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April 30, 2026

**Via Email and Overnight Mail**
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**Re: Comments on Draft Environmental Impact Report for Phillip Road Project (SCH No. 2025060240)**

Dear Mr. Singer, Mr. Ogden:

On behalf of Placer County Residents for Responsible Development ("Placer County Residents") we submit these comments on the Draft Environmental Impact Report ("DEIR") prepared for the Phillip Road Project (SCH No. 2025060240) ("Project") proposed by Panattoni Development Company ("Applicant"). The proposed Project would be located at 6382 Phillip road on approximately 241 acres of undeveloped grazing land in the northwest corner of Roseville, in Placer county (APN: 017-101-008-000).[1]

The Project would include up to 664 residential units, 30,084 square feet of retail uses, 20925 square feet of medical offices, and 1,011,032 square feet of innovation center uses, as well as parks, open space, and trails.[2] The residential uses would be separated from the other proposed uses by a new north-south public roadway, which would connect to the north by a bridge across Pleasant Grove Creek and Pleasant Grove Creek Bypass Channel.[3] The project also includes a new electrical substation, utility extensions, and improvements to Blue Oaks Boulevard and Phillip Road.[4]

[1] Phillip Road Project Draft Environmental Impact Report ("DEIR"), p. 2-1, available at: https://ceqanet.lci.ca.gov/2025060240/2/Attachment/cfEXnd.
[2] *Id.* at p. 2-6.
[3] *Id.*
[4] *Id.* at p. ES-1.

We have reviewed the DEIR, its technical appendices, and reference documents with assistance of Placer County Residents' expert consultants, whose comments and qualifications are attached.[5] Based on our review of the DEIR, it is clear that the DEIR fails as an informational document under CEQA and lacks substantial evidence to support its conclusions that the Project's significant impacts would be mitigated to the greatest extent feasible. There is also substantial evidence demonstrating that the Project's potentially significant environmental impacts are far more extensive than disclosed in the DEIR. Placer County Residents and their expert consultants have identified numerous potentially significant impacts that the DEIR either mischaracterizes, underestimates, or fails to identify. Moreover, many of the mitigation measures described in the DEIR will not, in fact, mitigate impacts to the extent claimed.

For example, the DEIR fails to adequately describe the Project's innovation center uses, including the size and scale of the proposed data center. Placer County Residents' air quality expert James Clark, Ph.D. finds that the DEIR improperly omits passenger vehicle emissions from its operational emissions health risk analysis, resulting in underestimated and unmitigated health risk to local residents.[6] Dr. Clark's comments also highlight the DEIR's failure to disclose, analyze, and mitigate potential impacts from the Project's proposed battery energy storage systems ("BESS") which would be used to store energy from residential solar generation, a proposed data center, and other commercial uses at the Project site. Dr. Clark explains that small-scale and commercial BESS systems, particularly when coupled with solar PV and a microgrid/energy management system as proposed for the Project, almost universally use lithium-ion (Li-ion) battery chemistries.[7] Li-ion batteries can result in hazardous thermal runaway, a chain reaction within a battery cell characterized by uncontrollable heat generation, which can lead to catastrophic consequences such as fire or explosion.[8] In particular, the data center, which may be as large as 40-45 megawatts (MW)[9] may require a substantially sized BESS.[10] The DEIR fails to disclose or mitigate the potential air quality, public health, hazards, and fire risks associated with these Project features.

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[5] The attached expert reports are incorporated by reference into this comment letter as if fully set forth herein, require responses from the City, and must be incorporated in the record for this Project.
[6] See **Exhibit A,** James Clark, Ph.D., Comments on the Draft Environmental Impact Report for the Phillip Road Site Project ("Clark Comments").
[7] Clark Comments, p. 11
[8] *Id*., citing Simpa et al. 2024. The safety and environmental impacts of battery storage systems in renewable energy. *World Journal of Advanced Research and Reviews.* 22(02), 564–580
[9] DEIR, Appendix F, p. 3 (Project's tentative map assumed to contain a potential 40MW data center); DEIR p. 3.5-13 (data center will require 3 15MW backup generators).
[10] Clark Comm, p. 10.

Placer County Residents' noise expert Jack Meighan finds that Project construction noise impacts are not adequately analyzed or mitigated in the DEIR.[11] He also finds that the DIER underestimates cooling system noise that is likely to result from potential data center uses and fails to adopt all feasible mitigation for the Project's significant operational traffic noise. Additionally, the DEIR fails to adequately assess whether the Project will result in wasteful, inefficient and unnecessary energy use. The DEIR also fails to analyze or mitigate impacts to the sensitive natural community of Blue Oak Woodland.

Therefore, the City must revise the DEIR to address all of the Project's potentially significant impacts prior to Project approval. Placer County Residents reserves the right to submit supplemental comments at any later hearings and proceedings related to the Project.[12]

## I. STATEMENT OF INTEREST

Placer County Residents is an unincorporated association of individuals and labor organizations that may be adversely affected by the potential environmental impacts associated with Project development. Placer County Residents includes the District Council of Ironworkers, and their members and their families, and other individuals that live and/or work in and around the City and Placer County.

Placer County Residents supports the development of sustainable residential, commercial, and industrial centers where properly analyzed and carefully planned to minimize impacts on public health and the environment. Developments like the Project should avoid adverse impacts to air quality, biological resources, transportation, and public health, and should take all feasible steps to ensure unavoidable impacts are mitigated to the maximum extent feasible. Only by maintaining the highest standards can development truly be sustainable.

The individual members of Placer County Residents and the members of the affiliated labor organizations live, work, recreate and raise their families in and around Placer County. They would be directly affected by the Project's environmental and health and safety impacts. Individual members may also work constructing the Project itself. They would be the first in line to be exposed to any health and safety hazards which may be present on the Project site.

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[11] See **Exhibit B,** Jack Meighan, Comments on the Draft Environmental Impact Report for the Phillip Road Site Project ("Meighan Comments").
[12] Gov. Code § 65009(b); PRC § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal.App.4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal.App.4th 1109, 1121.

In addition, Placer County 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. LEGAL BACKGROUND

CEQA requires public agencies to analyze the potential environmental impacts of their proposed actions in an EIR.[13] "The foremost principle under CEQA is that the Legislature intended the act to be interpreted in such a manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language."[14]

CEQA has two primary purposes. First, CEQA is designed to inform decisionmakers and the public about the potential significant environmental effects of a project.[15] "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.'"[16] 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."[17] As the CEQA Guidelines explain, "[t]he EIR serves not only to protect the environment but also to demonstrate to the public that it is being protected."[18]

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[13] PRC § 21100.
[14] *Laurel Heights Improvement Assn. v. Regents of Univ. of Cal ("Laurel Heights I")* (1988) 47 Cal.3d 376, 390 (internal quotations omitted).
[15] PRC § 21061; CEQA Guidelines §§ 15002(a)(1); 15003(b)-(e); *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 517 ("[T]he basic purpose of an EIR is to provide public agencies and the public in general with detailed information about the effect [that] a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project.").
[16] *Citizens of Goleta Valley,* 52 Cal.3d at p. 564 (quoting *Laurel Heights I*, 47 Cal.3d at 392).
[17] *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810; *see also Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal.App.4th 1344, 1354 ("*Berkeley Jets*") (purpose of EIR is to inform the public and officials of environmental consequences of their decisions *before* they are made).
[18] CEQA Guidelines § 15003(b).

Second, CEQA requires public agencies to avoid or reduce environmental damage when "feasible" by requiring consideration of environmentally superior alternatives and adoption of all feasible mitigation measures.[19] The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to "identify ways that environmental damage can be avoided or significantly reduced."[20] If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has "eliminated or substantially lessened all significant effects on the environment" to the greatest extent feasible and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns."[21]

While courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position. A clearly inadequate or unsupported study is entitled to no judicial deference."[22] As the courts have explained, a prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decision-making and informed public participation, thereby thwarting the statutory goals of the EIR process."[23] "The ultimate inquiry, as case law and the CEQA guidelines make clear, is whether the EIR includes enough detail 'to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.'"[24]

## III. THE DEIR FAILS TO ADEQUATELY DESCRIBE THE DATA CENTER

The DEIR does not meet CEQA's requirements because it fails to include an accurate and complete description of the Project's proposed data center, rendering

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[19] CEQA Guidelines § 15002(a)(2), (3); *see also Berkeley Jets*, 91 Cal.App.4th at 1354; *Citizens of Goleta Valley*, 52 Cal.3d at p. 564.
[20] CEQA Guidelines § 15002(a)(2).
[21] PRC § 21081(a)(3), (b); CEQA Guidelines §§ 15090(a), 15091(a), 15092(b)(2)(A), (B); *Covington v. Great Basin Unified Air Pollution Control Dist.* (2019) 43 Cal.App.5th 867, 883.
[22] *Berkeley Jets*, 91 Cal.App.4th at p. 1355 (emphasis added) (quoting *Laurel Heights I*, 47 Cal.3d at 391, 409, fn. 12).
[23] *Berkeley Jets*, 91 Cal.App.4th at p. 1355; *see also San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 722 (error is prejudicial if the failure to include relevant information precludes informed decision making and informed public participation, thereby thwarting the statutory goals of the EIR process); *Galante Vineyards*, 60 Cal.App.4th at p. 1117 (decision to approve a project is a nullity if based upon an EIR that does not provide decision-makers and the public with information about the project as required by CEQA); *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 946 (prejudicial abuse of discretion results where agency fails to comply with information disclosure provisions of CEQA).
[24] *Sierra Club,* 6 Cal.5th at p. 516 (quoting *Laurel Heights I*, 47 Cal.3d at 405).

its air quality, energy and hazards impact analysis inadequate. California courts have repeatedly held that "an accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR."[25] CEQA requires that a project be described with enough particularity that its impacts can be assessed.[26] Without a complete project description, the environmental analysis under CEQA is impermissibly limited, thus minimizing the project's impacts and undermining meaningful public review.[27] Accordingly, a lead agency may not hide behind its failure to obtain a complete and accurate project description.[28]

The DEIR explains that the Project's "innovation center" uses would include a data center.[29] The DEIR states that the data center would use recycled water for cooling, and would require a BESS and backup generators for energy storage and backup power. However, the DEIR fails to disclose the size or capacity of the proposed data center, leaving the public and decision makers to guess about the scope of the proposed data center's air quality, energy, and hazards impacts.[30] Buried in Appendix F, the Project's water supply assessment, is a reference to the Project's tentative map, which states that the "Tentative Map is assumed to contain a potential 40MW data center."[31] The DEIR also states that the data center would require approximately 15 3-megawatt (MW) generators,[32] implying that the data center may be as large as 45MW. But the DEIR does not analyze the air quality, BESS hazards, or energy consumption related to a 40-45MW data center.

CEQA prohibits this type of disjointed, incomplete description of a project and its impacts. As the Supreme Court has explained, "a reader of the []EIR could not reasonably be expected to ferret out an unreferenced discussion in the earlier Water Forum Proposal, interpret that discussion's unexplained figures without assistance, and spontaneously incorporate them into the []EIR's own discussion of total projected supply and demand. The data in an EIR must not only be sufficient in quantity, it must be presented in a manner calculated to adequately inform the public and decision makers, who may not be previously familiar with the details of

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[25] *Stopthemillenniumhollywood.com v. City of Los Angeles* (2019) 39 Cal.App.5th 1, 17; *Communities for a Better Environment v. City of Richmond* ("*CBE v. Richmond*") (2010) 184 Cal.App.4th 70, 85–89; *County of Inyo v. City of Los Angeles* (3d Dist. 1977) 71 Cal.App.3d 185, 193.
[26] 14 CCR § 15124; *see, Laurel Heights I, supra,* 47 Cal.3d 376, 192-193.
[27] *Id.*
[28] *Sundstrom v. County of Mendocino* ("*Sundstrom*") (1988) 202 Cal.App.3d 296, 311.
[29] DEIR, pp. ES-3; 3.4-18; 3.11-21.
[30] The Project's water supply assessment in Appendix F is the only section of the DEIR which quantifies data center impacts (on water supply only).
[31] DEIR, Appendix F, p. 3.
[32] DEIR, Pg 3.4-19.

the project. Information 'scattered here and there in EIR appendices' or a report 'buried in an appendix,' is not a substitute for 'a good faith reasoned analysis."[33]

The DEIR must be revised and recirculated to include an accurate description of the proposed data center, and an accurate analysis of its impacts.

