cv-01624-ES-SCM
Rosenfeld Deposition. 6-7-2019

In the United States District Court of Southern District of Texas Galveston Division
M/T Carla Maersk, *Plaintiffs,* vs. Conti 168., Schiffahrts-GMBH & Co. Bulker KG MS "Conti Perdido" *Defendant.*
Case No.: 3:15-CV-00106 consolidated with 3:15-CV-00237
Rosenfeld Deposition. 5-9-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
Carole-Taddeo-Bates et al., vs. Ifran Khan et al., Defendants
Case No.: No. BC615636
Rosenfeld Deposition, 1-26-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
The San Gabriel Valley Council of Governments et al. vs El Adobe Apts. Inc. et al., Defendants
Case No.: No. BC646857
Rosenfeld Deposition, 10-6-2018; Trial 3-7-19

In United States District Court For The District of Colorado
Bells et al. Plaintiff vs. The 3M Company et al., Defendants
Case No.: 1:16-cv-02531-RBJ
Rosenfeld Deposition, 3-15-2018 and 4-3-2018

In The District Court Of Regan County, Texas, 112th Judicial District
Phillip Bales et al., Plaintiff vs. Dow Agrosciences, LLC, et al., Defendants
Cause No.: 1923
Rosenfeld Deposition, 11-17-2017

In The Superior Court of the State of California In And For The County Of Contra Costa
Simons et al., Plaintiffs vs. Chevron Corporation, et al., Defendants
Cause No C12-01481
Rosenfeld Deposition, 11-20-2017

In The Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 0i9-L-2295
Rosenfeld Deposition, 8-23-2017

In United States District Court For The Southern District of Mississippi
Guy Manuel vs. The BP Exploration et al., Defendants
Case: No 1:19-cv-00315-RHW
Rosenfeld Deposition, 4-22-2020

In The Superior Court of the State of California, For The County of Los Angeles
Warrn Gilbert and Penny Gilber, Plaintiff vs. BMW of North America LLC
Case No.: LC102019 (c/w BC582154)
Rosenfeld Deposition, 8-16-2017, Trail 8-28-2018

In the Northern District Court of Mississippi, Greenville Division
Brenda J. Cooper, et al., *Plaintiffs,* vs. Meritor Inc., et al., *Defendants*
Case Number: 4:16-cv-52-DMB-JVM
Rosenfeld Deposition: July 2017

In The Superior Court of the State of Washington, County of Snohomish
Michael Davis and Julie Davis et al., Plaintiff vs. Cedar Grove Composting Inc., Defendants
Case No.: No. 13-2-03987-5
Rosenfeld Deposition, February 2017
Trial, March 2017

In The Superior Court of the State of California, County of Alameda
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants
Case No.: RG14711115
Rosenfeld Deposition, September 2015

In The Iowa District Court In And For Poweshiek County
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants
Case No.: LALA002187
Rosenfeld Deposition, August 2015

In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action N0. 14-C-30000
Rosenfeld Deposition, June 2015

In The Iowa District Court For Muscatine County
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant
Case No 4980
Rosenfeld Deposition: May 2015

In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case Number CACE07030358 (26)
Rosenfeld Deposition: December 2014

In the County Court of Dallas County Texas
Lisa Parr et al, *Plaintiff*, vs. Aruba et al, *Defendant.*
Case Number cc-11-01650-E
Rosenfeld Deposition: March and September 2013
Rosenfeld Trial: April 2014

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., *Plaintiffs,* vs. Republic Services, Inc., et al., *Defendants*
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)
Rosenfeld Deposition: October 2012

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

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

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

EXHIBIT B

WILSON IHRIG
ACOUSTICS, NOISE & VIBRATION

CALIFORNIA
WASHINGTON
NEW YORK

WI #21-092

15 November 2021

Aidan P. Marshall, Esq.
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

Subject: *Empire Lumber Mixed-Use Project, San José, California*
Mitigated Negative Declaration / Initial Study
Review and Comment on Noise Analysis

Dear Mr. Marshall,

As requested, we have reviewed the information and noise impact analyses in the following documents:

Empire Lumber Mixed-Use Project, San José, California
Mitigated Negative Declaration ("MND")
Project File No. PDC15-067 and ER20-102
16 December 2020

Empire Lumber Mixed-Use Project, San José, California
Initial Study ("IS")
File Nos. GPT15-007 and PDC15-067
December 2020

Empire Lumber Mixed-Use Project
1260 East Santa Clara Street, San José, California
Noise and Vibration Assessment
July 13, 2016

This letter reports our comments on the noise analysis in the subject document.

Wilson, Ihrig & Associates, Acoustical Consultants, has practiced exclusively in the field of acoustics since 1966. During our 55 years of operation, we have prepared hundreds of noise studies for Environmental Impact Reports and Statements. We have one of the largest technical laboratories in the acoustical consulting industry. We also utilize industry-standard acoustical programs such as

Environmental Noise Model (ENM), Traffic Noise Model (TNM), SoundPLAN, and CADNA. In short, we are well qualified to prepare environmental noise studies and review studies prepared by others.

Adverse Effects of Noise[1]

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. The problems and irritation that are associated with speech disturbance have become more pronounced during the COVID-19 pandemic because many people find themselves and others they live with trying to work and learn simultaneously in spaces that were not designed for speech privacy.

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.

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. This is why

[1] 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)

there are standards for classroom background noise levels and why offices and libraries are designed to provide quiet work environments. While sheltering-in-place during the COVID-19 pandemic, many people are finding working and learning more difficult because their home environment is not as quiet as their office or school was.

Comments on Construction Noise Analysis

The IS, following the Noise Assessment, states clear thresholds of significance for construction noise:

> The temporary construction noise impact would be considered significant if project construction activities exceeded 60 dBA Leq at nearby residences or exceeded 70 dBA Leq at nearby commercial land uses and exceeded the ambient noise environment by five dBA Leq or more for a period longer than 12 months. [IS at p. 132]

As provided in the IS, the total construction time will be 24 months for demolition through building exterior and another 2 months for paving. [IS, Table 4.12-3, at p. 132].

Unlike the Noise Assessment, the IS does not present the construction noise levels at specific nearby receptors, but only presents generic construction noise levels at a distance of 100 feet. The closest receptors – residences across Shortridge Avenue and S 26th Avenue – are only 65 feet away. Using the range of construction noise levels at adjacent land uses provided in the Noise Assessment [Table 8, at p. 23] and the existing ambient noise levels measured for the Noise Assessment [Noise Assessment pp. 15-16; IS, Tables 4.13-1 and 4.13-2, at p. 129], the following table may be constructed indicating the amount unmitigated construction noise is expected to exceed existing ambient noise levels:

Receptor	Relevant Baseline Location	Existing Daytime Level(s) (dBA, Leq)	Threshold of Significance(1) (dBA, Leq)	Range of Construction Noise Levels (dBA, Leq)	Decibels above Threshold (dBA, Leq)
Residences to South	ST-1	53	58	73 – 83	15 – 25
Residences to West	ST-2	57	62	73 – 83	11 – 21
Residences to East	ST-3	55	60	61 – 70(2)	1 – 10
Commercial to East	LT-1	59 – 61	64 – 66	71 – 78(3)	5 – 14
Commercial to North	LT-2	70 – 76	75 – 81	71 – 80(3)	0 – 5

Notes:
(1) In conjunction with construction noise level at residence exceeding 60 dBA Leq and at commercial exceeding 70 dBA Leq.
(2) Only construction noise levels above 60 dBA Leq considered.
(3) Only construction noise levels above 70 dBA Leq considered.

As can be seen in the table above, unmitigated construction noise is expected to exceed the thresholds of significance by up to 25 dBA Leq at residences and 14 dBA Leq at commercial establishments in the project vicinity.

Having established that unmitigated construction noise would exceed the IS-adopted threshold of significance, the IS then presents Standard Permit Conditions and Mitigation Measure MM-NOI-1, both of which contain a number of reasonable, best-practices to reduce construction noise levels and the annoyance construction noise will cause, but there is no analysis supporting the subsequent claim that "implementation of the identified Standard Permit Conditions and mitigation measures would result in a less than significant construction noise impact." [IS at p. 134]

In order for the mitigated impact to be deemed "less than significant", the noise levels would have to be reduced to levels lower than the threshold of significance, not just reduced by common-sense, good faith efforts. While the permit conditions and mitigation measures should be implemented, they will not provide the requisite noise reduction necessary to render the noise impact less-than-significant. Below, each measure is presented along with commentary (in *italics*) on its effectiveness:

Standard Permit Conditions

- Pile-driving shall be prohibited.
  - *Pile driving is not required for this project.* [IS at p. 132]
- Limit construction hours to between 7:00 a.m. and 7:00 p.m., Monday through Friday, unless permission is granted with a development permit or other planning approval. No construction activities are permitted on the weekends at sites within 500 feet of a residence.
  - *The construction noise analysis already accounts for this standard restriction on days and hours. There is no indication that work outside these hours will need to be done*.
- Construct solid plywood fences around ground level construction sites adjacent to operational businesses, residences, or other noise-sensitive land uses.
  - *This condition does not make clear if "adjacent" means shared property line (this project shares none with noise-sensitive receptors) or would require a fence around the entire site. In any case, it would be impractical to construct a fence that would provide up to 25 dB of noise attenuation at the nearby residences. (More comments on sound barrier walls below.)*
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
  - *Construction equipment was not commonly equipped with mufflers prior to the 1970s, so requiring a muffler was a meaningful noise mitigation measure when NEPA and CEQA were first passed. However, equipment operating today in urban settings is commonly muffled from the factory. The noise level data cited in the Noise Assessment ("Mitigation of Nighttime Construction Noise, Vibrations and Other Nuisances", National Cooperative Highway Research Program, 1999) is for equipment that is already muffled, so while well-fit mufflers should be required, that will only serve to keep noise levels from being louder than calculated in the Noise Assessment.*
- Prohibit unnecessary idling of internal combustion engines.

- *The Noise Assessment does not provide details of its noise calculations, but given that the results are presented as noise equivalent levels (Leq), they already account for the typical times that the engines idle and operate at full power. It is not reasonable to expect a construction crew to deviate much from the typical times.*

- Locate stationary noise-generating equipment such as air compressors or portable power generators as far as possible from sensitive receptors. Construct temporary noise barriers to screen stationary noise-generating equipment when located near adjoining sensitive land uses.

  - *Because no details about the Noise Assessment calculations are presented, it is not possible to know where stationary equipment was assumed to be placed for the analysis. However, having done many construction noise analyses myself, I can state that stationary noise sources are not the dominant noise sources at a construction site, so these requirements, while unquestionably good ideas, will not reduce the construction noise levels much, if at all.*

- Utilize "quiet" air compressors and other stationary noise sources where technology exists.

  - *This is a good idea, but will not reduce the composite construction noise levels much, if at all.*

- Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.

  - *This is a good idea, but will not reduce the composite construction noise levels at all.*

- Notify all adjacent business, residences, and other noise-sensitive land uses of the construction schedule, in writing, and provide a written schedule of "noisy" construction activities to the adjacent land uses and nearby residences.

  - *This is a good idea, but will not reduce the composite construction noise levels at all.*

- If complaints are received or excessive noise levels cannot be reduced using the measures above, erect a temporary noise control blanket barrier along surrounding building facades that face the construction sites.

  - *While this has the potential to reduce construction noise levels at noise-sensitive receivers, neither the efficacy nor the feasibility of this has been established in the IS. To begin with, this would entail setting up scaffolding immediately in front of every house on, for example, Shortridge Avenue while leaving the driveways clear. If this method is to be employed to reduce construction noise at the façades of residences to levels less than the thresholds of significance, it's efficacy should be supported by a detailed analysis, and it should be a required element of MM-NOI-1.*

- Designate a "disturbance coordinator" who shall be responsible for responding to any complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., bad muffler, etc.) and shall require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the

disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule.

- *This is a good idea, but will not reduce the composite construction noise levels at all.*

MM NOI-1.1: A construction noise logistics plan, in accordance with General Plan Policy EC-1.7, shall be required prior to issuance of a grading permit. A typical construction noise logistics plan will include, but not be limited to, the following measures to reduce construction noise levels:

- Consistent with the Standard Permit Conditions, temporary noise barriers will be constructed to screen stationary noise-generating equipment when located within 200 feet of adjoining sensitive land uses. Temporary noise barrier fences will provide a five dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receptor and if the barrier is constructed in a manner that eliminates any cracks or gaps.
    - *As discussed above, stationary equipment is not the dominant noise source on a construction site, so screening it, while unquestionably good ideas, will not reduce the construction noise levels much, if at all*
- Locate cranes as far from adjoining noise-sensitive receptors as possible.
    - *Because no details about the Noise Assessment calculations are presented, it is not possible to know where cranes were assumed to be placed for the analysis. This would have no effect on the two loudest phases: demolition and grading/excavation.*
- During final grading, substitute graders for bulldozers, where feasible. Wheeled heavy equipment are quieter than track equipment and shall be used where feasible.
    - *In the "Construction Equipment 50-foot Noise Emission Limits" table presented in the Noise Assessment (Table 6 at p. 22), a grader and a dozer emit the same noise level (85 dBA). There is no indication of whether the equipment in Noise Assessment Table 6 is wheeled or tracked, so it is not possible to assert that this measure will reduce noise levels or by how much. Finally, there is no indication as to who determines feasibility or what the standard is for infeasibility.*
- Substitute nail guns for manual hammering, where feasible.
    - *This is a good idea, but will not reduce the composite construction noise levels at all. Also, there is no indication as to who determines feasibility or what the standard is for infeasibility.*
- Substitute electrically powered tools for noisier pneumatic tools, where feasible.
    - *This is a good idea, but will not reduce the composite construction noise levels at all. Also, there is no indication as to who determines feasibility or what the standard is for infeasibility.*
- The contractor shall prepare a detailed construction plan identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for

coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance.

- *This is a good idea, but will not reduce the composite construction noise levels at all.*

In conclusion, the Noise Assessment and Initial Study establish that unmitigated construction noise levels will exceed the adopted thresholds of significance by up to 25 dBA. However, they do not support with any quantitative analysis that the City of San José's Standard Permit Conditions and/or the proposed measures in MM-NOI-1 will reduce those noise levels such that they are lower than the thresholds of significance. As described in detail in this letter, those measures will, in fact, not provide the noise reduction necessary to do so. Therefore, the Finding section of the Mitigated Negative Declaration,

> The attached Initial Study identifies one or more potentially significant effects on the environment for which the project applicant, before public release of this Mitigated Negative Declaration (MND), has made or agrees to make project revisions that will clearly mitigate the potentially significant effects to a less than significant level. [MND at p. 1]

is unsupported with respect to noise.

Comments on Reasonable Performance Expectations for a Sound Barrier Wall

As noted above, it is unrealistic to assert that a sound barrier wall – particularly a temporary one – can provide 15 dB of sound attenuation. The following graph shows the barrier attenuation for 550 Hz as a function of the Fresnel Number (N_0), a parameter defined as

$$N_0 = 2(\delta/\lambda)$$

where

δ = path length difference between the shortest distance directly between the source and receiver and the shortest distance over the barrier between the source and receiver
λ = the wavelength of the sound wave (2.25 ft for 550 Hz)

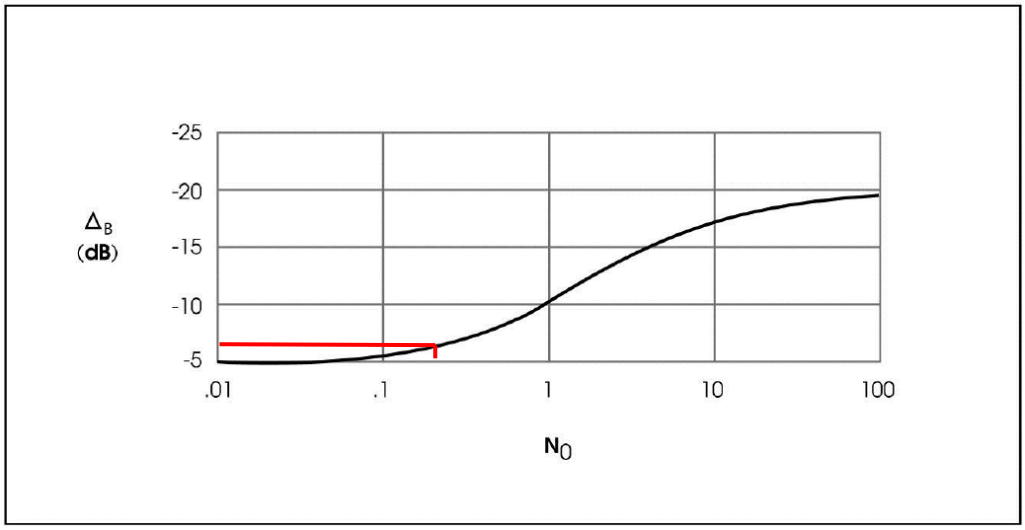
This graph is taken from a Caltrans document that is a common source in California about the performance of sound barrier walls. Sound at 550 Hz is representative of both highway noise and diesel engines associated with construction equipment.