## IV. THE DEIR FAILS TO ACCURATELY ANALYZE AND MITIGATE POTENTIALLY SIGNIFICANT IMPACTS TO AIR QUALITY

### A. The DEIR Fails to Disclose or Mitigate the Full Scope of the Project's Operational and Combined Health Risks

The DEIR fails to analyze all of the Project's potentially significant operational emissions. Despite this, the DEIR concludes that the Project will not expose sensitive receptors to substantial pollutant concentrations.[34] These conclusions are not supported by substantial evidence because, as Dr Clark highlights, the DIER omits passenger vehicle emissions from its health risk analysis.[35]

Dr. Clark explains that the DEIR's criteria pollutant modeling discloses about 36% of the Project's operational ROG emissions in the mitigated scenario come from passenger vehicles.[36] Despite this substantial contribution, the DEIR's health risk analysis ("HRA") failed to include automobile emissions its operational HRA, focusing primarily on diesel exhaust and a limited subset of Volatile Organic Compounds ("VOC's").[37] This does not fully evaluate toxic air contaminants ("TACs") associated with passenger vehicle emissions, which the California Air Resources Board ("CARB") has identified as including carcinogens such as benzene and 1,3 butadiene.[38] As a result, the Project's potential health risks are underestimated.

Dr. Clark explains that, if operational health risk, and combined construction and operational health risk, are remodeled to incorporate automobile VOCs, the resulting cancer risk would be higher than the 14.3 in one million (operational) and 21.2 in one million (construction + operational) calculated in the DEIR without those emissions. The DEIR's current mitigation measures requiring a clean

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[33] *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 442.
[34] DEIR, p. 3.4-28.
[35] Clark Comments, p. 6.
[36] Clark Comments, p. 7.
[37] Clark Comments, p. 7.
[38] Clark Comments, p. 7.

construction fleet and Tier 4 generators are limited to reducing emissions from construction equipment and on-site generators.[39] Since Mitigation Measures MM 3.4-4a and MM 3.4-4b do not address passenger vehicle automobile emissions, the increased health risk would not be reduced by implementation of MM 3.4-4a and MM 3.4-4b. When re-calculated with all operational emissions sources included, unmitigated health risk will be higher than assumed in the DEIR and mitigated health risk may continue to exceed thresholds.[40] As a result, the City lacks substantial evidence to conclude that the Project's emissions will be mitigated to less than significant levels. And the Project may therefore be placing the residents of the nearby homes at a significant risk from exposure to toxic emissions during the construction phase and operational phase of the Project which the DEIR does not disclose.

For these reasons, the DEIR must be revised to accurately assess potential health risks and implement additional mitigation if necessary.

### B. The DEIR Fails to Disclose, Analyze, or Mitigate the Potentially Significant Impacts From The Project's Battery Energy Storage System

The DEIR's impact analysis is incomplete and unsupported because it fails to analyze potential impacts from the proposed BESS. In order to reduce the Project's operational GHG emissions the DEIR proposes Mitigation Measure 3.5-1a, which requires onsite solar photovoltaic ("PV") systems for both residential and non-residential development and incorporation of BESS.[41] The DEIR states that the BESS for "Residential development may include unit-scale or building-scale battery systems…while non-residential development, including *commercial use and data centers,* shall evaluate and install *appropriately sized* centralized or building-specific BESS capable of load shifting, peak demand reduction, and backup power for critical operations."[42] The DEIR also states that the BESS shall also "be designed to integrate with onsite solar PV systems and be coordinated through a site-wide energy management system or microgrid infrastructure that allows for load prioritization and islanding during outages."[43] As Dr. Clark explains, installation, maintenance, and operation of these types of BESS are known to pose potentially significant health and safety risks from fire, explosion, and hazardous

[39] DEIR, p. 3.4-40.
[40] Clark Comments, p. 9.
[41] DEIR, pp. 3.6-16, 3.5-17.
[42] DEIR, p. 3.5-17 (*emphasis added).*
[43] DEIR, p. 3.5-17.

chemical exposure.[44] The DEIR fails to disclose, analyze, or mitigate any of these potential air quality, public health, or hazards risks.

For instance, the DEIR fails to provide any information regarding the size, configuration, battery components, material data sheets, or any other basic information about the BESS to allow an accurate and informed assessment of the projected energy efficiency or impacts.[45] This information is particularly relevant for potential data center uses, which are energy-intensive uses and will be equipped with approximately 15 3MW diesel generators (45MW total), implying that the data center may need similar storage capacity.[46]

Dr. Clark also highlights that lithium ion batteries—which are highly prone to thermal runaway—are the most common battery used in small-scale and commercial BESS systems coupled with solar PV and microgrid/energy management systems, like the one being proposed.[47] Thermal runaway is a common phenomenon in Lithium-ion BESS.[48] Thermal runaway refers to a chain reaction within a battery cell characterized by uncontrollable heat generation, which can lead to catastrophic consequences such as fire, explosion, or release of toxic battery gas.[49] These are significant impacts that could result in injury or death to workers and nearby residents which the DEIR does not discuss or mitigate.

The DEIR's omission of this analysis is particularly egregious because one of the main causes of thermal runway is overcharging.[50] Solar-integrated microgrid BESS, like the ones being proposed, are particularly at risk of overcharging.[51] The solar plus microgrid system proposed is also presents several additional risk factors, such as—islanding mode, variable PV generation, commissioning risk, and aging and cycling.[52]

The DEIR must be revised to disclose, analyze, and mitigate these potentially significant impacts related to the BESS prior to Project approval.

[44] Clark Comments, pp. 10-13.
[45] Clark Comments, p. 10.
[46] Clark Comments, p. 10.
[47] Clark Comments, p. 11.
[48] Clark Comments, p. 11.
[49] Clark Comments, p. 11.
[50] Clark Comments, p. 11.
[51] Clark Comments, p. 11.
[52] Clark Comments, p. 13.

## V. THE DEIR FAILS TO ACCURATELY ANALYZE AND MITIGATE POTENTIALLY SIGNIFICANT NOISE IMPACTS

### A. The Project Will Result in Potentially Significant and Unmitigated Construction Noise Impacts Which the DEIR Fails to Disclose or Mitigate

The DEIR's analysis of the Project's construction noise impacts does not comply with CEQA and is unsupported by substantial evidence. The DEIR concludes that construction-related noise impacts will be less than significant.[53] To come to this conclusion, the DEIR relies on Roseville Municipal Code Section 9.24.030, which exempts private construction activities occurring between the hours of 7:00am and 7:00pm from the local noise ordinance.[54] However, this methodology is contrary to CEQA and renders the DEIR's conclusion unsupported.

One of CEQA's main policies is to ensure Californians are free from excessive noise.[55] In order to identify potentially significant noise impacts, the CEQA guidelines require the Lead Agency to determine whether a project will generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.[56] In applying significance thresholds, the lead agency must consider both the "absolute noise level" associated with a project as well as the increase in the level of noise that will result from a project.[57] If the threshold is met, "the effect will normally be determined to be significant."[58] However, "[c]ompliance with the law is not enough to support a finding of no significant impact under the CEQA."[59] The EIR's discussion of impacts must "provide[] sufficient information and analysis to allow the public to discern the basis for the agency's impact findings. Thust the EIR should set forth specific data, as needed to meaningfully assess whether the proposed activities would result in significant impacts."[60]

In *Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners of Oakland* the EIR relied exclusively on a fixed standard of 65

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[53] DEIR, p. 3.6-13.
[54] DEIR, p. 3.6-15.
[55] CEQA § 21001(b).
[56] CEQA Guidelines, Appendix G: Environmental Checklist Form, XIII, Noise.
[57] *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 CA5th 814, 887, 893.
[58] CEQA Guidelines § 15064.7(a).
[59] *Californians for Alternatives to Toxics v. Department of Food and Agriculture* (2005) 136 Cal.App.4th 1, 17.
[60] *Id. 13.*

community noise equivalent levels ("CNEL") to determine whether an expansion of the Oakland airport would have a significant effect on noise.[61] The court explained that use of the CNEL standard precluded "any meaningful analysis of existing ambient noise levels, the number of additional nighttime flights that will occur under the [project], the frequency of those flights, to what degree single overflights will create noise levels over and above the existing ambient noise level at a given location, and the community reaction to aircraft noise, including sleep disturbance."[62]

This is unlike the EIR in *Sierra Club v. Tahoe Regional Planning Agency*, which conducted a detailed analysis of the Project's level of daytime noise despite finding it exempt from the local ordinance.[63] There, the EIR examined the noise impacts of the Project's construction activity based on the "worst-case scenario", indicated that construction would occur seasonally and at particular locations for only a fraction of the time, it also considered that the impacts would be lessened by the noise reduction measures imposed by the County's ordinance, as well as the mitigation measure proposed to reduce the nighttime construction noise, which required a noise control plan.[64]

Here, the City acknowledges that "the construction generated noise during daytime could be as high as 76.1 dBA Leq and 80.1 dBA Lmax at the nearest sensitive receptor…" and that this "would exceed the city of Roseville Municipal Code standard for daytime noise on sensitive receptors of 57 dBA Leq and 77 dBA Lmax."[65] However, similar to *Berkeley Keep Jets Over the Bay Committee*, the City exclusively relies on the daytime construction noise exemption in the Municipal Code to conclude impacts would be less than significant. Unlike the EIR in *Tahoe Regional Planning Agency*, the City does not propose any mitigation to reduce construction-related noise levels. Thus, the City does not meaningfully consider the noise impacts of the project.

As Mr. Meighan highlights, this implies that any increase in noise is considered insignificant so long as the construction activities are conducted during the daytime.[66] This methodology is contrary to CEQA and fails to adequately assess whether the Project will result in significant noise impacts. Mr. Meighan recommends that the City either compare the expected construction noise levels against the City's Noise Ordinance thresholds or choose an alternative threshold,

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[61] *Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners of Oakland* (2001) 91 Cal.App.4th 1344, 1373.
[62] *Id.* at p. 1382.
[63] *Sierra Club v. Tahoe Regional Planning Agency* (2013) 916 F.Supp.2d 1098, 1147.
[64] *Id.* at pp. 1147-1148.
[65] DEIR, p. 3.6-15.
[66] Meighan Comments, p. 3.

such as the Federal Transit Administration's Transit Noise and Vibration Impact Assessment Manual.[67] The City's estimated construction noise levels exceed both thresholds and require mitigation.[68] Mr. Meighan recommends implementation of temporary sound walls in a revised EIR.[69]

Therefore, the City must revise the EIR to provide an accurate analysis of the Project's potentially significant noise impacts and propose mitigation to reduce construction noise levels to the greatest extent feasible.

### B. The DEIR Lacks Substantial Evidence to Conclude That Operational Traffic Noise Will be Significant and Unavoidable

The DEIR fails to adopt all feasible mitigation measures to reduce the Project's impacts related to traffic noise and thus cannot make the necessary findings to approve a statement of overriding considerations. The DEIR concludes that sensitive receptors will be exposed to significant and unavoidable traffic noise levels during Project operation.[70] The DEIR also concludes that no additional feasible mitigation is available to reduce these potential impacts.[71] However, Mr. Meighan provides substantial evidence that there is additional feasible mitigation that would further reduce traffic noise, rendering the City's conclusions unsupported by substantial evidence.[72]

When an EIR identifies significant environmental impacts that may result from a project, certification of the EIR must include certain mandatory CEQA findings. Those findings include that the EIR complies with CEQA, that the lead agency has mitigated all significant environmental impacts to the greatest extent feasible, and that any remaining significant environmental impacts are acceptable due to overriding considerations.[73] Accordingly, before an impact can be declared significant and unavoidable, the lead agency must first adopt all feasible mitigation to reduce the impact to the greatest extent feasible, and must consider feasible mitigation recommended by commenters, when such measures would substantially lessen a significant environmental effect.[74] Furthermore, the mitigation measures that are adopted must be enforceable through conditions of approval, contracts or

[67] Meighan Comments, p. 3.
[68] Meighan Comments, p. 3.
[69] Meighan Comments, p. 3.
[70] DEIR, p. 3.6-17.
[71] DEIR, p. 3.6-19.
[72] Meighan Comments, p. 4.
[73] PRC § 21081(a)(3), (b); CEQA Guidelines §§ 15043, 15090, 15091, 15092, 15093.
[74] *Covington v Great Basin Unif. Air Pollution Control Dist.* (2019) 43 Cal.App.5th 867, 879-883.

other means that are legally binding.[75] "As is relevant here, a public agency cannot approve a project if the EIR identifies one or more significant effects on the environment, unless the agency makes a finding with respect to each significant effect that specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or alternatives identified in the EIR and makes a statement of overriding consideration with respect to the significant effects."[76]

Here, the City attempts to rely on analysis conducted in the Creekview Specific Plan EIR to conclude there is no feasible mitigation because that EIR found that cumulative traffic noise impacts would be significant and unavoidable even after mitigation.[77] This reliance is misplaced. The Creekview Specific Plan is a 501-acre area that is located immediately east of the project site.[78] As such, the proposed project site and its potential impacts were not analyzed in the Specific Plan. Therefore, the prior analysis in the Creekview Specific Plan does not excuse the City from its obligation to conduct its own project-specific analysis of available mitigation measures.

Additionally, Mr. Meighan provides substantial evidence that implementing rubberized asphalt pavement could reduce tire pavement noise by approximately 3 to 5 dBA, which represents a perceptible reduction to nearby receptors.[79] Because this would substantially lessen the Project's traffic noise impacts, the City must revise the DEIR to include this as mitigation.

Lastly, Mr. Meighan demonstrates that the Project's modeled traffic noise levels are inaccurate, further undermining the validity of the EIR's conclusions.[80]

For these reasons, the City lacks substantial evidence to conclude that the Project will not result in significant traffic noise impacts. The DEIR must be revised to correct deficiencies in its modeled traffic noise levels and include all feasible mitigation before it can adopt a statement of overriding considerations.

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[75] PRC § 21081.6(b); CEQA Guidelines § 15126.4(a)(2).
[76] *Covington v Great Basin Unif. Air Pollution Control Dist.* (2019) 43 Cal.App.5th 867, 877; PRC § 21081.
[77] DEIR, p. 3.6-19.
[78] DEIR, p. 4-3.
[79] Meighan Comments, p. 4.
[80] Meighan Comments, pp. 4-5.

### C. Substantial Evidence Demonstrates That The Project Will Have Significant and Unmitigated Cooling System and HVAC Noise

The DEIR underestimates the potential noise that could result if the allowed innovation center uses are used for a data center, rendering its conclusion inaccurate and unsupported.

Specifically, the DEIR concludes that noise from building mechanical equipment, like air conditioning systems (e.g., HVAC units), can reach up to 78 dB at 3 feet, which would not result in significant noise impacts requiring mitigation.[81] However, Mr. Meighan provides substantial evidence that noise from cooling towers associated with data center operations can reach up to 85 dBA with HVAC levels of up to 100 dBA.[82] Mr. Meighan also states that these higher noise levels are likely to exceed the City's nighttime noise standard of 52 dBA Leq.[83] The DEIR fails to propose any mitigation that would reduce these noise levels. Mr. Meighan recommends implementation of mitigation, such as a soundwall enclosure around any rooftop elements.[84]

Therefore, the DEIR must be revised to include an accurate assessment of potential operational noise impacts from all potential project uses, especially Data Center uses, and propose any necessary mitigation.

## VI. THE DEIR LACKS SUBSTANTIAL EVIDENCE TO CONCLUDE THAT THE PROJECT WILL NOT RESULT IN WASTEFUL, INEFFICIENT, AND UNNECESSARY ENERGY USE

The DEIR's analysis of the Project's energy impacts is inadequate and unsupported by substantial evidence because its discussion of potential energy conservation measures does not comply with CEQA Guidelines Appendix F and fails to provide any quantitative analysis demonstrating that the proposed mitigation measures would actually reduce the Project's energy consumption.

CEQA requires an environmental document to discuss mitigation measures for significant environmental impacts, including "measures to reduce the wasteful, inefficient, and unnecessary consumption of energy."[85] The CEQA Guidelines require discussion of energy conservation measures when relevant, and provide the following examples in Appendix F:

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[81] DEIR, p. 3.6-21.
[82] Meighan Comments, p. 5.
[83] Meighan Comments, p. 5.
[84] Meighan Comments, p. 5.
[85] Pub. Res. Code § 21100(b)(3); *Tracy First v. City of Tracy* (2009) 177 Cal.App.4th 912, 930.

- Potential measures to reduce wasteful, inefficient and unnecessary consumption of energy during construction, operation, maintenance and/or removal. The discussion should explain why certain measures were incorporated in the project and why other measures were dismissed.
- The potential of siting, orientation, and design to minimize energy consumption, including transportation energy, increase water conservation and reduce solid waste.
- The potential for reducing peak energy demand.
- Alternate fuels (particularly renewable ones) or energy systems.
- Energy conservation which could result from recycling efforts.[86]

Courts have rejected CEQA documents that fail to include adequate analysis investigation into energy conservation measures that might be available or appropriate for a project.[87] In *California Clean Energy Commission v. City of Woodland* ("CCEC"), the Court reviewed an EIR for a shopping center on undeveloped agricultural land.[88] There, the Court found that the City's reliance on mitigation measures that required compliance with title 24 and other California green building codes did not meet the requirements of Appendix F of the CEQA Guidelines.[89] The Court also rejected the City's reliance on mitigation measures adopted under the rubric of reducing greenhouse gas emissions.[90] The court explained that "…Air quality mitigation is not a substitute for an energy analysis."[91]

Similarly here, the DEIR improperly concludes that the Project's use of energy would not be wasteful, inefficient, or unnecessary and that no mitigation is required.[92] In support of this conclusion, the City relies on the Project's expected compliance with the energy efficiency requirements of the California Energy Code and CalGreen Code, as well as implementation of air quality and greenhouse gas Mitigation Measures 3.4-3e, 3.5-1a, and 3.5-1c.[93] According to the DEIR, the mitigation measures would improve the Project's energy efficiency by requiring implementation of an employee commute reduction program, promoting the use of

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[86] CEQA Guidelines § 15126.4(a)(1)(C) (stating "'Energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant.").
[87] *Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 CA4th 256; *Spring Valley Lake Ass'n v. City of Victorville* (2016) 248 CA4th 91.
[88] *CCEC* (2014) 225 CA4th 173.
[89] *Id.* at p. 210; *Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 Cal.App.4th 256, 264.
[90] *Id.* p. 208; *Ukiah* at p. 264.
[91] *Id.* at p. 208; *Ukiah* at p. 264.
[92] DEIR, pp. 3.14-9, 3.14-11.
[93] DEIR, pp. 3.14-9, 3.14-11.

renewable energy sources and reduction in fossil fuel consumption, and reducing reliance on the electrical grid through onsite energy generation, including solar facilities and a battery energy storage system ("BESS").[94]

This conclusion is unsupported because it improperly relies on compliance with Title 24 and CalGreen to mitigate operational and construction energy impacts. As the case's above demonstrate, compliance with Title 24 regulations and CalGreen Code, alone, do not support a conclusion that energy impacts are less than significant. Moreover, Mitigation Measures 3.4-3e, 3.5-1a, and 3.5-1c were developed to reduce the Project's air quality and greenhouse gas emissions, yet the City provides no evidence demonstrating that these measures would actually reduce the Project's overall energy consumption or ensure that energy use would not be wasteful, inefficient, or unnecessary. The DEIR does not quantify any anticipated reduction in energy demand attributable to these measures or otherwise demonstrate that they would meaningfully reduce the Project's energy use. The City cannot rely on mitigation measures aimed at air quality and greenhouse gas impacts in place of mitigation specifically designed to reduce wasteful, inefficient, or unnecessary energy use. This omission is particularly significant given the inherently energy-intensive nature of data centers, which currently account for approximately 4.4% of annual electricity consumption in the Unites States, with demand projected to continue increasing rapidly.[95]

In order to comply with CEQA, the City must revise the EIR to provide an adequate analysis of the available energy conservation measures that can be incorporated into the Project and how those will reduce the Project's energy consumption.

## VII. THE DEIR FAILS TO DISCLOSE, ANALYZE, AND MITIGATE THE PROJECT'S POTENTIALLY SIGNIFICANT IMPACTS TO BLUE OAK WOODLANDS

The DIER identifies 8.7 acres of valley oak riparian woodland habitat as a sensitive natural community and proposes mitigation measure 3.7-3 to reduce

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[94] DEIR, p. 3.14-11.

[95] Data Centers and Their Energy Consumption, Frequently Asked Questions, available at: https://www.congress.gov/crs-product/R48646; EESI Data Center Energy Needs Could Upend Power Grids and Threaten the Climate, available at: https://www.eesi.org/articles/view/data-center-energy-needs-are-upending-power-grids-and-threatening-the-climate; Little Hoover Commission, Data Centers and California Electricity Policy (March 2026), available at: https://lhc.ca.gov/wp-content/uploads/LHC-Report-292-Data-Centers-California-Electricity-Policy-FINAL-PUBLIC-3.3.26.pdf.

impacts to valley oak habitat.[96] However, the DEIR fails to analyze or mitigate all potentially significant impacts to sensitive natural communities on the Project site. Specifically, the DEIR separately identifies a 4-acre oak woodland containing "valley oak, blue oak, and Arizona ash," yet does not evaluate whether impacts to the site's blue oak woodland constitute significant impacts under CEQA.[97] This omission is significant because Blue Oak Woodland and Forest is recognized by the California Department of Fish and Wildlife ("CDFW") as a sensitive natural community.[98]

CEQA requires an EIR to determine whether a project would cause a substantial adverse effect on any riparian habitat or other sensitive natural community identified by CDFW, the U.S. Fish and Wildlife Service, or applicable local or regional plans and policies.[99] By limiting its analysis and mitigation to valley oak riparian woodland habitat, the DEIR fails to address impacts to other protected oak woodland communities present on the site.

Accordingly, the DEIR must be revised to disclose and evaluate impacts to Blue Oak Woodland and Forest habitat and adopt any necessary mitigation measures to reduce impacts to this habitat.

## VIII. THE CITY SHOULD ASK THE APPLICANT TO CONSIDER WORKFORCE STANDARDS AS PART OF THE DEVELOPMENT AGREEMENT TO ENSURE CONSISTENCY WITH THE GENERAL PLAN

As discussed in more detail below, the City cannot make the requisite findings to approve the DA because its provisions are inconsistent with the General Plan.[100] However, in addition to these findings, the City must also consider the following in its review of the DA:

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[96] DEIR, p. 3.7-38.
[97] DEIR, p. 3.7-8.
[98] CDFW, California Sensitive Natural Communities List, available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline; CDFW, Natural Communities, available at: https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive.
[99] CEQA Guidelines, Appendix G: Environmental Checklist Form, IV Biological Resources; *Save the El Dorado Canal v. El Dorado Irrigation District* (2022) 75 Cal.App.5th 239, 265; *Center for Sierra Nevada Conservation v. County of El Dorado* (2012) 202 Cal.App.4th 1156, 1177 ("the oak woodland management plan's focus on valley oak habitats excludes the vast majority of oak woodlands in the County from the mitigation measures to be funded by the Option B fee").
[100] Roseville Municipal Code § 19.84.050.

- Consistency with the objectives, policies, general land uses and programs specified in the General Plan and any applicable specific plan;
- Consistency with the provisions of Title 19 of the City's Municipal Code;
- Conformity with public health, safety and general welfare;
- The effect on the orderly development of property or the preservation of property values; and
- Whether the provisions of the agreement shall provide sufficient benefit to the City to justify entering into the agreement.[101]

The DEIR states the DA will include a requirement for the applicant to pay into a Community Facilities District ("CFD") to provide funding for fire and police protection and other public services.[102] As proposed, the DA fails to ensure that the Project will conform with public health, safety, and general welfare because it fails to address several significant and unmitigated air quality, public health, hazards risks, and noise impacts. Additionally, the DA fails to ensure that the Project will be consistent with the objectives and policies in the General Plan and that it will provide sufficient benefit to the City to justify entering into the agreement.