One thing that is obvious in the figure is that it is essentially impossible to get more than 20 dB of attenuation from a sound barrier wall. What is not obvious is that that it is very difficult to get 15 dB and somewhat difficult to get 10 dB. By way of example, consider the homes across Shortridge Avenue and assume a wall is built on the southern edge of the project site:

Distance from wall to receiver: 65 ft (Noise Assessment at p. 24)

Distance from wall to source:	135 ft	(center of project site)
Height of receiver:	5 ft	(would be higher for second floor windows)
Height of source:	7 ft	(typical exhaust stack height)
Height of sound barrier:	10 ft	

Given this geometry and using 550 Hz to represent diesel engine noise, the Fresnel number is 0.21. As seen in the figure, the sound barrier attenuation for this 10-ft tall wall should be about 6 dB. To get 10 dB (N_0 = 1), the wall would have to be a little over 15 feet tall, and to get 15 dB (N0 = 3.7), the wall would have to be 24 feet tall.



Barrier Attenuation (Δ_B) vs Fresnel Number (N_0) for Infinitely Long Barrier

(Reference: *Technical Noise Supplement to the Caltrans Traffic Noise Analysis Protocol*, Report No. CT-HWANP-RT-13-069.25.2, September 2013, p. 2-41)

♦ ♦ ♦ ♦ ♦

Please contact me if you have any question about this review of the construction noise analysis in the *Empire Lumber Mixed-Use Project, Mitigated Negative Declaration / Initial Study*.

Very truly yours,

WILSON IHRIG

Derek L. Watry
Principal

2021-11-15 - empire lumber - noise - d watry.docx

DEREK L. WATRY

Principal

Since joining Wilson Ihrig in 1992, Derek has gained experienced in many areas of practice including environmental, construction, forensic, architectural, and industrial. For all of these, he has conducted extensive field measurements, established acceptability criteria, and calculated future noise and vibration levels. In the many of these areas, he has prepared CEQA and NEPA noise technical studies and EIR/EIS sections. Derek has a thorough understanding of the technical, public relations, and political aspects of environmental noise and vibration compliance work. He has helped resolve complex community noise issues, and he has also served as an expert witness in numerous legal matters.

Education

- M.S. Mechanical Engineering, University of California, Berkeley
- B.S. Mechanical Engineering, University of California, San Diego
- M.B.A. Saint Mary's College of California

Project Experience

12th Street Reconstruction, Oakland, CA
Responsible for construction noise control plan from pile driving after City received complaints from nearby neighbors. Attendance required at community meetings.

525 Golden Gate Avenue Demolition, San Francisco, CA
Noise and vibration monitoring and consultation during demolition of a multi-story office building next to Federal, State, and Municipal Court buildings for the SFDPW.

911 Emergency Communications Center, San Francisco, CA
Technical assistance on issues relating to the demolition and construction work including vibration monitoring, developing specification and reviewing/recommending appropriate methods and equipment for demolition of Old Emergency Center for the SFDPW.

Central Contra Costa Sanitary District, Grayson Creek Sewer, Pleasant Hill, CA
Evaluation of vibration levels due to construction of new sewer line in hard soil.

City of Atascadero, Review of Walmart EIR Noise Analysis, Atascadero, CA
Review and Critique of EIR Noise Analysis for the Del Rio Road Commercial Area Specific Plan.

City of Fremont, Ongoing Environmental Services On-Call Contract, Fremont, CA
Work tasks primarily focus on noise insulation and vibration control design compliance for new residential projects and peer review other consultant's projects.

City of Fremont, Patterson Ranch EIR, Fremont, CA
Conducted noise and vibration portion of the EIR.

City of King City, Silva Ranch Annexation EIR, King City, CA
Conducted the noise portion of the EIR and assessed the suitability of the project areas for the intended development. Work included a reconnaissance of existing noise sources and receptors in and around the project areas, and long-term noise measurements at key locations.

Conoco Phillips Community Study and Expert Witness, Rodeo, CA
Investigated low frequency noise from exhaust stacks and provided expert witness services representing Conoco Phillips. Evaluated effectiveness of noise controls implemented by the refinery.

Golden Gate Park Concourse Underground Garage, San Francisco, CA
Noise and vibration testing during underground garage construction to monitor for residences and an old sandstone statue during pile driving for the City of San Francisco.

Laguna Honda Hospital, Clarendon Hall Demolition, San Francisco, CA
Project manager for performed vibration monitoring during demolition of an older wing of the Laguna Honda Hospital.

Loch Lomond Marina EIR, San Rafael, CA
Examined traffic noise impacts on existing residences for the City of San Rafael. Provided the project with acoustical analyses and reports to satisfy the requirements of Title 24.

Mare Island Dredge and Material Disposal, Vallejo, CA
EIR/EIS analysis of noise from planned dredged material off-loading operations for the City of Vallejo.

Napa Creek Vibration Monitoring Review, CA
Initially brought in to peer review construction vibration services provided by another firm, but eventually was tapped for its expertise to develop a vibration monitoring plan for construction activities near historic buildings and long-term construction vibration monitoring.

San Francisco DPW, Environmental Services On-Call, CA
Noise and vibration monitoring for such tasks as: Northshore Main Improvement project, and design noise mitigation for SOMA West Skate Park.

San Francisco PUC, Islais Creek Clean Water Program, San Francisco, CA
Community noise and vibration monitoring during construction, including several stages of pile driving. Coordination of noise and ground vibration measurements during pile driving and other construction activity to determine compliance with noise ordinance. Coordination with Department of Public Works to provide a vibration seminar for inspectors and interaction with Construction Management team and nearby businesses to resolve noise and vibration issues.

San Francisco PUC, Richmond Transport Tunnel Clean Water Program, San Francisco, CA
Environmental compliance monitoring of vibration during soft tunnel mining and boring, cut-and-cover trenching for sewer lines, hard rock tunnel blasting and site remediation. Work involved long-term monitoring of general construction activity, special investigations of groundborne vibration from pumps and bus generated ground vibration, and interaction with the public (homeowners).

Santa Clara VTA, Capitol Expressway Light Rail (CELR) Bus Rapid Transit (BRT) Update EIS, CA
Reviewed previous BRT analysis and provide memo to support EIS.

Shell Oil Refinery, Martinez, CA
Identified source of community noise complaints from tonal noise due to refinery equipment and operations. Developed noise control recommendations. Conducted round-the-clock noise measurements at nearby residence and near to the property line of the refinery and correlated results. Conducted an exhaustive noise survey of the noisier pieces of equipment throughout the refinery to identify and characterize the dominant noise sources that were located anywhere from a quarter to three-quarters of a mile away. Provided a list of actions to mitigate noise from the noisiest pieces of refinery equipment. Assisted the refinery in the selection of long-term noise monitoring equipment to be situated on the refinery grounds so that a record of the current noise environment will be documented, and future noise complaints can be addressed more efficiently.

Tyco Electronics Corporation, Annual Noise Compliance Study, Menlo Park, CA
Conducted annual noise compliance monitoring. Provided letter critiquing the regulatory requirements and recommending improvements.

University of California, San Francisco Mission Bay Campus Vibration Study, CA
Conducted measurements and analysis of ground vibration across site due to heavy traffic on Third Street. Analysis included assessment of pavement surface condition and propensity of local soil structure.

EXHIBIT C

ADAMS BROADWELL JOSEPH & CARDOZO
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DANIEL L. CARDOZO

**Not admitted in California. Licensed in Colorado.*

November 3, 2021

Via Email and U.S. Mail

Betty Mitre
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Jessica Lowry
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Via Email Only

Thai-Chau Le, Planner, Thai-Chau.Le@sanjoseca.gov

Re: Request for *Immediate Access* to Public Records – Empire Lumber Mixed Use Project (File Nos: PDC15-067, ER20-102)

Dear Ms. Mitre, Ms. Lowry and Ms. Le,

We are writing on behalf of Silicon Valley Residents for Responsible Development ("Silicon Valley Residents") to request ***immediate access*** to any and all public records in the City of San Jose's possession referring or related to the Empire Lumber Mixed Use Project, File Nos: PDC15-067, ER20-102, ("Project"), proposed by Pacific States Industries Development ("Applicant"). Our request includes, but is not limited to, any and all materials, applications, correspondence, resolutions, reports, studies, memos, notes, analyses, electronic mail messages, files, maps, charts, and/or any other documents related to the Project.

The Project proposes to construct a mixed-use building with 408 residential units, approximately 60,330 square feet of commercial space, and an indoor parking garage on a 2.77 gross-acre site at 1260 East Santa Clara Street in San Jose (Accessor's Parcel Numbers 467-33-001, -002, -003, -004, -006, -007, and -008).

Silicon Valley Residents is an unincorporated association of individuals and labor organizations that may be adversely affected by the potential public impacts associated with Project development. Silicon Valley Residents includes: the International Brotherhood of Electrical Workers Local 332, Plumbers & Steamfitters Local 393, Sheet Metal Workers Local 104, Sprinkler Fitters Local 483 and their members and their families; and other individuals that live and/or work in the City of San Jose and Santa Clara County.

This request is made pursuant to the California Public Records Act, Government Code §§ 6250, *et seq*. This request is also made pursuant to Article I, section 3(b) of the California Constitution, which provides a constitutional right of access to information concerning the conduct of government. Article I, section 3(b) provides that any statutory right to information shall be broadly construed to provide the greatest access to government information and further requires that any statute that limits the right of access to information shall be narrowly construed.

We request ***immediate access*** to review the above documents pursuant to section 6253(a) of the Public Records Act, which requires public records to be "open to inspection at all times during the office hours of the state or local agency" and provides that "every person has a right to inspect any public record." Gov. Code § 6253(a). Therefore, the 10-day response period applicable to a "request for a copy of records" under Section 6253(c) does not apply to this request.

Pursuant to Government Code Section 6253.9, if the requested documents are available in electronic format, please upload them to a file hosting service such as NextRequest, Sharepoint or a similar program. Alternatively, if the electronic documents are 10 MB or less (or can be easily broken into sections of 10 MB or less), they may be emailed to jlaurain@adamsbroadwell.com as attachments.

Should you have any questions, please email me at jlaurain@adamsbroadwell.com or leave me a message at (650) 589-1660 and I will return your call.

Thank you for your assistance with this matter.

Sincerely,

Janet Laurain
Paralegal

JML:ljl

5425-002j

EXHIBIT D

From: Mitre, Betty <Betty.Mitre@sanjoseca.gov>
Sent: Friday, November 12, 2021 3:40 PM
To: Janet M. Laurain <jlaurain@adamsbroadwell.com>
Cc: Le, Thai-Chau <Thai-Chau.Le@sanjoseca.gov>
Subject: FW: Request for Immediate Access to Public Records – Empire Lumber Mixed Use Project (5425)

Hi Janet,

The Planning Department will need an extension for this request. I will have the records to you by November 29 or earlier.

Thank you,

Betty Mitre
Staff Specialist | Planning, Building & Code Enforcement
City of San José | 200 East Santa Clara Street
Email: betty.mitre@sanjoseca.gov

RESPONSE TO ADAMS, BROADWELL, JOSEPH & CARDOZO LETTER TO PLANNING COMMISSION

A. Adams, Broadwell, Joseph & Cardozo to Planning Commission (dated November 17, 2021)

Comment A.1: We write on behalf of Silicon Valley Residents for Responsible Development ("Silicon Valley Residents") to provide comments on the Initial Study/Mitigated Negative Declaration and associated Mitigation Monitoring and Reporting Program (collectively, "IS/MND") prepared by the City of San Jose ("City") for the Empire Lumber Mixed-Use Project, which includes a proposed Planned Development Rezoning and other approvals for a mixed-use development with a minimum of 60,331 square feet of commercial and up to 408 residential units on a 2.77 gross-acre site (collectively, "Project").

The Project site is located at 1260 East Santa Clara Street in San Jose (Accessor's Parcel Numbers 467-33-001, -002, -003, -004, -006, -007, and -008). The Project would demolish existing structures on the Project site, and construct a new mixed-use building. The mixed-use building would be seven stories with a maximum height of 85 feet. The building would contain up to approximately 60,330 square feet of commercial space and up to 408 residential units, as well as indoor parking garage space. The proposed building would have one level of below-grade parking and two levels of above-grade parking. The commercial space and residences would wrap the parking levels on the first and second floors.

The Project also includes a Planned Development Rezoning from a Commercial General Zoning District and Light Industrial Zoning District to a Commercial Pedestrian Planned Development Zoning District.

We reviewed the IS/MND and its technical appendices with assistance of air quality and health risk experts Matt Hagemann, P.G, C.Hg. and Paul E. Rosenfeld, PhD from Soil / Water / Air Protection Enterprise ("SWAPE"). We also received technical assistance from noise expert Derek Watry.

As explained more fully below, an EIR is required because substantial evidence supports a fair argument that the Project may result in significant impacts. As a result of its shortcomings, the IS/MND lacks substantial evidence to support its conclusions and fails to properly mitigate the Project's significant impacts to air quality and public health, and from greenhouse gases and noise. Instead, substantial evidence supports a fair argument that the Project will result in significant and unmitigated impacts in these areas. The City cannot approve the Project until the errors in the IS/MND are remedied and substantial evidence supporting its conclusions is provided in an environmental impact report ("EIR"). We reserve the right to supplement these comments at later proceedings and hearings related to the Project.

I. Statement of Interest

Silicon Valley Residents is an unincorporated association of individuals and labor organizations that may be adversely affected by the potential public and worker health and safety hazards, and the environmental and public service impacts of the Project. Residents includes San Jose residents Ricardo Diaz and Edwin Lopez Silva, the International Brotherhood of Electrical Workers Local 332,

Plumbers & Steamfitters Local 393, Sheet Metal Workers Local 104, Sprinkler Fitters Local 483, along with their members, their families, and other individuals who live and work in the City of San Jose.

Individual members of Silicon Valley Residents live, work, recreate, and raise their families in the City and in the surrounding communities. Accordingly, they would be directly affected by the Project's environmental and health and safety impacts. Individual members may also work on the Project itself. They will be first in line to be exposed to any health and safety hazards that exist on site.

In addition, Silicon Valley Residents has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for businesses and industries to expand in the region, and by making the area less desirable for new businesses and new residents. Indeed, continued environmental degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduce future employment opportunities.

> **Response A.1:** The comment above is informational. Refer to Responses A.4 through A.34 below regarding specific comments on the IS/MND.

Comment A.2: II. The City Failed to Provide Timely Access to Documents Referenced and Incorporated by Reference in the IS/MND.

Silicon Valley Residents did not have access to all of the documents referenced and incorporated by reference in the IS/MND. As a result, Silicon Valley Residents was unable to complete its review and analysis of the IS/MND prior to submitting these comments.

On November 3rd, we submitted a request for immediate access to public records relating to the Project. This request was made pursuant to the California Public Records Act, and Article I, section 3(b) of the California Constitution, which provides a constitutional right of access to information concerning the conduct of government. Section 6253(a) of the Public Records Act requires public records to be "open to inspection at all times during the office hours of the state or local agency" and provides that "every person has a right to inspect any public record." Gov. Code § 6253(a). Therefore, the 10-day response period applicable to a "request for a copy of records" under Section 6253(c) did not apply to this request.

On November 12th, the City responded that it would need an extension for our request, and would be able to provide access to the records by November 29th. We therefore reserve our right to submit supplemental comments on the IS/MND and the Project at a future date.

> **Response A.2:** On November 3, 2021, the commenter requested information pertaining to this project under the California Public Records Act. However, the commenter incorrectly claimed that the request was for information pertaining to all the documents referenced and incorporated by reference in the environmental analysis. Rather, the November 3, 2021 Public Records Act request specified that it was to obtain documents that "includes, but is not limited to, any and all materials,

applications, correspondence, resolutions, reports, studies, memos, notes, analyses, electronic mail messages, files, maps, charts, and/or any other documents related to the Project" (Refer to Exhibit A). As the project is from 2015, the City requested an extension to adequately provide all the information for the project including older site plans, previously circulated environmental documents, and all the items requested. The City provided documents in response to the request on November 23, 2021.

Furthermore, the City circulated the IS/MND during the public review period from December 18, 2020 to January 13, 2021, and responded to all comments submitted during public circulation on November 5, 2021. There was no request from the commenter for any environmental documents prior to, during, or immediately after public circulation of the IS/MND. Therefore, the comments and requests provided now about the environmental documents are untimely for the administrative record and are outside of the public comment period under CEQA. The responses by the City below to the untimely November 17, 2021 Adams Broadwell letter are made to inform the City Council, as a courtesy to the public, and to insure completeness of the record of this project.

Comment A.3: III. An EIR is Required

CEQA requires that lead agencies analyze any project with potentially significant environmental impacts in an EIR. "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." 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."

CEQA's purpose and goals must be met through the preparation of an EIR, except in certain limited circumstances. CEQA contains a strong presumption in favor of requiring a lead agency to prepare an EIR. This presumption is reflected in the "fair argument" standard. Under that standard, a lead agency "shall" prepare an EIR whenever substantial evidence in the whole record before the agency supports a fair argument that a project may have a significant effect on the environment.

In contrast, a mitigated negative declaration may be prepared only when, after preparing an initial study, a lead agency determines that a project may have a significant effect on the environment, but:

> (1) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment.

Courts have held that if "no EIR has been prepared for a nonexempt project, but substantial evidence in the record supports a fair argument that the project may result in significant adverse impacts, the proper remedy is to order preparation of an EIR." The fair argument standard creates a "low threshold" favoring environmental review through an EIR, rather than through issuance of a negative

declaration. An agency's decision not to require an EIR can be upheld only when there is no credible evidence to the contrary.

"Substantial evidence" required to support a fair argument is defined as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached." According to the CEQA Guidelines, when determining whether an EIR is required, the lead agency is required to apply the principles set forth in Section 15064, subdivision (f):

> [I]n marginal cases where it is not clear whether there is substantial evidence that a project may have a significant effect on the environment, the lead agency shall be guided by the following principle: If there is disagreement among expert opinion supported by facts over the significance of an effect on the environment, the Lead Agency shall treat the effect as significant and shall prepare an EIR. 13 Pub. Resources Code, § 21064.5 (emphasis added).

Furthermore, CEQA documents, including EIRs and MNDs, must mitigate significant impacts through measures that are "fully enforceable through permit conditions, agreements, or other legally binding instruments." Deferring formulation of mitigation measures to post-approval studies is generally impermissible. Mitigation measures adopted after Project approval deny the public the opportunity to comment on the Project as modified to mitigate impacts. If identification of specific mitigation measures is impractical until a later stage in the Project, specific performance criteria must be articulated and further approvals must be made contingent upon meeting these performance criteria. Courts have held that simply requiring a project applicant to obtain a future report and then comply with the report's recommendations is insufficient to meet the standard for properly deferred mitigation.

With respect to this Project, the MND fails to satisfy the basic purposes of CEQA. The MND fails to adequately disclose, investigate, and analyze the Project's potentially significant impacts, and fails to provide substantial evidence to conclude that impacts will be mitigated to a less than significant level. Because the MND lacks basic information regarding the Project's potentially significant impacts, the MND's conclusion that the Project will have a less than significant impact on the environment is unsupported. The City failed to gather the relevant data to support its finding of no significant impacts. Moreover, substantial evidence shows that the Project may result in potentially significant impacts. Therefore, a fair argument can be made that the Project may cause significant impacts requiring the preparation of an EIR.

IV. There is a Fair Argument that the Project May Cause Significant Impacts that Require the City to Prepare an EIR

Under CEQA, a lead agency must prepare an EIR whenever substantial evidence in the whole record before the agency supports a fair argument that a project may have a significant effect on the environment. The fair argument standard creates a "low threshold" favoring environmental review through an EIR, rather than through issuance of a negative declaration. An agency's decision not to require an EIR can be upheld only when there is no credible evidence to the contrary. Substantial evidence can be provided by technical experts or members of the public. "If a lead agency is presented with a fair argument that a project may have a significant effect on the environment, the

lead agency shall prepare an EIR even though it may also be presented with other substantial evidence that the project will not have a significant effect."

As discussed below, there is a fair argument supported by substantial evidence that the Project may result in significant impacts relating to public health, air quality, greenhouse gases, and noise. The City is required to prepare an EIR to evaluate the Project's impacts and propose mitigation measures to reduce those impacts to a less-than-significant level.

> **Response A.3:** The commenter provides no specific comments regarding the IS/MND. Refer to Responses A.4 through A.34 below.

Comment A.4: A. The IS/MND Fails to Identify, Analyze, and Mitigate the Project's Potentially Significant Health Impacts

1. The City Failed to Disclose the Project's Operational Health Risks

The City assumes the Project's health impacts from its operational emissions would be less than significant. However, the IS/MND fails to disclose operational toxic air contaminant ("TAC") emissions or evaluate the health risk impacts associated with Project operation. This failure to conduct an operational health risk analysis ("HRA") violates CEQA.

An agency must support its findings of a project's potential environmental impacts with concrete evidence, with "sufficient information to foster informed public participation and to enable the decision makers to consider the environmental factors necessary to make a reasoned decision." A project's health risks "must be 'clearly identified' and the discussion must include 'relevant specifics' about the environmental changes attributable to the Project and their associated health outcomes."

Courts have held that an environmental review document must disclose a project's potential health risks to a degree of specificity that would allow the public to make the correlation between the project's impacts and adverse effects to human health. In *Bakersfield Citizens for Local Control v. City of Bakersfield* ("Bakersfield"), the court found that the EIRs' description of health risks were insufficient and that after reading them, "the public would have no idea of the health consequences that result when more pollutants are added to a nonattainment basin." And in *Sierra Club v. County of Fresno* ("Sierra Club"), the Supreme Court of California disapproved of an EIR that failed to compare the health effects from exposure to ozone emissions against applicable thresholds. The Court held that it is insufficient to merely state that "exposure to ambient levels of ozone ranging from 0.10 to 0.40 [parts per million of ozone] has been found to significantly alter lung functions" – the EIR must also compare the Project's impacts against this threshold.

Here, the Project is anticipated to generate 3,169 average daily vehicle trips. These trips will generate exhaust emissions and expose nearby sensitive receptors to diesel particulate matter ("DPM"), which is a TAC. However, the IS/MND completely omits disclosure of the Project's operational TAC emissions and associated health impacts. This omission is in clear violation of the requirement discussed in Bakersfield to disclose a project's potential health risks to a degree of specificity that would allow the public to make the correlation between the project's impacts and adverse effects to human health.

The City's failure to disclose the Project's operational health impacts also violates Sierra Club's requirement to compare the health effects from exposure to ozone emissions against applicable thresholds. The City acknowledges that the applicable threshold is set by the Bay Area Air Quality Management District ("BAAQMD"):

Table 2-1
Air Quality CEQA Thresholds of Significance*

Pollutant	Construction-Related	Operational-Related
Project-Level		
Risk and Hazards for new sources and receptors (Individual Project)*	Same as Operational Thresholds**	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient $PM_{2.5}$ increase: > 0.3 $\mu g/m^3$ annual average Zone of Influence: 1,000-foot radius from property line of source or receptor

As shown in the above table, BAAQMD requires projects within 1,000 feet of an existing sensitive receptor or source to evaluate the cancer risk associated with Project operation. However, the City failed to conduct this analysis. By claiming a less than significant impact without conducting a quantified operational HRA for nearby, existing sensitive receptors, the IS/MND fails to compare the excess health risk impact to the applicable BAAQMD threshold of 10 in one million. Because the City does not compare the Project's health effects against applicable thresholds, the City violates the requirements of CEQA.

The failure to prepare an operational HRA also conflicts with scientific authority. California Environmental Protection Agency's Office of Environmental Health Hazard Assessment ("OEHHA") guidance recommends that exposure from projects lasting more than 6 months be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident ("MEIR"). The Project's operations will last more than 6 months. Therefore, an analysis of health risk impacts posed to nearby sensitive receptors from Project operation must be included in an EIR for the Project.

In light of the City's failure to disclose the Project's potential health risks, the City must prepare an EIR which includes an operational HRA.

Response A.4: OEHHA's Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments is specifically for assessment of projects under the Air Toxics Hot Spots Program. The guidance manual was developed by OEHHA, in conjunction with the California Air Resources Board (CARB) for use in implementing the Air Toxics Hot Spots Program. The ARB states that the Air Toxics Hot Spots Information and Assessment Act requires stationary sources to report the types and quantities of certain substances routinely released into the air.

The Air Toxics Hot Spots Information and Assessment Act specifically defines a facility as follows:

44304. "Facility" means every structure, appurtenance, installation, and improvement on land which is associated with a source of air releases or potential air releases of a hazardous material.

ARB specifically notes that applicability for the HRA assessment is based on the following types of facilities.

- Facilities that emit >10 tons per year of Total Organic Gasses (TOG), Particulate Matter (PM), Nitrogen Oxides (NOx), or Sulfur Oxides (SOx)
- Facilities that emit >5 tons/year of any Federal Hazardous Air Pollutant (HAP)
- Facilities that emit <10 tons/year like gas stations, dry cleaners, hazardous waste incinerators, metal platers using cadmium or chromium, wastewater treatment facilities, etc.

As stated in Section 4.3 Air Quality and Appendix A of the IS/MND, the project does not propose significant operational sources of TACs, such as freeways and high-traffic roads, commercial distribution centers, rail yards, ports, refineries, chrome platers, dry cleaners, or gasoline stations. The project is predominately residential, and would primarily generate passenger vehicle traffic, which is not a substantial TAC source. Only diesel delivery or landscape service trucks would be considered an operational source of TACs, of which the project would generate a small amount. Because passenger vehicles are not a significant source of TACs, a quantitative operational TAC impact assessment was not completed for the IS/MND, consistent with City practice in its environmental documents. This is also consistent with BAAQMD guidance, which states that passenger vehicles are not a substantial source of TACs.

Given the lack of TAC emission sources included in the project, the commenters assessment inaccurately stated that the project would result in significant operational health risk impacts. As described below in Response A.5, the information provided by the commenter is not substantial evidence of an actual project impact. Operational health risk impacts at adjacent sensitive receptors would be less than significant.[1]

In terms of impacts with respect to ozone levels, operational emissions caused by the project were predicted and shown to be below significance thresholds in Section 4.3 Air Quality and Appendix A of the IS/MND. This analysis included emissions of ozone precursor pollutants (i.e., reactive organic gases and nitrogen oxides). BAAQMD recognizes that air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project

[1] Personal Communication: James Reyff – Illingworth & Rodkin. December 2, 2021.

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. Since the project would have emissions below the thresholds developed by BAAQMD, the project would not contribute to elevated ozone levels. The commenter provided no evidence to the contrary in regard to the project emissions or BAAQMD's significance thresholds. Therefore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5.

Comment A.5: 2. A Screening-Level Analysis Shows the Project has Potentially Significant Health Risks

Because the City did not conduct an operational HRA for the Project, SWAPE prepared a screening level HRA using AERSCREEN, a screening level air quality dispersion model. AERSCREEN is included in OEHHA guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

SWAPE projects that over the course of Project construction and operation, the excess cancer risks posed to infants, children, and adults are approximately 7.21, 80.3, and 12.4 in one million. The excess cancer risk over the course of a residential lifetime (30 years), utilizing age sensitivity factors, is approximately 98.9 in one million. The child, adult, and lifetime cancer risks exceed the BAAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the IS/MND."

The Maximally Exposed Individual at an Existing Residential Receptor

Activity	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	ASF	Cancer Risk with ASFs*
Construction	0.25	0.2427	361	10	2.8E-06
3rd Trimester Duration	***0.25***			***3rd Trimester Exposure***	***2.8E-06***
Construction	0.97	0.2427	1090	10	3.3E-05
Operation	1.03	0.3027	1090	10	4.4E-05
Infant Exposure Duration	***2.00***			***Infant Exposure***	***7.6E-05***
Operation	14.00	0.3027	572	3	7.9E-05
Child Exposure Duration	***14.00***			***Child Exposure***	***7.9E-05***
Operation	14.00	0.3027	261	1	1.2E-05
Adult Exposure Duration	***14.00***			***Adult Exposure***	***1.2E-05***
Lifetime Exposure Duration	**30.00**			**Lifetime Exposure**	**1.70E-04**

Under the fair argument legal standard, an EIR is required whenever "there is substantial evidence that any aspect of the project, either individually or cumulatively, may cause a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial." Since SWAPE's HRA identifies a significant public health impact not disclosed in the IS/MND, an EIR must be prepared.

Response A.5: The commenter incorrectly asserts that traffic produced by the proposed project would cause significant health risks. As noted in Response A.4, there is no requirement to model project traffic because daily trips are comprised primarily of automobiles which do not emit diesel particulate matter that are the primary TAC emitted by traffic. Per BAAQMD, roads with less than 10,000 total vehicles per day and less than 1,000 trucks per day are categorized as minor, low impact sources that do not pose a significant health impact even in combination with other nearby sources. As such, traffic trips generated by the project (considered as a source) can be excluded from the CEQA evaluation.[2] As stated in the IS/MND, the project would generate approximately 3,169 net new daily trips, which is well below the 10,000 daily vehicles per day threshold. Therefore, the Air Quality Analysis for the IS/MND complies with the BAAQMD's guidance and no health risk assessment was required.

The commenter's assertion that cancer risk levels would be significant relied on a screening level risk assessment performed by SWAPE (Exhibit A of the comment letter). SWAPE's screening level analysis is misleading and inaccurate.

First, SWAPE incorrectly assigns the emissions of DPM from project traffic to the project site. However, the emissions that come from project traffic would be spread over the travel ways used by project generated traffic. Most of the emissions would occur more than 1,000 feet from the project site. The SWAPE analysis did not account for the existing conditions on-site and did not consider traffic generated by existing land uses that would be replaced by project traffic.

Second, the SWAPE modeling used inaccurate exposure periods assuming that all construction emissions from the two-year construction project would occur in one year followed by operation the second year, which decreases the actual exposure period and falsely increases exposure levels.

Finally, the SWAPE analysis relied upon a screening model, AERSCREEN, to inflate their results rather than using the more accurate AERMOD model that is recommended by BAAQMD[3]. The AESCREEN model is a screening model that computes the maximum 1-hour concentration from a source and then applies a simple

[2] Bay Area Air Quality Management District, 2012. *Recommended Methods for Screening and Modeling Local Risks and Hazards.* May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

[3] Bay Area Air Quality Management District (BAAQMD), 2012*, Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0*. May.

factor to estimate annual exposures. The model assumes that the source is continuous for every hour of the day for 365 days with adverse meteorological conditions that lead to conservatively high concentrations. AERSCREEN is a screening model that is recommended by U.S. EPA to identify the potential for impacts and not used to quantify significant impacts. If significant impacts are predicted using this model, then further analysis should be conducted. In addition, this model is inappropriate for modeling traffic sources.[4] The analysis using AERSCREEN was faulty to begin with because, as described above, it greatly overestimates localized TAC emissions. Therefore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5. More importantly, due to the erroneous assumptions and incorrect modelling methodology used by the commenting party, the comment does not constitute substantial evidence in light of the whole record that the project will result in a significant impact to the environment which cannot be mitigated or avoided.