For instance, Policy LU 3.4 encourages infill development and reinvestment that enhances the mix of land uses in proximity to one another so that more households can access services, recreation, and jobs without the use of a car.[103] Policy LU5.1 requires the implementation of a land use mix and pattern of development that provides linkages between residents' jobs and local employment-generating uses, facilitates a match between the number and type of local jobs and the local labor force, and maintains the fiscal viability of the City.[104] The proposed CFD funding does not demonstrate compliance with these General Plan policies or demonstrate that the Project's impacts will be outweighed by the public benefits being provided.

The City should ask the Applicant to voluntarily include workforce benefits in the DA to comply with the General Plan, to maximize community benefits from the Project, and to provide a greater degree of requisite certainty in the Project's development. Including a local hire and apprenticeship requirement would be consistent with the City's General Plan Goal LU-10, as well as related

[101] Roseville Municipal Code § 19.84.040.
[102] DEIR, p. 2-43.
[103] Roseville General Plan, Land Use Element, p. II-28.
[104] *Id.* at p. II-29.

Implementation Policies LU-10.1 and LU-7.3, because it promotes well-paying local job growth and a strong local economy.

## IX. THE CITY LACKS SUBSTANTIAL EVIDENCE TO APPROVE THE PROJECT'S ENTITLEMENTS

The Project requires a General Plan Amendment ("GPA"), Rezone, Major Project Permit ("MPP"), Development Agreement, and Tentative Parcel Map ("TPM").[105] As discussed more fully below, the City lacks substantial evidence to make the requisite findings to approve these entitlements because it fails to address all of the Project's potentially significant impacts.

**General Plan Amendment**

The Applicant is seeking a GPA to change the land use designation from Public/Quasi-Public, Low-Density Residential, Parks and Recreation, and Open Space along Pleasant Grove Creek.[106] Amendments to the Land Use Map may only be considered by the City when such amendments are consistent with the intent of the goal and policies of the General Plan.[107] The City cannot demonstrate compliance with the general plan because the Project has air quality, public health, and noise impacts that are unaddressed, which conflict with several of the City's General Plan policies.

First, the Project conflicts with the City's Noise Element. Policy N1.3 states that "the City's exterior noise compatibility standards for uses affected by non-transportation-related noise are defined within the City's Noise Ordinance, and should be applied consistent with the Noise Ordinance."[108] As Mr. Meighan's comments demonstrate, the Project's cooling system noise is likely to exceed the City's nighttime noise threshold of 52 dBA Leq if the Project's innovation uses are utilized for a data center, which is a permitted use. The City underestimates this impact and fails to propose mitigation to ensure noise from cooling systems is reduced below threshold in violation of the City's exterior noise compatibility standards.

Second, the Project conflicts with the City's Air Quality and Climate Change Element, as well as its Safety Element. As discussed in more detail above, the DEIR fails to adequately assess potential impacts from the Project's operational emissions

[105] DEIR, p. 2-43.
[106] DEIR, p. 2-12.
[107] Roseville General Plan, Introduction, p. I-7.
[108] Roseville General Plan, Noise Element, p. IX-11.

by omitting passenger vehicle emissions, rendering this impact underestimated and potentially significant. The DEIR also fails to disclose, analyze, or mitigate potential hazards, health and safety risks, and air quality impacts related to the proposed BESS. These deficiencies are contrary to the below air quality and safety policies aimed at ensuring substantial air pollutants/emissions are mitigated and that City residents are protected from hazardous materials.

| | |
|---|---|
| Policy AQ1.3 | Projects that could generate or expose sensitive uses to substantial air pollutant concentrations should incorporate strategies to reduce exposure to such emission using measures recommended by the Placer County Air Pollution Control District and other applicable, feasible strategies, as needed, to avoid significant air quality impacts.[109] |
| Policy AQ1.4 | As part of the development review process, develop mitigation measures to minimize stationary and area source emissions.[110] |
| Policy AQ1.21 | Protect City residents from the risks involved in the transport, distribution, storage, use, and disposal of hazardous materials, and coordinate with other agencies and organizations to reduce existing sources of health risk.[111] |
| Policy SAFE5.1 | Require the disclosure, use, storage, and disposal of hazardous materials to comply with local, state, and federal safety standards.[112] |

Therefore, the DEIR must be revised to address these impacts before it can find the Project consistent with the General Plan and approve the GPA.

[109] Roseville General Plan, Air Quality and Climate Change Element, p. IV-6.
[110] *Id.*
[111] *Id.* at p. IV-7.
[112] Roseville General Plan, Safety Element, p. VIII-25.

**Rezone**

The Applicant is seeking to rezone the Project site from the Planned Development zone to the Community Commercial-Planned Development zone, Innovation Tech Park-Planned Development zone, Public/Quasi-Public zone, Small Lot Residential/Development Standards zone, Multi-Family Housing zone, Parks and Recreation zone, and the Open Space zone.[113] In order to approve this rezone, the City must find that the amendment is consistent with: (1) the public interest, health, safety, or welfare of the City, and (2) the General Plan and any applicable specific plan of the City of Roseville.[114]

The City cannot find that the amendment is in the public interest, health, safety, or welfare of the City because the rezone will permit land uses that pose potentially significant air quality, public health, and noise impacts that the DEIR has either underestimated, failed to disclose, or failed to adequately mitigate. For the same reasons discussed above for the GPA, the City also cannot find the rezone consistent with the General Plan because of the unaddressed air quality, public health, and noise impacts.

**Major Project Permit**

The City lacks substantial evidence required to make the requisite findings to approve the Project's MPP. Approval of a MPP is a three step process, requiring a preliminary development plan, architecture and landscape review, and final plans.[115]

The MPP cannot be approved unless the following findings are made:

- The preliminary development plan, as well as the architecture and landscaping application is consistent with the General Plan, applicable specific plan, and adopted City design guidelines; and
- The design and installation of the preliminary development plan, as well as the architecture and landscaping application shall not be detrimental to the public health and safety, or be materially detrimental to the public welfare.[116]

[113] DEIR, p. 2-12.
[114] Roseville Municipal Code §19.86.050.
[115] Roseville Municipal Code § 19.82.030.
[116] Roseville Municipal Code § 19.82.030(B), (C).

For the same reasons discussed above, the City cannot find the preliminary development plan or the architecture and landscaping application consistent with the General Plan because of the unaddressed air quality, public health, and noise impacts. Similarly, the City cannot find that the preliminary development application or the architecture and landscaping application will not be detrimental to the public health and safety, or be materially detrimental to the public welfare. As discussed above, the Project will result in significant and unmitigated air quality impacts from operational emissions. Additionally, the Project poses significant risks of hazardous materials exposure and other public health risks due to the unaddressed fire, explosion, and hazardous risks associated with construction of a BESS. Lastly, the Project will result in significant noise levels that the EIR fails to adequately mitigate. Mr. Meighan's comments demonstrate that noise can pose health risks, necessitating compliance with noise standards.

Therefore, the City cannot approve the MPP until after the DEIR has been revised to address all of these potentially significant impacts.

**Development Agreement**

The Applicant seeks to enter into a DA, which will include a requirement for the applicant to pay into a Community Facilities District ("CFD") to provide funding for fire and police protection and other public services.[117] The City cannot approve the DA, unless it finds that the provisions of the agreement are consistent with the General Plan and any applicable specific plan.[118] For the same reasons discussed above, the City also cannot find the DA consistent with the General Plan because funding a CFD for fire and police protection and other public services does not address the significant and unmitigated air quality, public health, and noise impacts the Project will have. Thus, the City cannot find that the DA provisions are consistent with the General Plan.

**Tentative Parcel Map**

The City lacks substantial evidence required to make the requisite findings to approve the Project's TPM. California's Subdivision Map Act precludes the approval of a tentative map where the design or improvement of the proposed subdivision is not consistent with the applicable general plan, is likely to cause substantial environmental damage, or is likely to cause serious public health problems.[119]

[117] DEIR, p. 2-43.
[118] Roseville Municipal Code §19.84.050.
[119] Government Code § 66474(b), (e) and (f).

Additionally, Roseville Municipal Codes Sections 18.06.0170 and 18.06.018 state that a TPM can only be approved if the following findings are made:

- Failure to deny the application would place the residents of the subdivision or the immediate community, or both, in a condition dangerous to their health or safety or both; or
- The condition imposed or denial of the application is required in order to comply with state or federal law.
- The size, design, character, grading, location, orientation and configuration of lots, roads and all improvements for the tentative subdivision map are consistent with the density, uses, circulation and open space systems, applicable policies and standards of the general plan or any applicable specific plan for the area, whichever is more restrictive, and the design standards of this title; and
- The subdivision will result in lots which can be used or built upon. The subdivision will not create lots which are impractical for improvement or use due to the steepness of terrain or location of watercourses in the area; the size or shape of the lots or inadequate building area; inadequate frontage or access; or, some other physical condition of the area; and
- The design and density of the subdivision will not violate the existing requirements prescribed by the Regional Water Quality Control Board for the discharge of waste into the sewage system, pursuant to Division 7 of the Water Code.[120]

First, for the same reasons discussed above, the City cannot find the design or improvement of the proposed subdivision consistent with the General Plan because it will permit land uses that pose potentially significant air quality, public health, and noise impacts that the DEIR has either underestimated, failed to disclose, or failed to adequately mitigate

Second, approval of the TPM is likely to cause substantial environmental damage and public health risks. Relatedly, failure to deny the application would place the residents of the subdivision or the immediate community, or both, in a condition dangerous to their health or safety or both. As discussed above, the Project will result in significant and unmitigated air quality impacts from operational emissions. Additionally, the Project poses significant risks of hazardous materials exposure and other public health risks due to the unaddressed fire, explosion, and hazardous risks associated with construction of a BESS.

Therefore, the City cannot approve the Project's TPM until after the DEIR has been revised to adequately address all of the Project's potentially significant impacts.

[120] Roseville Municipal Code §§ 18.06.170, 18.06.180.

## X. CONCLUSION

For the reasons discussed above, the DEIR for the Project remains wholly inadequate under CEQA. It must be thoroughly revised to provide legally adequate analysis of, and mitigation for, all of the Project's potentially significant impacts. These revisions will necessarily require that the DEIR be recirculated for public review. Until the DEIR has been revised and recirculated, as described herein, the City may not lawfully approve the Project.

Thank you for your attention to these comments. Please include them in the record of proceedings for the Project.

Sincerely,

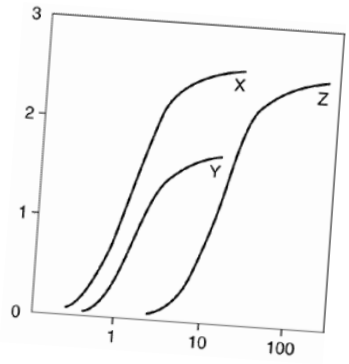
Alaura McGuire

Alaura McGuire

Attachments
ARM:acp

6557-023acp

# EXHIBIT A

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April 30, 2026

Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

**Attn: Ms. Alaura McGuire**

**Subject: Comment Letter on Draft Environmental Impact Report For The Phillip Road Project, Roseville, California SCH Number 2025060240**

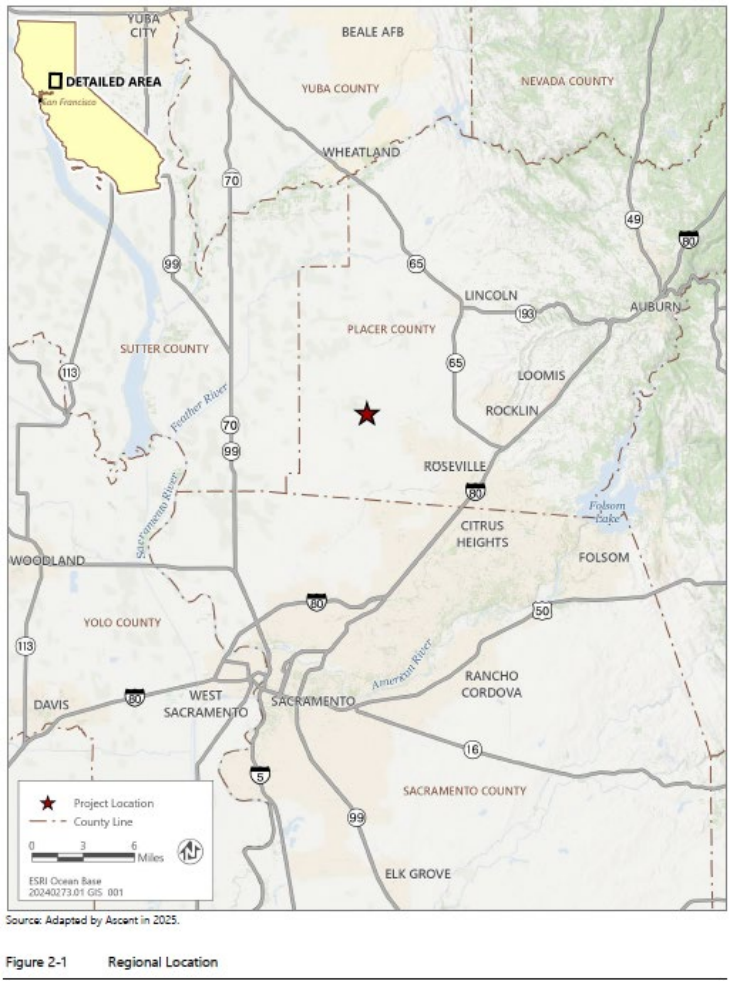
Dear Ms. McGuire:

At the request of Adams Broadwell Joseph & Cardozo (ABJC), Clark and Associates (Clark) has reviewed materials related to the above referenced project. Clark's review of the materials in no way constitutes a validation of the conclusions or materials contained within the DEIR. If we do not comment on a specific item, this does not constitute acceptance of the item.

**Project Description:**

According to the description of the Project on the CEQA.net website, "The project applicant proposes to purchase and develop a property in the City of Roseville with an approximately 176-acre mixed-use development. Proposed uses include up to 664 residential units, 30,084 square feet (sf) of retail, 20,925 sf of medical offices, and 1,011,032 sf of innovation center uses, as well as parks, open space, and trails. The residential uses would be separated from the other proposed uses by a new north-south public roadway, which would connect to the north by a bridge across Pleasant Grove Creek and Pleasant Grove Creek Bypass Channel. The project also includes a new electrical substation, utility extensions, and improvements to Blue Oaks Boulevard and Phillip Road. The project would generate 910-980 jobs and provide housing for 1,550-1,650 residents at buildout."

The project site is located at 6382 Phillip Road and includes approximately 241 acres of undeveloped grazing land in the northwest corner of Roseville, in Placer County. The project site, which is currently owned by the City, is predominantly flat with some sparsely vegetated, low hills. Pleasant Grove Creek traverses the property in an east– west direction, bisecting the site into a north and south parcel. Due to previous farming activities at the project site, the original hydrology/drainage has been modified over 70+ years. The southern portion of the site includes a drainage channel that was constructed to accommodate flows from the adjacent Creekview Specific Plan development to the east of the project site.




Source: Adapted by Ascent in 2025.

Figure 2-1 Regional Location

**Figure 1: Project Site Location**

The project site is part of the City-owned property known as Reason Farms, which totals approximately 1,700 acres. The City purchased the property in 2003 for a retention basin project using development impact fees collected in the Pleasant Grove/Curry Creek Mitigation Fee program. Since

2004, further studies and refined design alternatives have identified excess land areas which would be underutilized in achieving the retention basin project's mitigation needs. This allowed for the disposition of approximately 430 acres for other uses, which includes the approximately 241 acres being studied in this EIR, and the dedication of approximately 218 acres as an environmental preserve now known as the Al Johnson Wildlife Preserve. The remaining land for the Pleasant Grove Stormwater Retention Basin Project site totals approximately 1,052 acres.

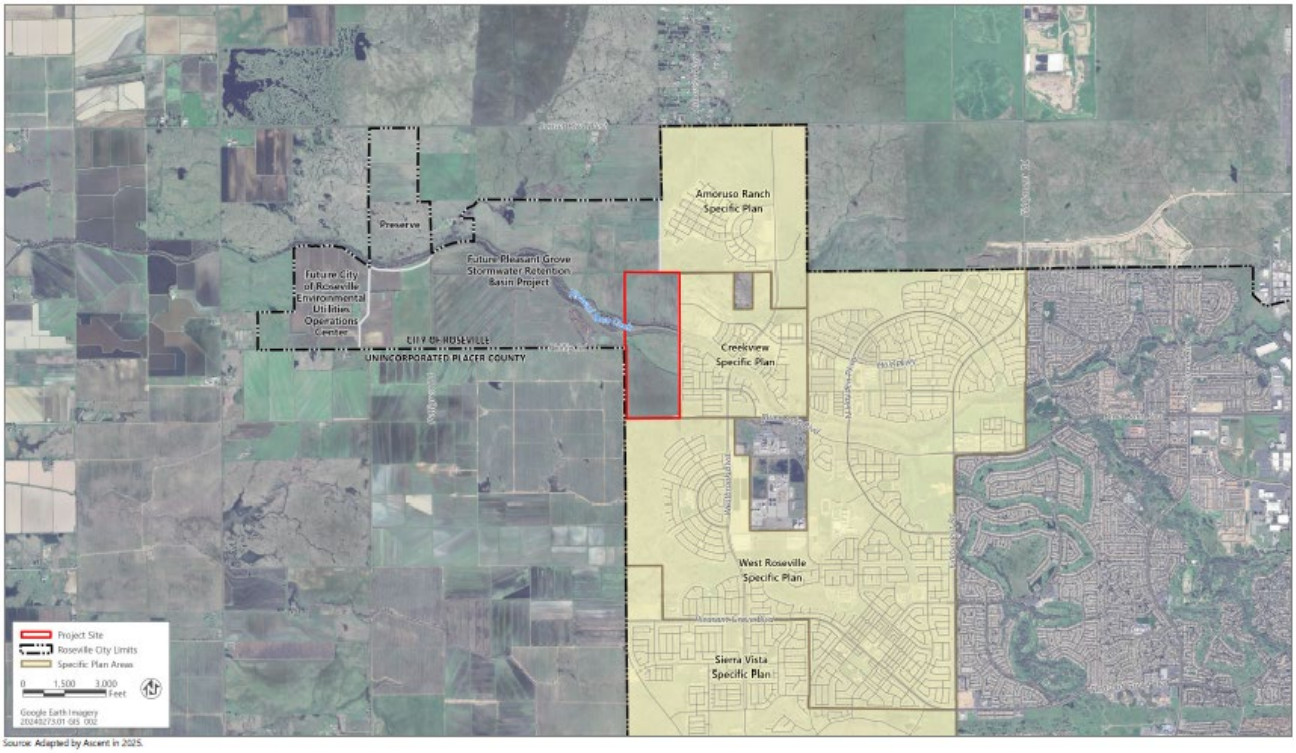



**Figure 2: Project Location and Surrounding Uses**

Specifically, the DEIR states that the project would include development of:

- 529 single-family residential units;
- Up to 135 multi-family residential units;
- 30,084 square feet (sf) of retail uses;
- 20,925 sf of medical offices;
- 1,011,032 sf of "innovation center" uses;
- 4.9 acres of park; and

- 13.9 acres of open space along Pleasant Grove Creek and the Pleasant Grove Creek Bypass Channel.

The southern portion of the project site would include residential, retail, medical offices, innovation center uses, and a park. The northern portion of the project site would include residential uses and a park. The two portions would be connected by a bridge across Pleasant Grove Creek and Pleasant Grove Creek Bypass Channel, which would remain as open space.

At buildout, the project would require approximately 49 megavolt-amperes (MVA) of power. Roseville Electric has identified 5 MVA currently available from its existing facilities, which would require extension of two existing 12-kilovolt (kV) underground lines. *The remaining demand would be met through construction of a new 225-by-175-foot electrical substation proposed to be constructed on the project site, along with two 60-kV overhead power lines extending along the south side of Blue Oaks Boulevard to the substation.*

Backbone infrastructure would be constructed beginning in 2027. Residential development would occur in five phases starting in 2028, with full residential occupancy projected by 2033. The innovation and commercial components would follow in up to four phases beginning as early as 2029. The timing of future phases would depend on market readiness and tenant demand. From a market absorption and practical perspective, it could take decades for the entire innovation and commercial development to come to fruition. For the purposes of the EIR, the full buildout year was conservatively assumed to be 2038.

**Table 2-5 Proposed Residential Phasing Plan**

| Phase | Village | Timing |
|---|---|---|
| 0 | Backbone infrastructure | Construction: approximately 18 months beginning in 2027 |
| R1 | Village 1 – 162 lots (northern half of the south side) | Construction: approximately 12 months beginning in 2028; Occupancy: 2029 |
| R2 | Village 2 – 156 lots (southern half of the south side) | Construction: approximately 12 months beginning in 2029; Occupancy: 2030 |
| R3 | Village 3 – 105 lots (southern half of the north side) | Construction: approximately 12 months beginning in 2030; Occupancy: 2031 |
| R4 | Village 4 – 106 lots (northern half of the north side) | Construction: approximately 12 months beginning in 2031; Occupancy: 2032 |
| R5 | Village 5 – HDR on Blue Oaks Boulevard | Construction: approximately 12 months beginning in 2032; Occupancy: 2033 |

Source: Provided by Panattoni in 2025.

According to the DEIR, "Construction activities and general sequencing would be as follows: installation of stormwater pollution prevention plan BMPs; clear and grub; mass grading and soil

stabilization; installation of footings, slab, wall panels, roof structure; installation of mechanical, electrical, and plumbing infrastructure and building envelope and finishes; installation of underground wet and dry utilities, hardscape/paving, and irrigation and landscaping."[1]

**Table 2-6 Proposed Innovation and Commercial Phasing Plan**

| Phase | Buildings | Timing |
|---|---|---|
| 0 | Backbone infrastructure | Construction: approximately 18 months beginning in 2027 |
| I1 | C, D | Construction to be determined based on market demand: approximately 12 months beginning in 2029; Occupancy: 2030 |
| I2 | E, F | Construction to be determined based on market demand: approximately 12 months beginning in 2031; Occupancy: 2032 |
| I3 | G, H, I | Construction to be determined based on market demand: approximately 12 months beginning in 2033; Occupancy: 2034 |
| I4 | A, B | Construction to be determined based on market demand: approximately 12 months beginning in 2036; Occupancy: 2038 |

Source: Provided by Panattoni in 2025.

Our review identifies two significant deficiencies in the DEIR's air quality and hazardous materials analyses: (1) the Health Risk Assessment omits VOC emissions from project-generated automobile traffic, and (2) the DEIR contains no hazard analysis of the on-site Battery Energy Storage System. A revised DEIR addressing the specific comments below is necessary to ensure that the community's health is protected.

**Specific Comments:**

1. **The Health Risk Assessment Underestimates The Risk From The Combined Construction and Operational Phases Of The Project By Only Focusing On Diesel Particulate Matter And Not Including Volatile Organic Compounds (VOCs) From Automobiles.**

According to the DEIR, "Based on the nature of proposed uses, the project would result in operational emissions associated with area sources, *mobile sources*, and off-gassing emissions associated with consumer products, architectural coatings, autobody shop paint booths, and toxic air contaminants (TAC) from the biosafety level 2 wet labs. CalEEMod was used to model all sources with project specific information as inputs, where available (e.g., building square footage, land use type, water, electricity, natural gas, and project vehicle miles traveled (VMT) and daily trips for

[1] DEIR. 2026. Pg 2-41

operations), TAC emissions from the autobody shop paint booths and the biosafety level 2 wet labs, and emissions from the delivery trucks and generators, which were modeled in excel using project specific information."[2] The DEIR describes the method for assessing the autobody shop, the wet lab, and the diesel generators that will be used on site. Then the DEIR states that "Mobile source emissions would result from vehicle miles traveled (VMT) that would be generated by trucks and passenger cars. For this analysis, data was provided by Fehr & Peers (Fehr & Peers 2025)."

In Appendix B1 to the DEIR, the TAC sources, emission factor references, and physical characteristics of the modeled sources used in AERMOD are detailed in Table 3. The operational phase includes off-road equipment, on-road trucks, 3-MW generators, regular generators, the autobody shop paint booths, and the wet lab. Missing from the analysis are the emissions from the automobiles associated with the project.