Comment A.6: B. The IS/MND Fails to Disclose the Project's Potentially Significant Air Quality and GHG Impacts

Under CEQA, lead agencies must consider a project's air quality and GHG emissions. The IS/MND's air quality and GHG analyses rely on emissions calculated with the California Emission Estimator Model ("CalEEMod") 2016.3.2. The model uses site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type to calculate a project's construction and operational emissions.

After reviewing the IS/MND, SWAPE concluded that "several of the values inputted into the model were not consistent with information disclosed in the IS/MND." As a result, the Project's construction and operational emissions may be underestimated. An EIR must be prepared to include updated air quality and GHG analyses that accurately evaluate the Project's impacts.

First, the City's analysis underestimates parking land use size. According to the IS/MND, "[t]he parking garage would have approximately 554 parking spaces." However, the air quality modeling assumes 534 parking spaces. SWAPE explains that this underestimation is relevant because the square footage of parking land uses is used for certain calculations such as determining the area to be painted and stripped (which implicates VOC emissions from architectural coatings), and volume to be ventilated (which implicates energy impacts).

[4] According to the U.S. EPA (40 CFR Part 51, Appendix W – Guidelines on Air Quality Models), there are generally two levels of sophistication of air quality models. The first level consists of screening models that provide conservative modeled estimates of the air quality impact of a specific source or source category based on simplified assumptions of the model inputs (e.g., preset, worst-case meteorological conditions). If a screening model indicates that the increase in concentration attributable to the source could cause or exacerbate air quality conditions, then the second level of more sophisticated models should be applied unless appropriate controls or operational restrictions are implemented based on the screening modeling. AERSCREEN is a first-level screening model that is designed to provide a conservative (i.e., overestimate) of air pollutant impacts.

Response A.6: The project did change slightly after completion of the air quality modeling by adding 20 parking spaces. As proposed for approval before the City Council, the project would have a maximum of 408 residential units, 60,330 square feet of commercial space, and 554 parking spaces. The air quality modeling included 408 residential units, 60,331 square feet of commercial space (which is one square foot more than the actual project proposal), and 534 parking spaces. The additional 20 parking spaces amounts to a 3.7 percent increase in parking spaces over what was evaluated in the IS/MND. This is a minor adjustment that has a negligible effect on the model results. Furthermore, as shown in Table 4.3-5 (page 41) of the IS/MND, as analyzed the projects construction emissions would be well below the BAAQMD Thresholds. The table is shown below for reference.

Table Error! No text of specified style in document.**-1: Construction Period Criteria Pollutant Emissions**

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
Total Construction Emissions (from CalEEMod) (tons)	3.3	0.8	<0.1	<0.1
Total Construction Emissions (from EMFAC2017) (tons)	2.0	2.4	0.2	0.1
Total Construction Emissions (tons)	5.3	3.2	0.2	0.1
Average Daily Emissions (pounds per day)	41.4	24.6	1.9	1.0
BAAQMD Thresholds (pounds per day)	***54***	***54***	***82***	***54***
Exceed Threshold	**No**	**No**	**No**	**No**

As analyzed with 408 residential units, 534 parking spaces, and 60,331 square feet of retail, construction emissions would be below the BAAQMD thresholds.

An average size parking stall is nine feet by 18 feet. As shown on the project plans, the parking stalls on-site would also be nine feet by 18 feet. Therefore, each parking space would be 162 square feet and 20 parking spaces would equal 3,240 square feet. The parking structure modeled in CalEEMod was over 200,000 square feet and the total square feet for the project exceeded 680,000 square feet. This increase would represent a potential increase of 0.5 percent of constructable area, which is a minimal change.

The commenter states that "this underestimation is relevant because the square footage of parking land uses is used for certain calculations such as determining the area to be painted and stripped (which implicates VOC emissions from architectural coatings), and volume to be ventilated (which implicates energy impacts)." While the calculated emission numbers shown in the table above may be slightly understated due to the difference in parking, the small increase in construction emissions resulting from the additional square footage represented by 20 parking spaces would not be sufficient to increase ROG emissions by 12.6 pounds per day, NOx emissions by 29.4 pounds per day, PM10 emissions by 80.1 pounds per day, or PM2.5 emissions by 53 pounds per day.

For the reasons stated above, the commenter is incorrect that the difference in parking is relevant as it would not change the conclusion of the IS/MND or require mitigation to be implemented during construction. Therefore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5. Further, the comment does not constitute substantial evidence in light of the whole record that the project will result in a significant impact to the environment which cannot be mitigated or avoided.

Comment A.7: Second, the City's analysis fails to model all proposed land uses at the Project site. According to the IS/MND, "[a] pool deck, podium garden, and club/fitness area (approximately 2,442 square feet) are proposed on top of the parking structure on the third floor." However, the City's air modeling fails to include the proposed pool and fitness area as a land use type. This inconsistency is significant, as each land use type in CalEEMod is assigned a distinctive set of energy usage emission factors, and includes a specific trip rate that CalEEMod uses to calculate mobile-source emissions.

Response A.7: There would be no additional vehicle trips (beyond what has already been analyzed) generated by the pool deck and club/fitness area as these are private amenities for the residents of the project site and not a public destination for persons living off-site.

With regard to energy usage for these project components, the energy usage would be minimal relative to the overall project. As shown in Table 4.3-6 (page 41) of the IS/MND, as analyzed the projects operational emissions would be well below the BAAQMD Thresholds. The table is shown below for reference.

Table Error! No text of specified style in document.**-2: Operational Criteria Pollutant Emissions**

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2023 Annual Project Operational Emissions (tons)	3.3	1.7	2.2	0.6
BAAQMD Thresholds (tons per year)	***10***	***10***	***15***	***10***
Exceed Threshold	**No**	**No**	**No**	**No**
Average Daily Net Project Operational Emissions (pounds)	18.1	9.2	12.2	3.5
BAAQMD Thresholds (pounds per day)	***54***	***54***	***82***	***54***
Exceed Threshold	**No**	**No**	**No**	**No**

Given that the project as analyzed with 408 residential units, 534 parking spaces, and 60,331 square feet of retail would result in emissions that are substantially lower than the BAAQMD thresholds, the addition of an outdoor pool and a 2,442 square foot club/fitness area would not cause the project to exceed the thresholds. Specifically,

emissions associated with the amenity spaces would not increase ROG by 35.9 pounds per day, NOx by 44.8 pounds per day, PM10 by 69.8 pounds per day, and PM2.5 by 50.5 pounds per day.

The commenter is incorrect that the difference in emissions with the amenity spaces is significant as it would not change the conclusion of the IS/MND. Therefore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5. In addition, the comment does not constitute substantial evidence in light of the whole record that the project will result in a significant impact to the environment which cannot be mitigated or avoided.

Comment A.8: Third, the City's analysis relies on inconsistent off-road construction equipment usage hours. The City's Air Quality Report states that the equipment required for construction would be operated for 8 hours per day, yet the City's CalEEMod output files assume far lower usage hours. By relying on these inconsistent equipment usage hours, the model may underestimate the Project's construction-related emissions.

Response A.8: Section 4.3, Page 31, of the CalEEMod User's Guide (see http://www.caleemod.com/) for modeling construction emissions states that *"if the user has more detailed site-specific equipment and phase information, the user should override the default values."* Project-specific construction data were provided were provided for this project. In addition, CalEEMod construction default data were developed based on surveys of construction sites performed by South Coast Air Quality Management District (SCAQMD) staff, as described in Appendix E of the CalEEMod User's Guide (see http://www.caleemod.com/) and the survey report for projects five acres or less.[5] The surveys addressed projects that were less than five acres and projects that were up to 30 acres in size and 50 feet in height. Based on the results of the construction site survey, SCAQMD staff has developed typical construction site scenarios. A "typical" construction scenario means that the construction does not require additional activities such as major cut-and-fill for projects located on a hill or steep grade; or major soil excavation and hauling off-site for a project that includes sub-grade levels or parking; or demolition of buildings greater than 50 feet tall (assumed to be about four stories). Use of default CalEEMod construction assumptions would be inappropriate for this project, especially in lieu of the project-specific information provided.

A detailed construction schedule and list of construction equipment usage, in terms of hours per day and number of days per phase, was provided for the analysis. CalEEMod inputs require hours per day per phase, so the total number of hours

[5] South Coast Air Quality Management District. *Sample Construction Scenarios for Projects Less Than Five Acres in Size.* 2005

equipment would operate during the phase is divided by the number of days per phase. Equipment operates six to eight hours per day, but not for every day of the construction phase. As a result, the hours per day entered into CalEEMod represent the average hours per day during that phase of construction, which is typically less than eight hours.

Comment A.9: Fourth, the City underestimates the Project's operational trip rates. According to the City's Transportation Analysis, the proposed Project is expected to generate approximately 3,169 daily operational vehicle trips. However, the City's CalEEMod analysis assumes 3,229.53 weekday trips, 3,081.45 Saturday trips, and 2,138.56 Sunday trips. The average of these trips (3,052.52) is lower than the number in the Transportation Analysis (3,169). By including underestimated operational vehicle trip rates, the City's CalEEMod analysis underestimates the Project's mobile-source operational emissions.

Response A.9: As analyzed in Section 4.17 and Appendix F of the IS/MND, the trip rate in the transportation analysis is for weekday trips only. The CalEEMod modeling overestimated the weekday trips slightly compared to the traffic analysis which accounts for the CalEEMod estimate showing 60 additional weekday trips.

To estimate annual emissions, assumptions for Saturday and Sunday have to be made and were based on the relationship CalEEMod uses for those weekend days compared to weekday trips. Trip generation is slightly lower on Saturday and lower on Sunday compared to weekday volumes. The use of these rates is explained on Page 4 of the *Updated Project Criteria Air Pollutant and GHG Emissions Modeling* memo prepared by Illingworth & Rodkin, Inc. in April 2020 and included in Appendix A of the IS/MND. This is the correct method.

Furthermore, the transportation assessment (Appendix F of the IS/MND) states the specific trip generation rates from the *Institute of Transportation Engineers (ITE) Manual* (10th Edition, 2017) to calculate the daily trips. For the residential component of the project, the ITE Land Use Code 221 (Multifamily Housing [Mid-Rise]) was used as it is the closest representation of the proposed project. The ITE Manual shows explicitly that the 5.44 daily trip rate is for weekdays (Page 73, Volume 2, Part 1), and that the AM and PM Peak Hour rates are also specifically for weekday traffic (Pages 74-75, Volume 2, Part 1). The same is true for the commercial component (ITE Land Use Code 820 – Shopping Center), which specifically notes the trip rates used as being for weekday traffic (Pages 138-140, Volume 2, Part 3). Therefore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5. In addition, the comment does not constitute substantial evidence in light of the whole record that the project will result in a significant impact to the environment which cannot be mitigated or avoided.

Comment A.10: Fifth, SWAPE determined that the "pass-by" trips expected to occur throughout the Project's operation were double-counted by the IS/MND's analysis. The Project's retail use generates three types of trips: primary, diverted, and pass-by. Pass-by trips are much shorter than the other types of trips, and thus have lower emissions. SWAPE's review of the City's CalEEMod model shows that the City divides the Project's trips into the three types, but then takes an additional "Pass-by trip reduction." By taking pass-by reductions that were already accounted for, the City underestimates the trip lengths associated with the Project's daily vehicle trips. As a result, the City's models underestimate the Project's mobile-source operational emissions.

Response A.10: No additional pass-by trip reduction was taken. As stated in Appendix F of the IS/MND, Pass-by trips are trips that would already be on the adjacent roadways (and are therefore already counted in the existing traffic) but would turn into the site while passing by. Justification for applying the pass-by-trip reduction is founded on the observation that such retail traffic is not actually generated by the retail development but is already part of the ambient traffic levels. The modeling relied on the default trip adjustments for pass-by trips in CalEEMod and that is why the CalEEMod weekday trip generation is greater than the rate from the transportation analysis. This results in a very small increase in emissions and would not change the conclusions of the analysis.

There were two choices for adjusting pass-by trips for this project: 1) use the adjustment provided by the traffic consultant or 2) use the default adjustment in CalEEMod. Applying the traffic consultant's adjustment is complicated in CalEEMod because it is tied to the trip type for that use (i.e., worker, customer, other) and it changes the fractions of other trip types (i.e., primary and diverted). This would require manipulation of the primary and diverted trip rates in CalEEMod. Therefore, the CalEEMod adjustment was used instead of the traffic report adjustment. In either case, the adjustment is very small and doesn't affect results. The commenter incorrectly states that these were double counted because they believe we used traffic numbers that were adjusted for retail pass-by trips and then adjusted those again in the model for pass-by effects. This was not the case. Therefore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5. In addition, the comment does not constitute substantial evidence in light of the whole record that the project will result in a significant impact to the environment which cannot be mitigated or avoided.

Comment A.11: Sixth, the City's analysis assumes that the Project's wastewater would be treated 100% aerobically. This assumption is unsubstantiated. The IS/MND indicates that "[t]he wastewater generated on the project site following project occupancy would be collected and conveyed to the San José-Santa Clara Regional Wastewater Facility for treatment" SWAPE's review of the San José-Santa Clara Regional Wastewater Facilities treatment process reveals the use of anaerobic bacteria in the digesters phase of treatment. As such, the assumption that the Project's wastewater would be treated 100% aerobically is unsupported. This assumption may result in the Project's GHG impacts

being underestimated, as each type of wastewater treatment system is associated with different GHG emission factors.

Response A.11: CalEEMod defaults to a small percentage of septic and facultative lagoons which are inappropriate for this project, where wastewater would be treated at a municipal wastewater treatment plant. Biosolids removed from the wastewater treatment would be processed using anerobic digesters, but the treatment plant would capture these emissions.[6] Because these emissions are captured, the difference in emissions from operation of the project with and without this change is minor. Therefore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5. In addition, the comment does not constitute substantial evidence in light of the whole record that the project will result in significant impact to the environment which cannot be mitigated or avoided.

Comment A.12: SWAPE concludes that the City's air models cannot be relied on until these errors are remedied. The City thus lacks substantial evidence to conclude that air quality and GHG impacts will be less than significant. Moreover, substantial evidence supports a fair argument that the air quality and GHG impacts may be significant when the errors in the analysis are corrected. Therefore, the City must prepare an EIR.

Response A.12: As explained in Responses A.4 through A.11, SWAPE's interpretation of the air quality assessment is incorrect and there are no error which would change the conclusions of the analysis. As such, there is no substantive evidence presented which would require the preparation of an EIR for the proposed project. Furthermore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5. In addition, the comment does not constitute substantial evidence in light of the whole record that the project will result in significant impact to the environment which cannot be mitigated or avoided.

Comment A.13: C. The City's Greenhouse Gas Significance Thresholds are not Supported by Substantial Evidence

Under the CEQA Guidelines, a lead agency must analyze a project's impacts on GHG emissions. The Guidelines provide that "[i]n determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's

[6] Capture means the emissions are not released but contained within the facility and abated on-site.

incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable."
Here, the EIR presents two thresholds for determining whether the Project will result in significant impacts from GHGs: an efficiency threshold of 2.6 MT CO2e/year/service population and a bright-line threshold of 660 MT CO2e/year. These thresholds are based on BAAQMD's May 2017 CEQA Air Quality Guidelines, which recommend a GHG threshold of 1,100 metric tons or 4.6 MT CO2e/year/service population. The BAAQMD Guidelines are state-level metrics developed to meet the 2020 GHG targets set by AB 32 (reducing GHG emissions to 1990 levels by 2020). These metrics are based on statewide data. For example, the 4.6 MT CO2e/year/service population metric is calculated by dividing the "Statewide Land Use Sectors Greenhouse Gas Emissions Target" by the "statewide service population."