[2] DEIR. Pg 3.4-18

Table 3 TAC Sources, Emission Factors Reference, and Physical Characteristics of Modeled Sources in AERMOD

| Source | TAC | Emission Factor Reference | Source Type | Source Configuration | Source Configuration Reference |
|---|---|---|---|---|---|
| **Construction** | | | | | |
| Off-road equipment | DPM | OFFROAD 2025 | Area | Release height 5 m | PCAPCD, SMAQMD |
| On-road trucks | DPM | EMFAC 2025 | Line-volume | Plume height 6.8 m, plume width 8 m, release height 3.4 m | PCAPCD, Bay Area Air District |
| Onsite truck idling | DPM | EMFAC 2025 | Area | Release height 5 m | PCAPCD, SMAQMD |
| **Operation** | | | | | |
| Off-road equipment | DPM | OFFROAD 2025 | Area | Release height 5 m | PCAPCD, SMAQMD |
| Off-road equipment | DPM | AP-42 | Area | Release height 5 m | PCAPCD, SMAQMD |
| On-road trucks | DPM | EMFAC 2025 | Line-volume | Plume height 6.8 m, plume width 8 m, release height 3.4 m | PCAPCD, Bay Area Air District |
| Onsite truck movement | DPM | EMFAC 2025 | Line-volume | Plume height 6.8 m, plume width 8 m, release height 3.4 m | PCAPCD, Bay Area Air District |
| Onsite truck idling | DPM | EMFAC 2025 | Line-volume | Plume height 6.8 m, plume width 8 m, release height 3.4 m | PCAPCD, Bay Area Air District |
| 3-MW generators | DPM | CARB | Point | Release height 10.74 m, stack inner diameter 0.4572 m, exhaust gas velocity 26.5 m/s, exhaust temperature 783.15-degree Kelvin | University of California San Diego Hillcrest Main Generators |
| Regular generators | DPM | CARB | Point | Release height 3.66 m, stack inner diameter 0.183 m, exhaust gas velocity 45.3 m/s, exhaust temperature 739.82-degree Kelvin | Bay Area Air District |
| Autobody shop paint booths | Various TACs | PCAPCD | Volume | Release height 11.43 m | PCAPCD |
| Wet labs | Various TACs | Ascent Compiled | Volume | Release height 11.43 m | Bay Area Air District |

Notes: $PM_{10}$ = particulate matter with aerodynamic diameter less than 10 micrometers; DPM = diesel $PM_{10}$ exhaust; m = meter; m/s = meter per second.

Sources: BAAQMD 2022; CARB 2020, 2024; EPA 2006; PCAPCD 1998, 2003, 2017; SMAQMD 2013; and UCSD 2019.

In the Operational Emissions Summary table for the mitigated and unmitigated scenarios, the City calculated that 36.65 pounds per day of reactive organic gases (ROGs) will be emitted from passenger cars.[3] This makes up approximately 36 percent (35.85% to be exact) of the 102.24 pounds of ROGs that will be emitted in the Mitigated Scenario.

However, the Health Risk Analysis (HRA) performed for the Project focused primarily on the impacts from diesel exhaust associated with the generators and trucks and a limited set of Volatile Organic Compounds (VOCs) associated with the paint booths and wet labs, but omitted the emissions from passenger cars. In addition to TACs from diesel exhaust (assumed to be diesel particulate matter

[3] DEIR Appendix B1 pg 33 of 1517

or DPM), the California Air Resources Board's (CARB's) analysis of tailpipe emissions shows that, in addition to simple alkane hydrocarbons, the emissions also contain benzene (human carcinogen), 1,3-butadiene (human carcinogen), ethylbenzene (human carcinogen), toluene (neurotoxin), acetaldehyde (respiratory irritant), and formaldehyde (human carcinogen), and other air toxins. These air toxins make up approximately 22% of the total organic gases (TOGs) emitted from vehicles, and increase health risk when inhaled.

| **CARB TOG Speciation Profile Run Exhaust[4]** | | |
|---|---|---|
| **CAS#** | **Chemical Name** | **Fraction** |
| 75070 | Acetaldehyde | 0.0028 |
| 107028 | Acrolein | 0.0013 |
| 71432 | Benzene | 0.0247 |
| 106990 | 1,3-Butadiene | 0.0055 |
| 100414 | Ethylbenzene | 0.0105 |
| 50000 | Formaldehyde | 0.0158 |
| 110543 | Hexane | 0.0160 |
| 67561 | Methanol | 0.0012 |
| 78933 | Methyl Ethyl Ketone | 0.0002 |
| 91203 | Naphthalene | 0.0005 |
| 115071 | Propylene | 0.0306 |
| 100425 | Styrene | 0.0012 |
| 108883 | Toluene | 0.0576 |
| 1330207 | Xylenes | 0.0480 |

Clearly the majority of emissions of these compounds from the surrounding sites to the Project site will be associated with passenger vehicles, resulting in significant exposure to benzene (human carcinogen), 1,3-butadiene (human carcinogen), ethylbenzene (human carcinogen), toluene (neurotoxin), acetaldehyde (respiratory irritant), and formaldehyde (human carcinogen), and other air toxins. By omitting these emissions from the HRA, the DEIR substantially underestimates operational health risk.

The City initially concludes that operational health risk will result in a significant health risk of 14.3 in one million, which would exceed the PCAPCD health risk threshold for cancer risk of 10 in

[4] https://ww2.arb.ca.gov/speciation-profiles-used-carb-modeling

one million[5] and that the combined construction and operation scenario health risk analysis will also result in a significant health risk (21.2 in one million), requiring mitigation measures for the construction and operational phase of the Project.[6] Following the implementation of the DEIR's proposed mitigation measures (MM 3.4-4a, the implementation of clean construction fleet and MM 3.4-4b install Tier 4 generators), the City concludes that the health risk from exposure to emissions during the construction phase and operational phase would be reduced below the 10 in one million threshold and would not result in a significant cancer health risk.[7] These conclusions are unsupported because the City failed to include the emissions of VOCs from automobiles associated with the Project in its health risk modeling. As a result, the DEIR substantially underestimated the severity of the Project's potential operational and combined health risk by omitting those contributing emissions.

If operational health risk, and combined construction and operational health risk, are remodeled to incorporate automobile VOCs, the resulting cancer risk would be higher than the 14.3 in one million (operational) and 21.2 in one million (construction + operational) calculated in the DEIR without those emissions. And since Mitigation Measures MM 3.4-4a and MM 3.4-4b do not address passenger vehicle automobile emissions, the increased health risk would not be reduced by implementation of MM 3.4-4a and MM 3.4-4b. When re-calculated with all operational emissions sources included, unmitigated health risk will be higher than assumed in the DEIR and mitigated health risk may continue to exceed thresholds. The Project may therefore be placing the residents of the nearby homes at a significant risk from exposure to toxic emissions during the construction phase and operational phase of the Project which the DEIR does not disclose.

To accurately calculate health risk, the inherent toxicity of VOCs emitted from automobiles requires the City to first quantify the concentration of each VOC released into the environment at each of the sensitive receptor locations through air dispersion modeling, calculate the dose of each TAC at that location, including automobile VOCs, and quantify the cancer risk and hazard index for each of the chemicals of concern. Following that analysis, then the City can make a determination of the relative significance of the emissions. The results should then be presented in a revised EIR prior to issuing any permits for the Project.

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[5] DEIR, Pg 3.4-29.

[6] DEIR, Pg 3.4-30.

[7] DEIR, Pg 3.4-31.

## 2. The DEIR Fails To Perform A Hazard Analysis Of The Battery Energy Storage Systems (BESS) That Will Be Installed Onsite To Store Energy From The Photovoltaic Panels.

According to the DEIR[8], "implementation of Mitigation Measure 3.5-1a would require onsite solar PV systems and battery energy storage systems (BESS) and Mitigation Measure 3.5-1c would require the use of renewable natural gas. Implementation of these measures would promote the use of renewable energy sources and the reduction of fossil fuel as well as reduce reliance on the grid by promoting onsite energy (e.g., solar, BESS facility); thus, further enhancing the project's energy efficiency." However, the DEIR fails to include any description of the proposed BESS size, configuration, battery components, material data sheets, or any other basic information about the BESS to facilitate an analysis of either their energy efficiency or impacts. The DEIR simply states that residential development may include unit-scale or building-scale battery systems to store energy from onsite solar generation, and that non-residential development, "including ***commercial uses and data centers***. shall evaluate and install appropriately sized centralized or building-specific BESS capable of load shifting."[9] The DEIR states that diesel generators for the data center would be approximately 15 3-megawatt (MW),[10] implying that the data center may need similar storage capacity. A data center BESS, coupled with the additional BESS proposed for the Project's residential and other non-residential uses, may result in significant hazards impacts that the DEIR completely fails to disclose or mitigate.

Small-scale and commercial BESS systems, particularly when coupled with solar PV and a microgrid/energy management system (EMS), almost universally use **lithium-ion (Li-ion) battery chemistries** — most commonly lithium iron phosphate (LFP) for residential and smaller commercial applications, and nickel manganese cobalt oxide (NMC) for higher-energy-density commercial systems. The microgrid context (islanding, load prioritization, charge/discharge cycling controlled by an EMS) introduces specific hazard conditions because the battery management system (BMS) and EMS are tightly coupled, and failures at either layer can drive the battery into unsafe operating states.

Thermal runaway is the defining safety risk of Li-ion BESS. Thermal runaway refers to a chain reaction within a battery cell characterized by uncontrollable heat generation, which can lead to

[8] DEIR. Pg 3.14-10

[9] DEIR, Pg 3.5-17 (emphasis added).

[10] DEIR, Pg 3.4-19.

catastrophic consequences such as fire or explosion.[11] The initiating event for a thermal runaway event is frequently a short circuit, which may be a result of overcharging, overheating, or mechanical abuse. During the exothermic reaction process, large amounts of flammable and potentially toxic battery gas are generated.[12]

Several factors can initiate thermal runaway in BESS, including overcharging, overheating, manufacturing defects, battery misuse, and short circuits. In many cases, heat accumulates within the battery faster than it can be expelled. This causes the electrolyte to transition from a liquid to a gas, increasing internal pressure beyond safe limits. If venting fails, the pressure buildup can lead to catastrophic failure. [13] In a solar-integrated microgrid, overcharging is a particularly relevant trigger because the EMS must continuously balance variable PV generation against load and state-of-charge (SOC) limits. Overcharging can provoke side reactions such as lithium dendrite formation, cathode structure collapse, and accelerated electrolyte decomposition, generating heat and gases and ultimately triggering thermal runaway.[14]

Overcharging represents one of the most common causes of thermal runaway, occurring when battery management systems fail or when charging protocols exceed manufacturer specifications. In large-scale BESS installations, even small overcharging incidents can cascade through multiple modules if not detected quickly.[15]

In any BESS, one of the most important barriers for preventing runaway events is the battery management system (BMS), which provides primary thermal runaway protection by assuring that the battery system operates within a safe range of parameters — including state of charge and temperature.[16]

In case of undervoltage, overvoltage, over-temperature, or overcurrent conditions, the BMS will alarm and then limit the charge and discharge current or power. Under emergency conditions, the

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[11] Simpa et al. 2024. The safety and environmental impacts of battery storage systems in renewable energy. *World Journal of Advanced Research and Reviews.* 22(02), 564–580

[12] Conzen, Jens, Sunil Lakshmipathy, Anil Kapahi, Stefan Kraft, Matthew DiDomizio. 2023. Lithium ion battery energy storage systems (BESS) hazards„*Journal of Loss Prevention in the Process Industries*, Volume 81,104932, ISSN 0950-4230, https://doi.org/10.1016/j.jlp.2022.104932.

[13] Lozanova, S. 2025. BESS Thermal Runaway: Fire Risk & Mitigation Strategies. https://www.greenlancer.com/post/thermal-runaway

[14] Han, D., Juan Wang, Chengxian Yin, Yuxin Zhao. 2025. Advances in Early Warning of Thermal Runaway in Lithium-Ion Battery Energy Storage Systems. *Advanced Sensor Research*. Volume 4, Issue 5 2400165

[15] Solarif. 2026. How do you prevent thermal runaway in your BESS. https://solarif.com/academy-article/how-do-you-prevent-bess-thermal-runaway/

[16] Conzen, Jens, Sunil Lakshmipathy, Anil Kapahi, Stefan Kraft, Matthew DiDomizio. 2023. Lithium ion battery energy storage systems (BESS) hazards„*Journal of Loss Prevention in the Process Industries*, Volume 81,104932, ISSN 0950-4230, https://doi.org/10.1016/j.jlp.2022.104932.