Since development of the project will occur beyond 2020, the 2020 GHG targets are inapplicable. The currently applicable targets are the statewide reduction of GHG emissions to 40% below 1990 levels by 2030.69 The City updated its efficiency threshold by relying on metrics from an Association of Environmental Professionals whitepaper, which have not been adopted by BAAQMD. The whitepaper developed an efficiency threshold of 2.6 MT CO2e/year/service population by reducing the existing emissions target by 40% and dividing a statewide service population forecasted for 2030. The City updated its bright-line threshold by setting it 40% below the existing 1,100 MT threshold. These thresholds are inadequate to support a conclusion based on substantial evidence that no significant impact will occur from GHGs as a result of the Project.

In *Center for Biological Diversity v. Department of Fish & Wildlife*, the Supreme Court concluded an EIR's use of statewide emission reduction goals was a "permissible criterion of significance." At the same time, the court concluded the report did not provide substantial evidence to support the conclusion the cumulative GHG emissions would be less than significant based on the project level reduction of 31 percent, even though the amount was consistent with Assembly Bill 32's statewide goal of 29 percent. The court acknowledged the required percentage reduction for an individual project may not be the same as for the entire state population and economy because "a greater degree of reduction may be needed from new land use projects than from the economy as a whole." In other words, using a statewide criterion requires substantial evidence and reasoned explanation to close the analytical gap left by the assumption that the "level of effort required in one [statewide] context ... will suffice in the other, a specific land use development."

This principle was applied in Golden Door Properties LLC v. County of San Diego ("Golden Door"). In Golden Door, the Court held that a 4.9 MT C02e per service population per year efficiency threshold in the County of San Diego was improper because:

> [T]he service population number relies on statewide service population and GHG inventory data; it does not address San Diego County specifically, and it does not explain why using statewide data is appropriate for setting the metric for San Diego County. Additionally, the Efficiency Metric 'allows the threshold to be applied evenly to most project types,' but it does not account for variations between different types of development; nor does it explain why the per person limit would be appropriately evenly applied despite project differences. Without substantial evidence explaining why statewide GHG reduction levels would be properly used in this context, the County failed to comply with CEQA Guidelines.

The City's GHG thresholds similarly lack substantial evidence. As in Golden Door, the City's thresholds are based on statewide data. These thresholds do not account for variations between different types of development. They do not explain why the per person limit would be appropriately evenly applied despite project differences. The City fails to provide any kind of explanation of how this data is appropriate for setting the significance thresholds for a mixed-use development in San Jose. Therefore, the City fails to comply with the CEQA Guidelines.

Response A.13: The City utilized the most appropriate threshold for GHGs based on available data and agency guidance. It is inappropriate for lead agencies to develop new thresholds using somewhat arbitrary data (i.e., emissions, land use, traffic projections that they have no ability to accurately quantify). Furthermore, while it was disclosed that the project would not be operational in time to be subject to the City's 2020 GHG Reduction Strategy, the IS/MND showed that the project would be fully compliant with all applicable mandatory measures (page 91 of the IS/MND). Since completion of the IS/MND, the City has adopted a new qualified GHG Reduction Strategy for 2030 and an accompanying project compliance checklist which the project would comply with. As such, the project would result in a less than significant GHG impact. Therefore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5. In addition, the comment does not constitute substantial evidence in light of the whole record that the project will result in significant impact to the environment which cannot be mitigated or avoided.

Comment A.14: D. The IS/MND Fails to Adequately Analyze and Mitigate the Project's Significant Noise Impacts

1. The City's Reliance on a Maximum Noise Threshold is Unsupported

The City recognizes that mechanical equipment associated with the Project could generate noise in excess of the City's noise policy goal of 55 dBA DNL. However, the City states that this is a less than significant impact due to compliance with the 55 dBA DNL limit.
The courts have held that reliance on a maximum noise level as the sole threshold of significance for noise impacts violates CEQA because it fails to consider whether the magnitude of changes in noise levels is significant. In *Keep our Mountains Quiet v. County of Santa Clara*, neighbors of a wedding venue sued over the County of Santa Clara's failure to prepare an EIR for a proposed project to allow use permits for wedding and other party events at a residential property abutting an open space preserve. Neighbors and their noise expert contended that previous events at the facility had caused significant noise impacts that reverberated in neighbors' homes and disrupted the use and enjoyment of their property. Similar to the IS/MND in this case, the County's EIR relied on the noise standards set forth in its noise ordinance as its thresholds for significant noise exposure from the project, deeming any increase to be insignificant so long as the absolute noise level did not exceed those standards. The Court examined a long line of CEQA cases which have uniformly held that conformity with land use regulations is not conclusive of whether or not a project has significant noise impacts in holding that the County's reliance on the project's compliance with noise

regulations did not constitute substantial evidence supporting the County's finding of no significant impacts.

Here, the City also relies on a maximum noise level as the threshold of significance for noise impacts. As in *Keep our Mountains Quiet*, the City's reliance on this threshold fails to assess the severity of noise impacts on surrounding receptors as a result of the increased noise from the Project in conjunction with all relevant sources of noise that impact those receptors. The IS/MND's conclusion that noise impacts are less than significant is based on an illusory threshold and is therefore unsupported.

Response A.14: The Noise and Vibration Assessment dated July 13, 2016, states "The nearest noise sensitive uses include residences located about 65 to 75 feet to the south and west of the site, and residences located about 180 feet east of the site." Under the City's Noise Element, noise levels from building equipment would be limited to a noise level of 55 dBA DNL at receiving noise-sensitive land uses. Given the distance between rooftop equipment located on top of an 85-foot high structure and nearby noise-sensitive uses and the shielding provided by the roof structure, mechanical equipment noise is not anticipated to exceed 55 dBA DNL at these nearby residences or other sensitive uses. However, the final site plan should be reviewed by a qualified acoustical consultant to address any potential conflicts." Contrary to the comment, the noise and vibration assessment does not conclude that mechanical equipment associated with the Project would generate noise in excess of the City's noise policy goal of 55 dBA DNL. However, as a conservative measure, the Noise and Vibration Assessment recommends an additional review of mechanical equipment noise levels prior to construction as a Standard Permit Condition to ensure that mechanical equipment noise levels comply with the City of San José General Plan.

When potential worst-case mechanical equipment noise levels of 55 dBA DNL are combined with projected increases in traffic noise, the overall increase in noise levels at receptors would remain less than 3 dBA DNL. For example, at ST-1, which is the receptor exposed to the lowest ambient noise levels, existing DNL noise levels are 57 dBA (see Table 5 of the Noise and Vibration Assessment). Traffic noise modeling determined the contribution of local traffic to the overall ambient DNL. In this case, traffic noise levels produced by existing traffic volumes along Shortridge Avenue were calculated to be 49 dBA DNL due to the very low number of peak hour trips along the roadway segment (up to 40 peak hour trips). Based on this data, other ambient sources affecting the area (e.g., Highway 101, aircraft, existing site operations, and local residential sources of noise) were calculated to produce an existing noise level of 56 dBA DNL. The project would increase traffic volumes along Shortridge Avenue by up to 29 peak hour trips, resulting in peak hour traffic noise levels reaching 51 dBA DNL. However, the overall noise level increase with the addition of project traffic would be 0.2 dBA DNL. The addition of the potential worst-case mechanical equipment noise levels, Shortridge Avenue traffic noise levels under existing plus project conditions, and ambient noise levels is calculated to be at most 2 dBA DNL above existing conditions (55 dBA+51 dBA+56 dBA = 59 dBA). Therefore, the overall noise increase would not be 3 dBA DNL or more or considered perceptible to the human ear. Furthermore, this calculation is conservative because it

does not consider the removal of existing on-site noise sources from the ambient noise environment. Therefore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5.

Comment A.15: 2. The City Fails to Consider and Disclose the Project's Total Operational Noise Impacts

The City relies on compliance with General Plan Policies EC-1.2 and EC-1.3 to conclude the Project will not have significant noise impacts:

> EC-1.2 Minimize the noise impacts of new development on land uses sensitive to increased noise levels (Categories 1, 2, 3 and 6) by limiting noise generation and by requiring use of noise attenuation measures such as acoustical enclosures and sound barriers, where feasible. The City considers significant noise impacts to occur if a project would:
>
> - Cause the DNL at noise sensitive receptors to increase by five dBA DNL or more where the noise levels would remain "Normally Acceptable;" or
> - Cause the DNL at noise sensitive receptors to increase by three dBA DNL or more where noise levels would equal or exceed the "Normally Acceptable" level.
>
> EC-1.3 Mitigate noise generation of new nonresidential land uses to 55 dBA DNL at the property line when located adjacent to existing or planned noise-sensitive residential and public/quasi-public land uses.

These policies require the City to analyze the Project's total operational noise, and determine whether this noise exceeds thresholds. But the IS/MND incorrectly assesses each of the Project's noise sources separately. The IS/MND considers Project-generated traffic noise impacts separately from operational noise impacts such as air conditioning units and large exhaust fans. To comply with CEQA and the General Plan, the City first must quantify the Project's operational noise impacts, then consider them in conjunction with the Project's traffic noise impacts. Due to the City's failure of analysis, it is unknown whether the Project's operational noise impacts exceed significance thresholds. Since the City admits that mechanical equipment alone could generate noise in excess of the City's noise policy goal of 55 dBA, the total operational noise impacts may be potentially significant, requiring the City to analyze these impacts in an EIR.

> **Response A.15:** See Response A.14. A noise increase of three dBA DNL is considered perceptible to the human ear. For traffic impacts, a three dBA DNL increase in noise would require a doubling of traffic from the project on the roadways.[7] As stated on Page 130 of the IS/MND, traffic noise volumes on

[7] Personal Communication: Michael Thill – Illingworth & Rodkin, December 2, 2021.

surrounding roadways would increase by one dB or less with operation of the proposed project. By limiting mechanical equipment noise to 55 dBA at the property line, the noise level of the equipment would be reduced with distance from the site. The minimal increase in traffic noise, which would not be perceptible to the human ear, combined with the property line noise limit required by the City for mechanical equipment would mean that the ambient noise levels at the nearest sensitive receptors (65 feet from the site) would not significantly increase with the project. Therefore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5. Further, the comment does not constitute substantial evidence in light of the whole record that the project will result in a significant impact to the environment which cannot be mitigated or avoided.

Comment A.16: 3. The IS/MND Does not Plainly Compare the Project's Construction Noise Impacts Against Applicable Thresholds

CEQA is designed to inform decision-makers and the public about the potential, significant environmental effects of a project. "CEQA's fundamental goal [is] fostering informed decision-making."

However, the IS/MND does not clearly compare metrics such as existing noise levels at the Project site, the Project's construction noise impacts, the applicable threshold of significance, and the Project's decibel increase over the thresholds. Plainly communicating the relationship between these metrics is critical to understanding the extent of the Project's noise impacts. But this information is dispersed throughout the IS/MND and the Noise Study, hindering analysis. Dr. Watry compiled this information into the table below, which indicates the extent unmitigated construction noise is expected to exceed existing ambient noise levels:

Receptor	Relevant Baseline Location	Existing Daytime Level(s) (dBA, Leq)	Threshold of Significance[1] (dBA, Leq)	Range of Construction Noise Levels (dBA, Leq)	Decibels above Threshold (dBA, Leq)
Residences to South	ST-1	53	58	73 – 83	15 – 25
Residences to West	ST-2	57	62	73 – 83	11 – 21
Residences to East	ST-3	55	60	61 – 70[2]	1 – 10
Commercial to East	LT-1	59 – 61	64 – 66	71 – 78[3]	5 – 14
Commercial to North	LT-2	70 – 76	75 – 81	71 – 80[3]	0 – 5

Notes:
(1) In conjunction with construction noise level at residence exceeding 60 dBA Leq and at commercial exceeding 70 dBA Leq.
(2) Only construction noise levels above 60 dBA Leq considered.
(3) Only construction noise levels above 70 dBA Leq considered.

As can be seen in the table above, unmitigated construction noise is expected to exceed the thresholds of significance by up to 25 dBA Leq at residences and 14 dBA Leq at commercial establishments in the project vicinity. The extent of this increase over thresholds was not forthrightly disclosed by the City. The City's disclosure was that:

> Construction noise would also exceed ambient noise levels at residences to the east, west, and south by at least 5 dBA Leq for the majority of construction. Construction noise would exceed ambient noise levels at commercial uses to the south, southeast, and southwest by at least 10 dBA Leq.

By stating that the exceedance is at least 5 dBA Leq at residences and at least 10 dBA Leq at commercial uses, when the actual exceedance is up to 25 dBA Leq and up to 14 dBA Leq, respectively, the City underplays the severity of the Project's potentially significant construction noise impacts. The City should revise its disclosure of the Project's potentially significant noise impacts in an EIR.

Response A.16: The Envision San José 2040 General Plan include policies and actions that are required to reduce temporary construction noise effects. The potential short-term noise impacts associated with construction facilitated by the Envision San José 2040 General Plan project would be mitigated by the implementation of Policy EC-1.7 that requires reasonable noise reduction measures be incorporated into the construction plan and implemented during all phases of construction activity to minimize the exposure of neighboring properties. Policy EC-1.7 in combination with the limitations on hours set forth in the Municipal Code such as Section 20.100.450, would reduce the impact to a less than significant level.

Therefore, consistent with Policy EC-1.7, the IS/MND Section 4.13 stated that a construction noise logistics plan, which includes reasonable noise reduction measures and allowable construction hours, is required to reduce construction noise levels per Policy EC-1.7. These measures are standard practice in just about every local community and is consistent with San José methodology. Very few communities have specific construction noise level limits, and the ones that do tend to set very high thresholds (110 dBA at that property plane in Palo Alto, for example). Therefore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5. Further, the comment does not constitute substantial evidence in light of the whole record that the project will result in a significant impact to the environment which cannot be mitigated or avoided.

Comment A.17: 4. The City's Noise Mitigation is Not Supported by Substantial Evidence
The IS/MND establishes that unmitigated construction noise levels will exceed the adopted thresholds of significance by up to 25 dBA. However, the City does not support with any quantitative

analysis that the City of San José's Standard Permit Conditions and/or the proposed measures in MM-NOI-1 will reduce those noise levels such that they are lower than the thresholds of significance. Dr. Watry reviewed the Standard Permit Conditions and MM-NOI-1, and determined that they will not provide the requisite noise reduction necessary to render the noise impact less-than-significant.

A reviewing court will not defer to a lead agency's determination that mitigation measures will work when their efficacy is not apparent and there is no evidence in the record showing they will be effective in remedying the identified environmental problem. When the effectiveness of a mitigation measure is not apparent, the environmental document should include facts and analysis supporting its characterization of the expected result. Mitigation measures that are unrealistic and unlikely to be implemented create an illusory analysis and should not be included in an environmental document.

Here, the City fails to conduct any quantitative analysis showing that the Standard Permit Conditions and mitigation measures will mitigate the Project's construction noise impacts to a less-than-significant level. This failure is unjustified in light of the severity of the Project's exceedance over noise thresholds. If the Project barely exceeded thresholds, it might be reasonable to expect that adopting a long list of mitigation measures would address the problem. But here, the Project will exceed the adopted thresholds of significance by up to 25 dBA. Thus, an EIR is required to develop mitigation measures that can be shown to mitigate the Project's significant impacts.

Further, many of the City's mitigation measures in the Standard Permit Conditions will be ineffective because they are either already accounted for in the Noise Study's characterization of the Project's impacts, or because they are inapplicable to this Project. Dr. Watry explains that prohibiting pile-driving will not reduce impacts because pile-driving is not required. Use of mufflers as a mitigation measure is ineffective because equipment operating today in urban settings is commonly muffled from the factory. Limiting construction hours to between 7:00 a.m. and 7:00 p.m., Monday through Friday, will not reduce impacts because the construction noise analysis already accounts for this restriction. Limiting idling will not likely reduce noise impacts because the City's noise analysis already accounts for typical idling times. Overall, there is no evidence in the record that these mitigation measures will be effective at reducing the potentially significant noise impacts.
Dr. Watry also explains that many of the Standard Permit Conditions and mitigation measures are ineffective because they are simply too minute to mitigate a 25 dBA exceedance. Noise reductions from limiting noise from workers' radios, using manual hammers rather than electric hammers, substituting graders for bulldozers, and using electric tools rather than pneumatic tools are likely insignificant.

The City lacks evidence to conclude that measures like strategically locating cranes and generators will resolve noise impacts, as it is not possible to know where this equipment was assumed to be placed for the City's noise analysis. In any case, noise reductions from these sources would have no effect on the two loudest phases of the Project's construction: demolition and grading/excavation.

Other mitigation measures the City relies on are of unclear feasibility. The City states that impacts will be reduced to a less-than-significant level by constructing sound barriers. The IS/MND fails to explain how building such a sound barrier will be feasible. Dr. Watry explains it would be impractical to construct a barrier that would provide up to 25 dB of noise attenuation at the nearby residences. His comments include calculations showing that it is "somewhat difficult" to build a 10

dB barrier, "very difficult" to build a 15 dB barrier, and "essentially impossible" to build a 20 dB barrier. Dr. Watry's analysis constitutes substantial evidence showing that the Project's noise impacts are unmitigated. An EIR must be prepared to analyze and adequately mitigate these significant impacts.

Response A.17: As stated on page 132 of the IS/MND, noise thresholds for temporary construction are not provided in the City's General Plan or Municipal Code, but there are policy and actions to reduce those impacts. Consistent with General Plan Policies EC-1.2 and EC-1.7, temporary construction would be an annoyance to surrounding land uses if the ambient noise environment increased by at least five dBA Leq for an extended period of time. The temporary construction noise impact would be considered significant if project construction activities exceeded 60 dBA Leq at nearby residences or exceeded 70 dBA Leq at nearby commercial land uses and exceeded the ambient noise environment by five dBA Leq or more for a period longer than 12 months. As discussed in the IS/MND and Appendix E, the nearby residential receptors will experience construction noise above the 60 dBA Leq standard. The actual increase depends on the phase of construction such as major excavation for foundation versus indoor work.

Consistent with City's practice and guidelines, the noise impacts were evaluated in Section 4.13 and Appendix E of the IS/MND. The IS/MND disclosed that construction noise was found to be less than significant with the inclusion of Standard Permit Conditions and mitigation measure MM NOI-1.1 which limits construction hours, require installation of a noise barrier, and dedicate a noise coordinator for all construction phases of the project. This is consistent with standard City practice as the construction noise would be temporary, would not result in a permanent increase in ambient noise levels, and would be limited to daytime hours during weekdays from 7:00 AM to 7:00 PM, consistent with the Municipal Code. Therefore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5. Further, the comment does not constitute substantial evidence in light of the whole record that the project will result in a significant impact to the environment which cannot be mitigated or avoided.

Comment A.18: 5. The IS/MND Fails to Analyze Cumulative Noise Impacts
The CEQA Guidelines require an environmental document to describe and analyze cumulative impacts if the impact is significant and the project's incremental effect is cumulatively considerable. No analysis is required if the impact is insignificant or the project's incremental contribution is not cumulatively considerable. If a lead agency finds that a project's incremental effect or the cumulative impact is not cumulatively considerable, the environmental document must briefly describe the basis for its findings.

CEQA requires that an adequate discussion of significant cumulative impacts must include either (A) a list of past, present, and probable future projects producing related or cumulative impacts,

including, if necessary, those projects outside the control of the agency, or (B) a summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect.

Here, the City fails to conduct a cumulative impacts analysis in one of the two authorized ways: the City fails to provide a list of related projects that will have construction or operational noise impacts, and the City fails to otherwise describe or evaluate conditions contributing to a cumulative effect. This lack of a cumulative impacts analysis is not justified by the City, in violation of CEQA. The City must analyze whether there are other proposed developments in the Project's vicinity which would build upon the Project's noise impacts. If so, the City must analyze these impacts in an EIR.

> **Response A.18:** As analyzed in Section 4.13 of the IS/MND, the proposed project would not result in a significant noise impact. In addition, the noise analysis is conservative and assumes build out of the project area based on General Plan projections. Further, at the time of the analysis there were no approved or pending development projects in the project area. The comment fails to provide any evidence that the existing condition has changed or that there are newly approved or pending projects in the immediate vicinity of the project. Therefore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5. Further, the comment does not constitute substantial evidence in light of the whole record that the project will result in a significant impact to the environment which cannot be mitigated or avoided.

Comment A.19: V. LAND USE
The Project is located directly adjacent to the future Five Wounds Trail. However, the Project currently does not integrate the trail into its design, which conflicts with the following policies in the Envision San José 2040 General Plan and the Roosevelt Park Urban Village Plan.

Village Plan Land Use Policy 6 provides: "New residential development adjacent to the Five Wounds Trail corridor should provide primary unit entries, stoops, and porches facing the trail." There is currently no indication that the Project will have primary unit entries, stoops, and porches facing the trail.

Village Plan Land Use Policy 7 provides: "New residential development adjacent to the Five Wounds Trail corridor should provide ground floor units that face the trail." The Project design currently does not plan for ground-floor units facing the trail.

General Plan Policy CD-3.3 provides: "Within new development, create a pedestrian-friendly environment by connecting the internal components with safe, convenient, accessible, and pleasant pedestrian facilities and by requiring pedestrian connections between building entrances, other site features, and adjacent public streets." There is currently no indication that the Project will connect its own pedestrian facilities with the trail.

General Plan Policy PR-1.9 provides: "As Village and Corridor areas redevelop, incorporate urban open space and parkland recreation areas through a combination of high-quality, publicly accessible outdoor spaces provided as a part of new development projects; privately or in limited instances publicly, owned and maintained pocket parks; neighborhood parks where possible; as well as through access to trails and other park and recreation amenities." There is currently no indication that the Project will connect its own facilities with the trail.

The City must demonstrate that these policies are complied with for the Project to be approved.

> **Response A.19:** The project is a Planned Development Rezoning and there is no development permit application on file at this time. The CEQA analysis assumes the maximum capacity of a foreseeable project, consistent with the CEQA guidelines. The rezoning includes development standards that would require future consistency review against these General Plan and Urban Village policies. However, for the purpose of CEQA, these policies and Urban Village policies are not adopted for the protection of the environment and would not change the analyses already disclosed in the IS/MND. Therefore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5. Further, the comment does not constitute substantial evidence in light of the whole record that the project will result in a significant impact to the environment which cannot be mitigated or avoided.

Comment A.20: VI. CONCLUSION
There is substantial evidence supporting a fair argument that the Project will have potentially significant, unmitigated impacts on public health, air quality, greenhouse gases, and noise. Due to the IS/MND's deficiencies, the City cannot conclude that the Project's impacts have been mitigated to a less than significant level.

The CEQA Guidelines require that an EIR be prepared if there is substantial evidence supporting a fair argument that any aspect of a project, either individually or cumulatively, may cause a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial. As discussed in detail above, there is more than a fair argument based on substantial evidence that the Project would result in significant adverse impacts not identified in the IS/MND. Moreover, there is substantial evidence the proposed mitigation measures will not reduce potentially significant impacts to a level of insignificance.

We urge the City to fulfill its responsibilities under CEQA by withdrawing the IS/MND and preparing an EIR to address the issues raised in this comment letter, the attached comments from SWAPE and Mr. Watry, and other public comments in the record. This is the only way the City and the public can ensure the Project's significant environmental impacts are mitigated to less than significant levels.

Response A.20: As explained in the responses above, the commenter has not provided substantive evidence in light of the whole record that the analysis and conclusions of the IS/MND are incorrect or that an EIR is required.

Exhibit A – SWAPE Comment Letter

Comment A.21: We have reviewed the December 2020 Initial Study and Mitigated Negative Declaration ("IS/MND") for the Empire Lumber Mixed-Use Project ("Project") located in the City of San Jose ("City"). The Project proposes to demolish all existing structures and associated parking as well as construct 60,330-SF of commercial space, up to 408 residential units, 2,442-SF of pool and fitness area, and 554 parking spaces on the 2.77-acre site.

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

Air Quality
Unsubstantiate Input Parameters Used to Estimate Project Emissions

The IS/MND's air quality analysis relies on emissions calculated with CalEEMod.2016.3.2 (p. 40). 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 April 2020 Air Quality Report ("AQ Report") as Appendix A to the IS/MND, we found that several model inputs were not consistent with information disclosed in the IS/MND. As a result, the Project's construction and operational emissions are underestimated. As a result, 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.

Response A.21: Contrary to the claim by the commenter, an EIR would not be required automatically even if it were correct that the emissions of the project were underestimated. An EIR would only be required if emissions could not be reduced below the established thresholds. Nevertheless, as shown in Responses A.4 through A.34, the commenters assertions are incorrect and no EIR is required.

Comment A.22: Underestimated Parking Land Use Size

According to the IS/MND:

> ”The parking garage would have approximately 554 parking spaces” (IS, pp. 15)

As such, the models should have included 554 parking spaces. However, review of the CalEEMod output files demonstrates that the “1260 E Santa Clara Street Update, San Jose” and “1260 E Santa Clara Street Update, San Jose - 2030” models include only 534 parking spaces (see excerpt below) (Appendix A, pp. 16, 65).

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	534.00	Space	0.00	213,600.00	0
Apartments Mid Rise	406.00	Dwelling Unit	2.77	406,000.00	1167
Strip Mall	60.33	1000sqft	0.00	60,331.00	0

As you can see in the excerpt above, the proposed parking is underestimated by 20 spaces. This underestimation presents an issue, as the square footage of parking land uses is used for certain calculations such as determining the area to be painted and stripped (i.e., VOC emissions from architectural coatings) and volume to be ventilated (i.e., energy impacts). Thus, by underestimating the number of proposed parking spaces, the models underestimate the Project’s construction-related and operational emissions and should not be relied upon to determine Project significance.

Response A.22: See Response A.6.

Comment A.23: Failure to Model All Proposed Land Uses
According to the IS/MND:

> ”A pool deck, podium garden, and club/fitness area (approximately 2,442 square feet) are proposed on top of the parking structure on the third floor” (IS, pp. 15).

As demonstrated above, the model should have included 2,442-SF of “Health Club” land use space. However, review of the CalEEMod output files demonstrates that the “1260 E Santa Clara Street Update, San Jose” and “1260 E Santa Clara Street Update, San Jose - 2030” models fail to include the proposed pool and fitness area (see excerpt below) (Appendix A, pp. 16, 65).

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	534.00	Space	0.00	213,600.00	0
Apartments Mid Rise	406.00	Dwelling Unit	2.77	406,000.00	1167
Strip Mall	60.33	1000sqft	0.00	60,331.00	0

As you can see in the excerpt above, the models fail to distinguish between the warehouse and office land uses. This inconsistency presents an issue, as CalEEMod includes 63 different land use types that are each assigned a distinctive set of energy usage emission factors. Furthermore, each land use type includes a specific trip rate that CalEEMod uses to calculate mobile-source emissions. Thus, by failing to include all proposed land use types, the models may underestimate the Project’s construction-related and operational emissions and should not be relied upon to determine Project significance.

Response A.23: It is unclear what office and warehouse uses the commenter is referring to as no stand-alone office or warehouse land uses are proposed as part of the project. See Response A.7.

Comment A.24: Unsubstantiated Off-Road Construction Equipment Usage Hours
Review of the CalEEMod output files demonstrates that the "1260 E Santa Clara Street Update, San Jose" model includes several reductions to the default off-road construction equipment usage hours (see excerpt below) (Appendix A, pp. 19, 20).

Table Name	Column Name	Default Value	New Value
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	3.30
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	3.00
tblOffRoadEquipment	UsageHours	8.00	2.10
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	2.10
tblOffRoadEquipment	UsageHours	8.00	2.10
tblOffRoadEquipment	UsageHours	8.00	1.20
tblOffRoadEquipment	UsageHours	8.00	1.50
tblOffRoadEquipment	UsageHours	7.00	1.50
tblOffRoadEquipment	UsageHours	8.00	1.50
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.30
tblOffRoadEquipment	UsageHours	6.00	0.00

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified. According to the "User Entered Comments and Non-Default Data" table, the justification provided for these changes is: "Provided constructino [sic] equip & hours" (Appendix A, pp. 17). However, the AQ Report provides the following construction-related input parameters (Appendix A, pp. 14):

Project Name: 1260 Santa Clara St.					
Construction Phase	Equipment (See next page for example of commonly used equipment)	Quantity	Average Hours Used Per Day	How Many Work Days	Fuel Type - If other than Diesel
Demolition	• Concrete/Industrial Saws	1	8	3	Gas
	• Dump Trucks	3	8	14	
	• Rubber-Tired Dozers	1	8	14	
Start Date: 4/15/17					
End Date: 5/15/17					
Site Preparation	• Rubber Tired Dozers	1	8	3	
	• Tractors/Loaders/Backhoes	1	8	3	
Start Date: 5/15/17					
End Date: 6/15/17					
Grading/Excavation	• Excavators	2	8	15	
	• Rubber Tired Dozers	2	8	26	
	• Tractors/Loaders/Backhoes	2	8	23	
Start Date: 6/15/17	• Dump Trucks (based on 52,800CY)	8	8	63	
End Date: 9/01/17					
Trenching	• Excavator	1	8	2	
	• Tractor/Loader/Backhoe	1	8	3	
Start Date: 8/01/17					
End Date: 10/01/17					
Building – Exterior	• Cranes	1	8	80	
	• Forklifts	1	8	80	
	• Generator Sets	1	8	80	
	• Tractors/Loader/Backhoe				
	• Welders				
Start Date: 10/01/17					
End Date: 5/15/19					
Building – Interior/ Architectural Coating	• Air Compressors	1	8	80	
Start Date: 3/15/18					
End Date: 5/15/19					
Paving					
	• Cement and Mortar Mixers	1	8	14	
	• Pavers				
	• Paving Equipment	1	8	2	
	• Rollers				
	• Tractors/Loaders/Backhoes	1	8	14	
Start Date: 3/01/19					
End Date: 5/15/19					

As demonstrated above, the equipment required for construction would be operated for 8 hours per day. As such, the model is inconsistent with the information provided in AQ Report. Thus, the revised off-road construction usage hours are incorrect and underestimated within the model. These underestimations present an issue, as CalEEMod uses off-road equipment usage hours to calculate the emissions associated with off-road construction equipment. By including incorrect changes to the default off-road construction equipment usage hours, the model may underestimate the Project's construction-related emissions and should not be relied upon to determine Project significance.

Response A.24: See Response A.8.

Comment A.25: Underestimated Saturday and Sunday Operational Vehicle Trip Rates
According to the Transportation Analysis ("TA"), provided as Appendix F to the IS/MND, the proposed Project is expected to generate approximately 3,169 daily operational vehicle trips (see excerpt below) (p. 31, Table 4).

Land Use	ITE Land Use Code	Location	% of Vehicle Mode Share	VMT[1] Existing	VMT[1] Project	% Reduction	Size	Daily Rate	Daily Trip
Proposed Land Uses									
Multifamily Housing (Mid-Rise)[1]	221						408 Dwelling Units	5.44	2,220
- Residential - Retail Internal Reduction[2]									-342
- Location Based Reduction[3]		Urban Low-Transit	87%			13%			-244
- VMT Reduction[4]				6.87	6.5	5%			-88
Shopping Center[1]	820						60,330 Square Feet	37.75	2,277
- Residential - Retail Internal Reduction[2]						15%			-342
- Location Based Reduction[3]		Urban Low-Transit	87%			13%			-252
- Pass-by Trip Reduction[5]						34%			-60
Baseline Vehicle Trips (Before Reductions)									4,497
Trips at Project Driveways (without pass-by reduction)									3,230
Net Project Trips									**3,169**

As such, the models should have included trip rates that reflect the estimated number of average daily vehicle trips. However, review of the CalEEMod output files demonstrates that the "1260 E Santa Clara Street Update, San Jose" and "1260 E Santa Clara Street Update, San Jose - 2030" models include only 3,081.45 Saturday and 2,138.56 Sunday vehicle trips (see excerpt below) (Appendix C, pp. 359):

Land Use	Weekday	Saturday	Sunday
Apartments Mid Rise	1,546.32	1,485.12	1362.72
Enclosed Parking with Elevator	0.00	0.00	0.00
Strip Mall	1,683.21	1,596.33	775.84
Total	3,229.53	3,081.45	2,138.56

As demonstrated above, the Saturday and Sunday trips are each underestimated by approximately 88 and 1,030 vehicle trips, respectively. As such, the trip rates inputted into the models are underestimated and inconsistent with the information provided by the TIS. By including underestimated operational vehicle trip rates, the models underestimate the Project's mobile-source operational emissions and should not be relied upon to determine Project significance.