BMS will cease operations and electrically disconnect each battery enclosure. However, if an internal cell breakdown has occurred, the BMS will not stop the thermal runaway.[17] This is a *critical limitation*: once thermal runaway begins at the cell level, the BMS is powerless to stop it. The microgrid EMS adds another layer of complexity — if control systems are not programmed or calibrated correctly, they may fail to monitor and manage battery performance effectively, leading to overheating or even thermal runaway.[18]

Manufacturing quality is also a major vulnerability. A 2024 industry quality report found that 72% of BESS manufacturing defects occurred at the system level, and a separate inspection study found that a significant fraction of inspected BESS units had defects in the fire suppression system, while 18% had thermal management system defects — both subsystems being critical for BESS safety.[19],[20]

The solar plus microgrid system called out for this Project introduces several additional risk factors not present in simpler standalone storage:

- **Islanding mode:** When a system islands from the grid during an outage, the EMS takes full control of charge/discharge. If the EMS has calibration errors or communication failures, the BMS may not receive correct setpoints, creating overcharge conditions.
- **Variable PV generation:** Rapid irradiance changes (cloud cover, shading) can cause charging current spikes that stress cells, particularly if the charge controller and BMS are not tightly coordinated.
- **Commissioning risk:** Some failures occurred during the commissioning phase, when monitoring and communications were not online, thus allowing leaks or isolation failures to

[17] Conzen, J. and M. Townsend. 2023. Mitigating Lithium-Ion Battery Energy Storage Systems (BESS) Hazards. https://www.jensenhughes.com/insights/mitigating-lithium-ion-battery-energy-storage-systems-bess-hazards

[18] Jake Connor. 2026. Battery Energy Storage System (BESS) fire and explosion prevention. https://www.gexcon.com/resources/blog/battery-energy-storage-system-bess-fire-and-explosion-prevention/

[19] Bonner, A. 2025. Growing need for BESS quality control, risk management strategies, insurer kWh Analytics says

*Energy Storage News.* Dated June 11, 2025. https://www.energy-storage.news/kwh-analytics-bess-safety-concerns-have-risen-following-fires/

[20] EPRI. 2024. Insights from EPRI's Battery Energy Storage Systems (BESS) Failure Incident Database Analysis of Failure Root Cause. https://www.sandovalcountynm.gov/wp-content/uploads/2024/12/InsightsfromEPRI_sBatteryEnergyStorageSystems_BESS_FailureIncidentDatabase_AnalysisofFailureRootCause.pdf

cascade into large-scale fires. Small commercial solar+storage systems are often commissioned by integrators with variable levels of BESS-specific expertise. [21]

- **Aging and cycling:** Solar-coupled BESS systems undergo daily deep cycling, which accelerates cell aging. End-of-life lithium-ion batteries are more prone to thermal runaway due to defects and aging-induced degradation.[22]

The DEIR fails to consider the battery chemistry and the hazards of thermal runaway, fire, and toxic gas release in its analysis of the Project. The City must prepare a revised DEIR for the Project to address these significant impacts.

## Conclusion

The facts identified and referenced in this comment letter lead me to reasonably conclude that the Project could result in significant impacts if allowed to proceed. Specifically, (1) the Health Risk Assessment's exclusion of automobile VOC emissions understates cancer risk to nearby residents, and (2) the absence of any hazard analysis for the on-site BESS leaves a foreseeable thermal-runaway and toxic-gas-release pathway unevaluated. A revised environmental impact report should be prepared to address these substantial concerns.

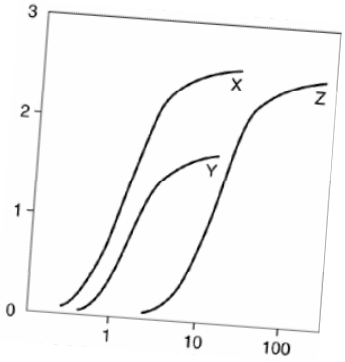
Sincerely,

[21] EPRI. 2024. Insights from EPRI's Battery Energy Storage Systems (BESS) Failure Incident Database Analysis of Failure Root Cause. https://www.sandovalcountynm.gov/wp-content/uploads/2024/12/InsightsfromEPRI_sBatteryEnergyStorageSystems_BESS_FailureIncidentDatabase_AnalysisofFailureRootCause.pdf

[22] Wu, D. (2026). A Review of Fire and Explosion Hazards in Sustainable Lithium-Ion Battery Recycling Industries. *Fire*, *9*(2), 76. https://doi.org/10.3390/fire9020076

Exhibit A:

Curriculum Vitae

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# *James J. J. Clark, Ph.D.*

*Principal Toxicologist*

**Toxicology/Exposure Assessment Modeling**

**Risk Assessment/Analysis/Dispersion Modeling**

**Education:**

Ph.D., Environmental Health Science, University of California, 1995

M.S., Environmental Health Science, University of California, 1993

B.S., Biophysical and Biochemical Sciences, University of Houston, 1987

**Professional Experience:**

Dr. Clark is a well recognized toxicologist, air modeler, and health scientist. He has 20 years of experience in researching the effects of environmental contaminants on human health including environmental fate and transport modeling (SCREEN3, AEROMOD, ISCST3, Johnson-Ettinger Vapor Intrusion Modeling); exposure assessment modeling (partitioning of contaminants in the environment as well as PBPK modeling); conducting and managing human health risk assessments for regulatory compliance and risk-based clean-up levels; and toxicological and medical literature research.

Significant projects performed by Dr. Clark include the following:

**LITIGATION SUPPORT**

**Case: James Harold Caygle, et al, v. Drummond Company, Inc. Circuit Court for the Tenth Judicial Circuit, Jefferson County, Alabama. Civil Action. CV-2009**

**Client: Environmental Litgation Group, Birmingham, Alabama**

Dr. Clark performed an air quality assessment of emissions from a coke factory located in Tarrant, Alabama. The assessment reviewed include a comprehensive review of air quality standards, measured concentrations of pollutants from factory, an inspection of the facility and detailed assessment of the impacts on the community. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Rose Roper V. Nissan North America, et al. Superior Court of the State Of California for the County Of Los Angeles – Central Civil West. Civil Action. NC041739**

**Client: Rose, Klein, Marias, LLP, Long Beach, California**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to multiple chemicals, including benzene, who later developed a respiratory distress. A review of the individual's medical and occupational history was performed to prepare an exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to respiratory irritants. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: O'Neil V. Sherwin Williams, et al. United States District Court Central District of California**

**Client: Rose, Klein, Marias, LLP, Long Beach, California**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to petroleum distillates who later developed a bladder cancer. A review of the individual's medical and occupational history was performed to prepare a quantitative exposure assessment. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Summary judgment for defendants.**

**Case: Moore V., Shell Oil Company, et al. Superior Court of the State Of California for the County Of Los Angeles**

**Client: Rose, Klein, Marias, LLP, Long Beach, California**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to chemicals while benzene who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a quantitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Raymond Saltonstall V. Fuller O'Brien, KILZ, and Zinsser, et al. United States District Court Central District of California**

**Client: Rose, Klein, Marias, LLP, Long Beach, California**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to benzene who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a quantitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Richard Boyer and Elizabeth Boyer, husband and wife, V. DESCO Corporation, et al. Circuit Court of Brooke County, West Virginia. Civil Action Number 04-C-7G.**

**Client: Frankovitch, Anetakis, Colantonio & Simon, Morgantown, West Virginia.**

Dr. Clark performed a toxicological assessment of a family exposed to chlorinated solvents released from the defendant's facility into local drinking water supplies. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to chlorinated solvents. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: JoAnne R. Cook, V. DESCO Corporation, et al. Circuit Court of Brooke County, West Virginia. Civil Action Number 04-C-9R**

**Client: Frankovitch, Anetakis, Colantonio & Simon, Morgantown, West Virginia.**

Dr. Clark performed a toxicological assessment of an individual exposed to chlorinated solvents released from the defendant's facility into local drinking water supplies. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to chlorinated solvents. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Patrick Allen And Susan Allen, husband and wife, and Andrew Allen, a minor, V. DESCO Corporation, et al. Circuit Court of Brooke County, West Virginia. Civil Action Number 04-C-W**

**Client: Frankovitch, Anetakis, Colantonio & Simon, Morgantown, West Virginia.**

Dr. Clark performed a toxicological assessment of a family exposed to chlorinated solvents released from the defendant's facility into local drinking water supplies. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to chlorinated solvents. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Michael Fahey, Susan Fahey V. Atlantic Richfield Company, et al. United States District Court Central District of California Civil Action Number CV-06 7109 JCL.**

**Client: Rose, Klein, Marias, LLP, Long Beach, California**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to refined petroleum hydrocarbons who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Constance Acevedo, et al., V. California Spray-Chemical Company, et al., Superior Court of the State Of California, County Of Santa Cruz. Case No. CV 146344**

Dr. Clark performed a comprehensive exposure assessment of community members exposed to toxic metals from a former lead arsenate manufacturing facility. The former manufacturing site had undergone a DTSC mandated removal action/remediation for the presence of the toxic metals at the site. Opinions were presented regarding the elevated levels of arsenic and lead (in attic dust and soils) found throughout the community and the potential for harm to the plaintiffs in question.

**Case Result: Settlement in favor of defendant.**

**Case: Michael Nawrocki V. The Coastal Corporation, Kurk Fuel Company, Pautler Oil Service, State of New York Supreme Court, County of Erie, Index Number I2001-11247**

**Client: Richard G. Berger Attorney At Law, Buffalo, New York**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to refined petroleum hydrocarbons who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the

known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Judgement in favor of defendant.**

## SELECTED AIR MODELING RESEARCH/PROJECTS

**Client – Confidential**

Dr. Clark performed a comprehensive evaluation of criteria pollutants, air toxins, and particulate matter emissions from a carbon black production facility to determine the impacts on the surrounding communities. The results of the dispersion model will be used to estimate acute and chronic exposure concentrations to multiple contaminants and will be incorporated into a comprehensive risk evaluation.

**Client – Confidential**

Dr. Clark performed a comprehensive evaluation of air toxins and particulate matter emissions from a railroad tie manufacturing facility to determine the impacts on the surrounding communities. The results of the dispersion model have been used to estimate acute and chronic exposure concentrations to multiple contaminants and have been incorporated into a comprehensive risk evaluation.

**Client – Los Angeles Alliance for a New Economy (LAANE), Los Angeles, California**

Dr. Clark is advising the LAANE on air quality issues related to current flight operations at the Los Angeles International Airport (LAX) operated by the Los Angeles World Airport (LAWA) Authority. He is working with the LAANE and LAX staff to develop a comprehensive strategy for meeting local community concerns over emissions from flight operations and to engage federal agencies on the issue of local impacts of community airports.

**Client – City of Santa Monica, Santa Monica, California**

Dr. Clark is advising the City of Santa Monica on air quality issues related to current flight operations at the facility. He is working with the City staff to develop a comprehensive strategy for meeting local community concerns over emissions from flight operations and to engage federal agencies on the issue of local impacts of community airports.

**Client: Omnitrans, San Bernardino, California**

Dr. Clark managed a public health survey of three communities near transit fueling facilities in San Bernardino and Montclair California in compliance with California Senate Bill 1927. The survey included an epidemiological survey of the effected communities, emission surveys of local businesses, dispersion modeling to determine potential emission concentrations within the communities, and a comprehensive risk assessment of each community. The results of the study were presented to the Governor as mandated by Senate Bill 1927.

**Client: Confidential, San Francisco, California**

Summarized cancer types associated with exposure to metals and smoking. Researched the specific types of cancers associated with exposure to metals and smoking. Provided causation analysis of the association between cancer types and exposure for use by non-public health professionals.

**Client: Confidential, Minneapolis, Minnesota**

Prepared human health risk assessment of workers exposed to VOCs from neighboring petroleum storage/transport facility. Reviewed the systems in place for distribution of petroleum hydrocarbons to identify chemicals of concern (COCs), prepared comprehensive toxicological summaries of COCs, and quantified potential risks from carcinogens and non-carcinogens to receptors at or adjacent to site. This evaluation was used in the support of litigation.