Response A.25: See Response A.9.

Comment A.26: Use of Incorrect Trip Purpose Percentages

Review of the CalEEMod output files demonstrates that the trip purpose percentages in the "1260 E Santa Clara Street Update, San Jose" and "1260 E Santa Clara Street Update, San Jose - 2030" models were divided amongst the primary, diverted, and pass-by trip types for the Project's proposed retail land use (see excerpts below) (Appendix A, pp. 57, 85).

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	6.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

However, review of the TA demonstrated that pass-by trips for the proposed shopping center were already accounted for in the Project's trip generation calculations (see excerpt below) (pg.31, Table 4).

Land Use	ITE Land Use Code	Location	% of Vehicle Mode Share	VMT[2] Existing	VMT[2] Project	% Reduction	Size	Daily Rate	Daily Trip
Proposed Land Uses									
Multifamily Housing (Mid-Rise)[1]	221						408 Dwelling Units	5.44	2,220
- *Residential - Retail Internal Reduction*[2]									-342
- *Location Based Reduction*[3]		Urban Low-Transit	87%			13%			-244
- *VMT Reduction*[4]				6.87	6.5	5%			-89
Shopping Center[1]	820						60,330 Square Feet	37.75	2,277
- *Residential - Retail Internal Reduction*[2]						15%			-342
- *Location Based Reduction*[3]		Urban Low-Transit	87%			13%			-252
- *Pass-by Trip Reduction*[5]						34%			-60
Baseline Vehicle Trips (Before Reductions)									4,497
Trips at Project Driveways (without pass-by reduction)									3,230
Net Project Trips									**3,169**

Thus, as the TA already includes pass-by trip reductions for the proposed retail land use, the CalEEMod model should have divided the trip purpose between primary and diverted trips, as pass-by trips are already accounted for in the Project's projected trip generation total.

According to Appendix A of the CalEEMod User's Guide, primary trips utilize the complete trip lengths associated with each trip type category. Diverted trips are assumed to take a slightly different path than a primary trip and are assumed to be 25% of the primary trip lengths. Pass-by trips are assumed to be 0.1 miles in length and are a result of no diversion from the primary route. Thus, by including pass-by reductions that were already accounted for in the TA, the models underestimate the trip lengths associated with the Project's daily vehicle trips. As a result, by incorrectly spreading the trip purpose percentages amongst the three categories, the models underestimate the Project's mobile-source operational emissions and should not be relied upon to determine Project significance.

Response A.26: See Response A.10.

Comment A.27: Unsubstantiated Changes to Wastewater Treatment System Percentages
Review of the CalEEMod output files demonstrates that the "1260 E Santa Clara Street Update, San Jose" and "1260 E Santa Clara Street Update, San Jose - 2030" models include several changes to the default wastewater treatment system percentages (see excerpt below) (Appendix A, pp. 34, 83).

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

As you can see in the excerpt above, the models assume 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. According to the "User Entered Comments and Non-Default Data" table, the justification provided for these changes is: "WTP treatment 100% aerobic" (Appendix A, pp. 17, 66). Furthermore, the AQ Report states:

> "Water/wastewater use were changed to 100% aerobic conditions to represent wastewater treatment plant conditions" (Appendix A, p. 4).

However, these changes remain unsupported. The IS/MND indicates that "[t]he wastewater generated on the project site following project occupancy would be collected and conveyed to the San José-Santa Clara Regional Wastewater Facility for treatment" (p. 112). Review of the San José-Santa Clara Regional Wastewater Facilities treatment process reveals the use of anaerobic bacteria in the digesters phase of treatment. As such, the assumption that the Project's wastewater would be treated 100% aerobically is incorrect and overestimated within the models.

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. Thus, by including unsubstantiated changes to the default wastewater treatment system percentages, the models may underestimate the Project's GHG emissions and should not be relied upon to determine Project significance.

Response A.27: See Response A.11.

Comment A.28: Incorrect Application of Operational Mitigation Measures
Review of the CalEEMod output files demonstrates that the "1260 E Santa Clara Street Update, San Jose" and "1260 E Santa Clara Street Update, San Jose - 2030" models includes the following energy-related mitigation measure (see excerpt below) (Appendix A, pp. 57, 86).

5.1 Mitigation Measures Energy
Percent of Electricity Use Generated with Renewable Energy

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified. According to the "User Entered Comments & Non-Default Data" table, the justification provided for this inclusion is: "SJCE 100% carbon free renewable energy" (Appendix A, pp. 17, 88). Furthermore, the IS/MND states:

> "SJCE customers are automatically enrolled in the GreenSource program, which provides 80 percent GHG emission-free electricity. Customers can choose to enroll in SJCE's TotalGreen program at any time to receive 100 percent GHG emission-free electricity form entirely renewable sources" (p. 72).

However, these justifications remain insufficient, as the above-mentioned energy-related mitigation measure refers to renewable energy generation on-site. As such, electricity from the grid is not applicable and the inclusion of the energy-related operational mitigation measure in the models is incorrect. By incorrectly including an operational mitigation measure, the models overestimate the reduction to the Project's operational emissions and should not be relied upon to determine Project significance.

Response A.28: The IS/MND Section 4.6 and Section discussed operational impacts for the lifetime of the project as it pertains to energy and emission. The inclusion of SJCE 100 percent carbon-free electricity is not a mitigation measure as the analysis found that the project would not result in significant impacts to energy consumption. Furthermore, the project completed the analysis for GHG and found the project is consistent with the State's 2030 threshold.

Since completion of the IS/MND, the City also has adopted a new qualified GHG Reduction Strategy for 2030 and an accompanying project compliance checklist which the project would be required to comply with. Therefore, even without assuming 100 percent carbon free electricity and including electricity GHG emissions in the energy GHG section, the per capita rate would still be below threshold and the project would have a less than significant GHG impact. Therefore, the comment does not provide new information that would change the project's impact, provide new information that would require additional analysis or result in new significant impacts or mitigation measures than those analyzed and disclosed in the IS/MND and

associated appendices, or present new information that would require recirculation of the IS/MND pursuant of CEQA Guideline Section 15073.5. Further, the comment does not constitute substantial evidence in light of the whole record that the project will result in a significant impact to the environment which cannot be mitigated or avoided.

Comment A.29: Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated
The IS/MND estimates that the mitigated residential child cancer risk posed to nearby, existing sensitive receptors as a result of Project construction would be 6.7 in one million, which would not exceed the BAAQMD significance threshold of 10 in one million (p. 44). However, the IS/MND fails to mention operational toxic air contaminant ("TAC") emissions or evaluate the health risk impacts associated with Project operation. The IS/MND's evaluation of the Project's potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is incorrect for five reasons.

First, by failing to prepare a quantified operational HRA, the Project is inconsistent with CEQA's requirement to correlate the increase in emissions that the Project would generate to the adverse impacts on human health caused by those emissions. According to the TA, the Project is anticipated to generate 3,169 average daily vehicle trips which will generate additional exhaust emissions and expose nearby sensitive receptors to diesel particulate matter ("DPM") emissions regardless (p. 44). However, the IS/MND fails to evaluate the potential TACs associated with Project operation or the concentrations at which such pollutants would trigger adverse health effects. Thus, without making a reasonable effort to connect the Project's operational TAC emissions to the potential health risks posed to nearby receptors, the Project is inconsistent with CEQA's requirement to correlate the increase in TAC emissions with potential adverse impacts on human health.

Second, the Office of Environmental Health Hazard Assessment ("OEHHA"), the organization responsible for providing guidance on conducting HRAs in California, released its most recent Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments in February 2015, as referenced by the IS/MND (p. 43). The OEHHA document recommends that exposure from projects lasting more than 6 months be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident ("MEIR"). Even though we were not provided with the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, we recommend that health risk impacts from Project operation also be evaluated, as a 30-year exposure duration vastly exceeds the 6-month requirement set forth by OEHHA. This recommendation reflects the most recent state health risk policies, and as such, we recommend that an analysis of health risk impacts posed to nearby sensitive receptors from Project operation be included in an EIR for the Project.

Third, the BAAQMD requires projects within 1,000 feet of an existing sensitive receptor or source to evaluate the cancer risk associated with Project operation (see excerpt below):

Table 2-1 Air Quality CEQA Thresholds of Significance*		
Pollutant	**Construction-Related**	**Operational-Related**
Project-Level		
Risk and Hazards for new sources and receptors (Individual Project)*	Same as Operational Thresholds**	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient $PM_{2.5}$ increase: > 0.3 $\mu g/m^3$ annual average Zone of Influence: 1,000-foot radius from property line of source or receptor

Furthermore, the IS/MND demostrates [sic] that there are existing sensitive receptors at the residential developments immediately adjacent to the Project site (p. 43). As such, pursuant to the BAAQMD, an analysis of the health risk posed to nearby, existing receptors from both Project operation should have been conducted.

Fourth, by claiming a less than significant impact without conducting a quantified operational HRA for nearby, existing sensitive receptors, the IS/MND fails to compare the excess health risk impact to the applicable BAAQMD threshold of 10 in one million.16 Specifically, regarding the operational TAC emissions threshold, the BAAQMD states:

> "The Lead Agency shall determine whether operational-related TAC and PM2.5 emissions generated as part of a proposed project siting a new source or receptor would expose existing or new receptors to levels that exceed BAAQMD's applicable Thresholds of Significance stated below:
>
> - Compliance with a qualified Community Risk Reduction Plan;
> - An excess cancer risk level of more than 10 in one million…"

Thus, pursuant to CEQA and the BAAQMD, an analysis of the health risk posed to nearby, existing receptors from Project operation should have been conducted.

Fifth, while the IS/MND includes an HRA evaluating the health risk impacts to nearby, existing receptors as a result of Project construction, the HRA fails to evaluate the cumulative lifetime cancer risk to nearby, existing receptors as a result of Project construction and operation together. According to OEHHA guidance, as referenced by the IS/MND, "the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk at the receptor location" (p. 43). However, the IS/MND's HRA fails to sum each age bin to evaluate the total cancer risk over the course of the Project's total construction and operation. This is incorrect and thus, an updated analysis should quantify the entirety of the Project's construction and operational health risks and then sum them to compare to the BAAQMD threshold of 10 in one million, as referenced by the IS/MND (p. 43).

Response A.29: See Response A.4.

Comment A.30: Screening-Level Analysis Demonstrates Significant Impacts

In order to conduct our screening-level risk assessment, we relied upon AERSCREEN, a screening level air quality dispersion model. The model replaced SCREEN3, and AERSCREEN is included in the OEHHA20 and the California Air Pollution Control Officers Associated ("CAPCOA") guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

We prepared a preliminary HRA of the Project's operational health risk impact to nearby sensitive receptors using the Project's 2030 annual PM10 exhaust estimates. Consistent with recommendations set forth by OEHHA, we assumed residential exposure begins during the third trimester stage of life. Subtracting the 760-day construction period from the total residential duration of 30 years, we assumed that after Project construction, the sensitive receptor would be exposed to the Project's operational DPM for an additional 27.92 years, approximately. The IS/MND's annual CalEEMod output file indicates that operational activities will generate approximately 90 pounds of DPM per year throughout operation. The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project operation, we calculated an average DPM emission rate by the following equation:

$$\text{Emission Rate (grams/second)} \quad X \ \frac{90.2 \text{ lbs}}{365 \text{ days}} \ X \ \frac{453.6 \text{ grams}}{\text{lbs}} \ X \ \frac{1 \text{ day}}{24 \text{ hours}} \ X \ \frac{1 \text{ hour}}{3{,}600 \text{ seconds}} = 0.00130 \text{ g/s}$$

Using this equation, we estimated an operational emission rate of 0.00130 g/s. Construction and operational activity was simulated as a 2.77-acre rectangular area source in AERSCREEN with approximate dimensions of 150 by 75 meters. A release height of three meters was selected to represent the height of exhaust stacks on operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution. The population of San Jose was obtained from U.S. 2020 Census data.

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10%. According to the IS/MND, the nearest sensitive receptors are single-family residences located directly adjacent to the Project site (p. 43). However, review of the AERSCREEN output files demonstrates that the maximally exposed individual resident ("MEIR") is located approximately 75 meters from the Project site. Thus, the single-hour concentration estimated by AERSCREEN for Project construction is approximately 3.079 µg/m3 DPM at approximately 75 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.3079 µg/m3 for Project operation at the MEIR.

We calculated the excess cancer risk to the MEIR using applicable HRA methodologies prescribed by OEHHA, as referenced by the AQ & GHG Assessment (Appendix A, p. 2). Consistent with the 760-day construction schedule utilized in the Project's CalEEMod output files, the annualized

averaged concentration for operation was used for the latter 0.17 years of the infant stage of life (0 – 2 years), as well as the entire child (2 – 16 years) and adult (16 – 30 years) stages of life.

Consistent with OEHHA, and as recommended by BAAQMD guidance, we used Age Sensitivity Factors ("ASFs") to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution. According to this guidance, the quantified cancer risk should be multiplied by a factor of ten during the third trimester of pregnancy and during the first two years of life (infant) as well as multiplied by a factor of three during the child stage of life (2 – 16 years). Furthermore, in accordance with the guidance set forth by OEHHA, we used the 95th percentile breathing rates for infants. Finally, according to BAAQMD guidance, we used a Fraction of Time At Home ("FAH") value of 0.85 for the 3rd trimester and infant receptors, 0.72 for child receptors, and 0.73 for the adult receptors. We used a cancer potency factor of 1.1 (mg/kg-day)-1 and an averaging time of 25,550 days. The results of our calculations are shown below.

The Maximally Exposed Individual at an Existing Residential Receptor

Age Group	Emissions Source	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	Cancer Risk (without ASFs*)	ASF	Cancer Risk (with ASFs*)
3rd Trimester	Construction	0.25	*	361	*	10	*
	Construction	*1.83*	*	*1090*	*		
	Operation	*0.17*	*0.3079*	*1090*	*7.21E-07*		
Infant (Age 0 - 2)	Total	2			7.21E-07	10	**7.21E-06**
Child (Age 2 - 16)	Operation	14	0.3079	572	2.68E-05	3	**8.03E-05**
Adult (Age 16 - 30)	Operation	14	0.3079	261	1.24E-05	1	**1.24E-05**
Lifetime		**30**			**3.98E-05**		**9.98E-05**

* Construction cancer risk calculated separately in the IS/MND.

As demonstrated in the table above, the excess cancer risks to infants, children, and adults at the MEIR located approximately 75 meters away, over the course of Project operation, are approximately 7.21, 80.3, and 12.4 in one million, respectively. The excess cancer risk associated with the Project operation over the course of a residential lifetime is approximately 98.9 in one million. When summing the Project's operational cancer risk, as estimated by SWAPE, with the IS/MND's construction-related cancer risk of 6.7 in one million, we estimate an excess cancer risk of approximately 105.6 in one million over the course of a residential lifetime (30 years) (p. 44). As such, the lifetime cancer risk greatly exceeds the BAAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the IS/MND.

An agency must include an analysis of health risks that connects the Project's air emissions with the health risk posed by those emissions. Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection. The purpose of the screening-level construction and operational HRA shown above is to demonstrate the link between the proposed Project's emissions and the potential health risk. Our screening-level HRA demonstrates that construction and operation of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. Therefore, since our screening-level HRA indicates a potentially significant impact, an EIR should be prepared and include updated, quantified air pollution model as well as an updated, quantified refined HRA

which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

Response A.30: See Response A.5.

Comment A.31: 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.31: The comment does not speak to the adequacy of the Initial Study. No response is required.

Exhibit B – Wilson Ihrig Comment Letter

Comment A.32: This letter reports our comments on the noise analysis in the subject document. Wilson, Ihrig & Associates, Acoustical Consultants, has practiced exclusively in the field of acoustics since 1966. During our 55 years of operation, we have prepared hundreds of noise studies for Environmental Impact Reports and Statements. We have one of the largest technical laboratories in the acoustical consulting industry. We also utilize industry-standard acoustical programs such as Environmental Noise Model (ENM), Traffic Noise Model (TNM), SoundPLAN, and CADNA. In short, we are well qualified to prepare environmental noise studies and review studies prepared by others.

Adverse Effects of Noise
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. The problems and irritation that are associated with speech disturbance have become more pronounced during the COVID-19 pandemic because many people find themselves and others they live with trying to work and learn simultaneously in spaces that were not designed for speech privacy.

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.

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. This is why there are standards for classroom background noise levels and why offices and libraries are designed to provide quiet work environments. While sheltering-in-place during the COVID-19 pandemic, many people are finding working and learning more difficult because their home environment is not as quiet as their office or school was.

> **Response A.32:** The comment does not speak to the adequacy of the Initial Study. No response is required.

Comment A.33: Comments on Construction Noise Analysis
The IS, following the Noise Assessment, states clear thresholds of significance for construction noise:

> The temporary construction noise impact would be considered significant if project construction activities exceeded 60 dBA Leq at nearby residences or exceeded 70 dBA Leq at nearby commercial land uses and exceeded the ambient noise environment by five dBA Leq or more for a period longer than 12 months. [IS at p. 132]

As provided in the IS, the total construction time will be 24 months for demolition through building exterior and another 2 months for paving. [IS, Table 4.12-3, at p. 132].

Unlike the Noise Assessment, the IS does not present the construction noise levels at specific nearby receptors, but only presents generic construction noise levels at a distance of 100 feet. The closest receptors – residences across Shortridge Avenue and S 26th Avenue – are only 65 feet away. Using the range of construction noise levels at adjacent land uses provided in the Noise Assessment [Table 8, at p. 23] and the existing ambient noise levels measured for the Noise Assessment [Noise Assessment pp. 15-16; IS, Tables 4.13-1 and 4.13-2, at p. 129], the following table may be

constructed indicating the amount unmitigated construction noise is expected to exceed existing ambient noise levels:

Receptor	Relevant Baseline Location	Existing Daytime Level(s)	Threshold of Significance(1)	Range of Construction Noise Levels	Decibels above Threshold
		(dBA, Leq)	(dBA, Leq)	(dBA, Leq)	(dBA, Leq)
Residences to South	ST-1	53	58	73 – 83	15 – 25
Residences to West	ST-2	57	62	73 – 83	11 – 21
Residences to East	ST-3	55	60	61 – 70(2)	1 – 10
Commercial to East	LT-1	59 – 61	64 – 66	71 – 78(3)	5 – 14
Commercial to North	LT-2	70 – 76	75 – 81	71 – 80(3)	0 – 5

Notes:
(1) In conjunction with construction noise level at residence exceeding 60 dBA Leq and at commercial exceeding 70 dBA Leq.
(2) Only construction noise levels above 60 dBA Leq considered.
(3) Only construction noise levels above 70 dBA Leq considered.

As can be seen in the table above, unmitigated construction noise is expected to exceed the thresholds of significance by up to 25 dBA Leq at residences and 14 dBA Leq at commercial establishments in the project vicinity.

Having established that unmitigated construction noise would exceed the IS-adopted threshold of significance, the IS then presents Standard Permit Conditions and Mitigation Measure MM-NOI-1, both of which contain a number of reasonable, best-practices to reduce construction noise levels and the annoyance construction noise will cause, but there is no analysis supporting the subsequent claim that "implementation of the identified Standard Permit Conditions and mitigation measures would result in a less than significant construction noise impact." [IS at p. 134]

In order for the mitigated impact to be deemed "less than significant", the noise levels would have to be reduced to levels lower than the threshold of significance, not just reduced by common-sense, good faith efforts. While the permit conditions and mitigation measures should be implemented, they will not provide the requisite noise reduction necessary to render the noise impact less-than-significant. Below, each measure is presented along with commentary (in italics) on its effectiveness:

Standard Permit Conditions

- Pile-driving shall be prohibited.
    - Pile driving is not required for this project. [IS at p. 132]
- Limit construction hours to between 7:00 a.m. and 7:00 p.m., Monday through Friday, unless permission is granted with a development permit or other planning approval. No construction activities are permitted on the weekends at sites within 500 feet of a residence.
    - The construction noise analysis already accounts for this standard restriction on days and hours. There is no indication that work outside these hours will need to be done.

- Construct solid plywood fences around ground level construction sites adjacent to operational businesses, residences, or other noise-sensitive land uses.
    - This condition does not make clear if "adjacent" means shared property line (this project shares none with noise-sensitive receptors) or would require a fence around the entire site. In any case, it would be impractical to construct a fence that would provide up to 25 dB of noise attenuation at the nearby residences. (More comments on sound barrier walls below.)
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
    - Construction equipment was not commonly equipped with mufflers prior to the 1970s, so requiring a muffler was a meaningful noise mitigation measure when NEPA and CEQA were first passed. However, equipment operating today in urban settings is commonly muffled from the factory. The noise level data cited in the Noise Assessment ("Mitigation of Nighttime Construction Noise, Vibrations and Other Nuisances", National Cooperative Highway Research Program, 1999) is for equipment that is already muffled, so while well-fit mufflers should be required, that will only serve to keep noise levels from being louder than calculated in the Noise Assessment.
- Prohibit unnecessary idling of internal combustion engines.
    - The Noise Assessment does not provide details of its noise calculations, but given that the results are presented as noise equivalent levels (Leq), they already account for the typical times that the engines idle and operate at full power. It is not reasonable to expect a construction crew to deviate much from the typical times.
- Locate stationary noise-generating equipment such as air compressors or portable power generators as far as possible from sensitive receptors. Construct temporary noise barriers to screen stationary noise-generating equipment when located near adjoining sensitive land uses.
    - Because no details about the Noise Assessment calculations are presented, it is not possible to know where stationary equipment was assumed to be placed for the analysis. However, having done many construction noise analyses myself, I can state that stationary noise sources are not the dominant noise sources at a construction site, so these requirements, while unquestionably good ideas, will not reduce the construction noise levels much, if at all.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
    - This is a good idea, but will not reduce the composite construction noise levels much, if at all.
- Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.
    - This is a good idea, but will not reduce the composite construction noise levels at all.
- Notify all adjacent business, residences, and other noise-sensitive land uses of the construction schedule, in writing, and provide a written schedule of "noisy" construction activities to the adjacent land uses and nearby residences.
    - This is a good idea, but will not reduce the composite construction noise levels at all.

- If complaints are received or excessive noise levels cannot be reduced using the measures above, erect a temporary noise control blanket barrier along surrounding building facades that face the construction sites.
    - While this has the potential to reduce construction noise levels at noise-sensitive receivers, neither the efficacy nor the feasibility of this has been established in the IS. To begin with, this would entail setting up scaffolding immediately in front of every house on, for example, Shortridge Avenue while leaving the driveways clear. If this method is to be employed to reduce construction noise at the façades of residences to levels less than the thresholds of significance, it's efficacy should be supported by a detailed analysis, and it should be a required element of MM-NOI-1.
- Designate a "disturbance coordinator" who shall be responsible for responding to any complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., bad muffler, etc.) and shall require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule.
    - This is a good idea, but will not reduce the composite construction noise levels at all.

MM NOI-1.1: A construction noise logistics plan, in accordance with General Plan Policy EC-1.7, shall be required prior to issuance of a grading permit. A typical construction noise logistics plan will include, but not be limited to, the following measures to reduce construction noise levels:

- Consistent with the Standard Permit Conditions, temporary noise barriers will be constructed to screen stationary noise-generating equipment when located within 200 feet of adjoining sensitive land uses. Temporary noise barrier fences will provide a five dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receptor and if the barrier is constructed in a manner that eliminates any cracks or gaps.
    - As discussed above, stationary equipment is not the dominant noise source on a construction site, so screening it, while unquestionably good ideas, will not reduce the construction noise levels much, if at all
- Locate cranes as far from adjoining noise-sensitive receptors as possible.
    - Because no details about the Noise Assessment calculations are presented, it is not possible to know where cranes were assumed to be placed for the analysis. This would have no effect on the two loudest phases: demolition and grading/excavation.
- During final grading, substitute graders for bulldozers, where feasible. Wheeled heavy equipment are quieter than track equipment and shall be used where feasible.
    - In the "Construction Equipment 50-foot Noise Emission Limits" table presented in the Noise Assessment (Table 6 at p. 22), a grader and a dozer emit the same noise level (85 dBA). There is no indication of whether the equipment in Noise Assessment Table 6 is wheeled or tracked, so it is not possible to assert that this measure will reduce noise levels or by how much. Finally, there is no indication as to who determines feasibility or what the standard is for infeasibility.
- Substitute nail guns for manual hammering, where feasible.

    - This is a good idea, but will not reduce the composite construction noise levels at all. Also, there is no indication as to who determines feasibility or what the standard is for infeasibility.
- Substitute electrically powered tools for noisier pneumatic tools, where feasible.
    - This is a good idea, but will not reduce the composite construction noise levels at all. Also, there is no indication as to who determines feasibility or what the standard is for infeasibility.
- The contractor shall prepare a detailed construction plan identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance.
    - This is a good idea, but will not reduce the composite construction noise levels at all.

In conclusion, the Noise Assessment and Initial Study establish that unmitigated construction noise levels will exceed the adopted thresholds of significance by up to 25 dBA. However, they do not support with any quantitative analysis that the City of San José's Standard Permit Conditions and/or the proposed measures in MM-NOI-1 will reduce those noise levels such that they are lower than the thresholds of significance. As described in detail in this letter, those measures will, in fact, not provide the noise reduction necessary to do so. Therefore, the Finding section of the Mitigated Negative Declaration,

> The attached Initial Study identifies one or more potentially significant effects on the environment for which the project applicant, before public release of this Mitigated Negative Declaration (MND), has made or agrees to make project revisions that will clearly mitigate the potentially significant effects to a less than significant level. [MND at p. 1]

is unsupported with respect to noise.

Response A.33: See Responses A.14, A.16 and A.17.

Comment A.34: Comments on Reasonable Performance Expectations for a Sound Barrier Wall
As noted above, it is unrealistic to assert that a sound barrier wall – particularly a temporary one – can provide 15 dB of sound attenuation. The following graph shows the barrier attenuation for 550 Hz as a function of the Fresnel Number (N0), a parameter defined as $N0 = 2(\delta/\lambda)$ where

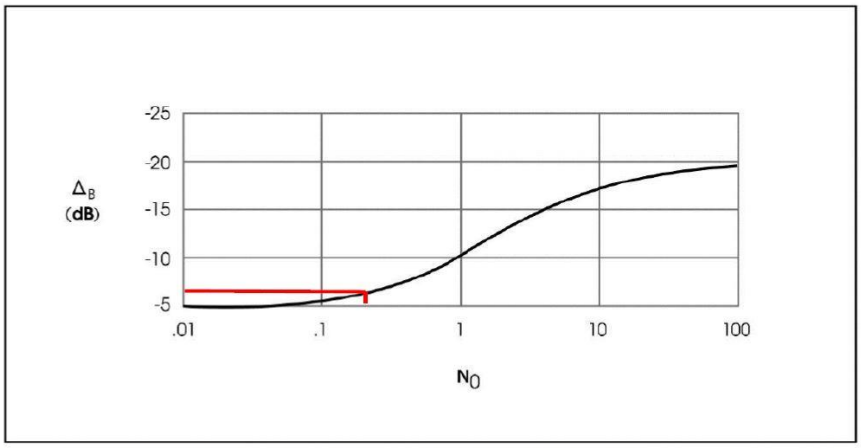
δ = path length difference between the shortest distance directly between the source and receiver and the shortest distance over the barrier between the source and receiver
λ = the wavelength of the sound wave (2.25 ft for 550 Hz)

This graph is taken from a Caltrans document that is a common source in California about the performance of sound barrier walls. Sound at 550 Hz is representative of both highway noise and diesel engines associated with construction equipment.

One thing that is obvious in the figure is that it is essentially impossible to get more than 20 dB of attenuation from a sound barrier wall. What is not obvious is that that it is very difficult to get 15 dB and somewhat difficult to get 10 dB. By way of example, consider the homes across Shortridge Avenue and assume a wall is built on the southern edge of the project site:

Distance from wall to receiver:	65 ft	(Noise Assessment at p. 24)
Distance from wall to source:	135 ft	(center of project site)
Height of receiver:	5 ft	(would be higher for second floor windows)
Height of source:	7 ft	(typical exhaust stack height)
Height of sound barrier:	10 ft	

Given this geometry and using 550 Hz to represent diesel engine noise, the Fresnel number is 0.21. As seen in the figure, the sound barrier attenuation for this 10-ft tall wall should be about 6 dB. To get 10 dB (N0 = 1), the wall would have to be a little over 15 feet tall, and to get 15 dB (N0 = 3.7), the wall would have to be 24 feet tall.



Barrier Attenuation (Δ_B) vs Fresnel Number (N_0) for Infinitely Long Barrier

(Reference: *Technical Noise Supplement to the Caltrans Traffic Noise Analysis Protocol*, Report No. CT-HWANP-RT-13-069.25.2, September 2013, p. 2-41)

Response A.34: See Response A.33.

Exhibit A

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November 3, 2021

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Re: Request for *Immediate Access* to Public Records – Empire Lumber Mixed Use Project (File Nos: PDC15-067, ER20-102)

Dear Ms. Mitre, Ms. Lowry and Ms. Le,

We are writing on behalf of Silicon Valley Residents for Responsible Development ("Silicon Valley Residents") to request ***immediate access*** to any and all public records in the City of San Jose's possession referring or related to the Empire Lumber Mixed Use Project, File Nos: PDC15-067, ER20-102, ("Project"), proposed by Pacific States Industries Development ("Applicant"). Our request includes, but is not limited to, any and all materials, applications, correspondence, resolutions, reports, studies, memos, notes, analyses, electronic mail messages, files, maps, charts, and/or any other documents related to the Project.

The Project proposes to construct a mixed-use building with 408 residential units, approximately 60,330 square feet of commercial space, and an indoor parking garage on a 2.77 gross-acre site at 1260 East Santa Clara Street in San Jose (Accessor's Parcel Numbers 467-33-001, -002, -003, -004, -006, -007, and -008).

Silicon Valley Residents is an unincorporated association of individuals and labor organizations that may be adversely affected by the potential public impacts associated with Project development. Silicon Valley Residents includes: the International Brotherhood of Electrical Workers Local 332, Plumbers & Steamfitters Local 393, Sheet Metal Workers Local 104, Sprinkler Fitters Local 483 and their members and their families; and other individuals that live and/or work in the City of San Jose and Santa Clara County.

This request is made pursuant to the California Public Records Act, Government Code §§ 6250, *et seq*. This request is also made pursuant to Article I, section 3(b) of the California Constitution, which provides a constitutional right of access to information concerning the conduct of government. Article I, section 3(b) provides that any statutory right to information shall be broadly construed to provide the greatest access to government information and further requires that any statute that limits the right of access to information shall be narrowly construed.

We request ***immediate access*** to review the above documents pursuant to section 6253(a) of the Public Records Act, which requires public records to be "open to inspection at all times during the office hours of the state or local agency" and provides that "every person has a right to inspect any public record." Gov. Code § 6253(a). Therefore, the 10-day response period applicable to a "request for a copy of records" under Section 6253(c) does not apply to this request.

Pursuant to Government Code Section 6253.9, if the requested documents are available in electronic format, please upload them to a file hosting service such as NextRequest, Sharepoint or a similar program. Alternatively, if the electronic documents are 10 MB or less (or can be easily broken into sections of 10 MB or less), they may be emailed to jlaurain@adamsbroadwell.com as attachments.

Should you have any questions, please email me at jlaurain@adamsbroadwell.com or leave me a message at (650) 589-1660 and I will return your call.

Thank you for your assistance with this matter.

Sincerely,

Janet Laurain
Paralegal

JML:ljl

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