**Client – United Kingdom Environmental Agency**

Dr. Clark is part of team that performed comprehensive evaluation of soil vapor intrusion of VOCs from former landfill adjacent residences for the United Kingdom's Environment

Agency. The evaluation included collection of liquid and soil vapor samples at site, modeling of vapor migration using the Johnson Ettinger Vapor Intrusion model, and calculation of site-specific health based vapor thresholds for chlorinated solvents, aromatic hydrocarbons, and semi-volatile organic compounds. The evaluation also included a detailed evaluation of the use, chemical characteristics, fate and transport, and toxicology of chemicals of concern (COC). The results of the evaluation have been used as a briefing tool for public health professionals.

## EMERGING/PERSISTENT CONTAMINANT RESEARCH/PROJECTS

**Client: Ameren Services, St. Louis, Missouri**

Managed the preparation of a comprehensive human health risk assessment of workers and residents at or near an NPL site in Missouri. The former operations at the Property included the servicing and repair of electrical transformers, which resulted in soils and groundwater beneath the Property and adjacent land becoming impacted with PCB and chlorinated solvent compounds. The results were submitted to U.S. EPA for evaluation and will be used in the final ROD.

**Client: City of Santa Clarita, Santa Clarita, California**

Dr. Clark is managing the oversight of the characterization, remediation and development activities of a former 1,000 acre munitions manufacturing facility for the City of Santa Clarita. The site is impacted with a number of contaminants including perchlorate, unexploded ordinance, and volatile organic compounds (VOCs). The site is currently under a number of regulatory consent orders, including an Immanent and Substantial Endangerment Order. Dr. Clark is assisting the impacted municipality with the development of remediation strategies, interaction with the responsible parties and stakeholders, as well as interfacing with the regulatory agency responsible for oversight of the site cleanup.

**Client: Confidential, Los Angeles, California**

Prepared comprehensive evaluation of perchlorate in environment. Dr. Clark evaluated the production, use, chemical characteristics, fate and transport, toxicology, and remediation of perchlorate. Perchlorates form the basis of solid rocket fuels and have recently been detected in water supplies in the United States. The results of this research

were presented to the USEPA, National GroundWater, and ultimately published in a recent book entitled *Perchlorate in the Environment.*

**Client – Confidential, Los Angeles, California**

Dr. Clark is performing a comprehensive review of the potential for pharmaceuticals and their by-products to impact groundwater and surface water supplies. This evaluation will include a review if available data on the history of pharmaceutical production in the United States; the chemical characteristics of various pharmaceuticals; environmental fate and transport; uptake by xenobiotics; the potential effects of pharmaceuticals on water treatment systems; and the potential threat to public health. The results of the evaluation may be used as a briefing tool for non-public health professionals.

## PUBLIC HEALTH/TOXICOLOGY

**Client: Brayton Purcell, Novato, California**

Dr. Clark performed a toxicological assessment of residents exposed to methyl-tertiary butyl ether (MTBE) from leaking underground storage tanks (LUSTs) adjacent to the subject property. The symptomology of residents and guests of the subject property were evaluated against the known outcomes in published literature to exposure to MTBE. The study found that residents had been exposed to MTBE in their drinking water; that concentrations of MTBE detected at the site were above regulatory guidelines; and, that the symptoms and outcomes expressed by residents and guests were consistent with symptoms and outcomes documented in published literature.

**Client: Confidential, San Francisco, California**

Identified and analyzed fifty years of epidemiological literature on workplace exposures to heavy metals. This research resulted in a summary of the types of cancer and non-cancer diseases associated with occupational exposure to chromium as well as the mortality and morbidity rates.

**Client: Confidential, San Francisco, California**

Summarized major public health research in United States. Identified major public health research efforts within United States over last twenty years. Results were used as a briefing tool for non-public health professionals.

**Client: Confidential, San Francisco, California**

Quantified the potential multi-pathway dose received by humans from a pesticide applied indoors. Part of team that developed exposure model and evaluated exposure concentrations in a comprehensive report on the plausible range of doses received by a specific person. This evaluation was used in the support of litigation.

**Client: Covanta Energy, Westwood, California**

Evaluated health risk from metals in biosolids applied as soil amendment on agricultural lands. The biosolids were created at a forest waste cogeneration facility using 96% whole tree wood chips and 4 percent green waste. Mass loading calculations were used to estimate Cr(VI) concentrations in agricultural soils based on a maximum loading rate of 40 tons of biomass per acre of agricultural soil. The results of the study were used by the Regulatory agency to determine that the application of biosolids did not constitute a health risk to workers applying the biosolids or to residences near the agricultural lands.

**Client – United Kingdom Environmental Agency**

Oversaw a comprehensive toxicological evaluation of methyl-*tertiary* butyl ether (M*t*BE) for the United Kingdom's Environment Agency. The evaluation included available data on the production, use, chemical characteristics, fate and transport, toxicology, and remediation of M*t*BE. The results of the evaluation have been used as a briefing tool for public health professionals.

**Client – Confidential, Los Angeles, California**

Prepared comprehensive evaluation of *tertiary* butyl alcohol (TBA) in municipal drinking water system. TBA is the primary breakdown product of M*t*BE, and is suspected to be the primary cause of M*t*BE toxicity. This evaluation will include available information on the production, use, chemical characteristics, fate and transport in the environment, absorption, distribution, routes of detoxification, metabolites, carcinogenic potential, and remediation of TBA. The results of the evaluation were used as a briefing tool for non-public health professionals.

**Client – Confidential, Los Angeles, California**

Prepared comprehensive evaluation of methyl *tertiary* butyl ether (MTBE) in municipal drinking water system. MTBE is a chemical added to gasoline to increase the octane

rating and to meet Federally mandated emission criteria. The evaluation included available data on the production, use, chemical characteristics, fate and transport, toxicology, and remediation of MTBE. The results of the evaluation have been were used as a briefing tool for non-public health professionals.

**Client – Ministry of Environment, Lands & Parks, British Columbia**

Dr. Clark assisted in the development of water quality guidelines for methyl tertiary-butyl ether (MTBE) to protect water uses in British Columbia (BC). The water uses to be considered includes freshwater and marine life, wildlife, industrial, and agricultural (e.g., irrigation and livestock watering) water uses. Guidelines from other jurisdictions for the protection of drinking water, recreation and aesthetics were to be identified.

**Client: Confidential, Los Angeles, California**

Prepared physiologically based pharmacokinetic (PBPK) assessment of lead risk of receptors at middle school built over former industrial facility. This evaluation is being used to determine cleanup goals and will be basis for regulatory closure of site.

**Client: Kaiser Venture Incorporated, Fontana, California**

Prepared PBPK assessment of lead risk of receptors at a 1,100-acre former steel mill. This evaluation was used as the basis for granting closure of the site by lead regulatory agency.

**RISK ASSESSMENTS/REMEDIAL INVESTIGATIONS**

**Client: Confidential, Atlanta, Georgia**

Researched potential exposure and health risks to community members potentially exposed to creosote, polycyclic aromatic hydrocarbons, pentachlorophenol, and dioxin compounds used at a former wood treatment facility. Prepared a comprehensive toxicological summary of the chemicals of concern, including the chemical characteristics, absorption, distribution, and carcinogenic potential. Prepared risk characterization of the carcinogenic and non-carcinogenic chemicals based on the exposure assessment to quantify the potential risk to members of the surrounding community. This evaluation was used to help settle class-action tort.

**Client: Confidential, Escondido, California**

Prepared comprehensive Preliminary Endangerment Assessment (PEA) of dense non-aqueous liquid phase hydrocarbon (chlorinated solvents) contamination at a former printed circuit board manufacturing facility. This evaluation was used for litigation support and may be used as the basis for reaching closure of the site with the lead regulatory agency.

**Client: Confidential, San Francisco, California**

Summarized epidemiological evidence for connective tissue and autoimmune diseases for product liability litigation. Identified epidemiological research efforts on the health effects of medical prostheses. This research was used in a meta-analysis of the health effects and as a briefing tool for non-public health professionals.

**Client: Confidential, Bogotá, Columbia**

Prepared comprehensive evaluation of the potential health risks associated with the redevelopment of a 13.7 hectares plastic manufacturing facility in Bogotá, Colombia The risk assessment was used as the basis for the remedial goals and closure of the site.

**Client: Confidential, Los Angeles, California**

Prepared comprehensive human health risk assessment of students, staff, and residents potentially exposed to heavy metals (principally cadmium) and VOCs from soil and soil vapor at 12-acre former crude oilfield and municipal landfill. The site is currently used as a middle school housing approximately 3,000 children. The evaluation determined that the site was safe for the current and future uses and was used as the basis for regulatory closure of site.

**Client: Confidential, Los Angeles, California**

Managed remedial investigation (RI) of heavy metals and volatile organic chemicals (VOCs) for a 15-acre former manufacturing facility. The RI investigation of the site included over 800 different sampling locations and the collection of soil, soil gas, and groundwater samples. The site is currently used as a year round school housing approximately 3,000 children. The Remedial Investigation was performed in a manner

that did not interrupt school activities and met the time restrictions placed on the project by the overseeing regulatory agency. The RI Report identified the off-site source of metals that impacted groundwater beneath the site and the sources of VOCs in soil gas and groundwater. The RI included a numerical model of vapor intrusion into the buildings at the site from the vadose zone to determine exposure concentrations and an air dispersion model of VOCs from the proposed soil vapor treatment system. The Feasibility Study for the Site is currently being drafted and may be used as the basis for granting closure of the site by DTSC.

**Client: Confidential, Los Angeles, California**

Prepared comprehensive human health risk assessment of students, staff, and residents potentially exposed to heavy metals (principally lead), VOCs, SVOCs, and PCBs from soil, soil vapor, and groundwater at 15-acre former manufacturing facility. The site is currently used as a year round school housing approximately 3,000 children. The evaluation determined that the site was safe for the current and future uses and will be basis for regulatory closure of site.

**Client: Confidential, Los Angeles, California**

Prepared comprehensive evaluation of VOC vapor intrusion into classrooms of middle school that was former 15-acre industrial facility. Using the Johnson-Ettinger Vapor Intrusion model, the evaluation determined acceptable soil gas concentrations at the site that did not pose health threat to students, staff, and residents. This evaluation is being used to determine cleanup goals and will be basis for regulatory closure of site.

Client –Dominguez Energy, Carson, California

Prepared comprehensive evaluation of the potential health risks associated with the redevelopment of 6-acre portion of a 500-acre oil and natural gas production facility in Carson, California. The risk assessment was used as the basis for closure of the site.

**Kaiser Ventures Incorporated, Fontana, California**

Prepared health risk assessment of semi-volatile organic chemicals and metals for a fifty-year old wastewater treatment facility used at a 1,100-acre former steel mill. This evaluation was used as the basis for granting closure of the site by lead regulatory agency.

ANR Freight - Los Angeles, California

Prepared a comprehensive Preliminary Endangerment Assessment (PEA) of petroleum hydrocarbon and metal contamination of a former freight depot. This evaluation was as the basis for reaching closure of the site with lead regulatory agency.

**Kaiser Ventures Incorporated, Fontana, California**

Prepared comprehensive health risk assessment of semi-volatile organic chemicals and metals for 23-acre parcel of a 1,100-acre former steel mill. The health risk assessment was used to determine clean up goals and as the basis for granting closure of the site by lead regulatory agency. Air dispersion modeling using ISCST3 was performed to determine downwind exposure point concentrations at sensitive receptors within a 1 kilometer radius of the site. The results of the health risk assessment were presented at a public meeting sponsored by the Department of Toxic Substances Control (DTSC) in the community potentially affected by the site.

**Unocal Corporation - Los Angeles, California**

Prepared comprehensive assessment of petroleum hydrocarbons and metals for a former petroleum service station located next to sensitive population center (elementary school). The assessment used a probabilistic approach to estimate risks to the community and was used as the basis for granting closure of the site by lead regulatory agency.

**Client: Confidential, Los Angeles, California**

Managed oversight of remedial investigation most contaminated heavy metal site in California. Lead concentrations in soil excess of 68,000,000 parts per billion (ppb) have been measured at the site. This State Superfund Site was a former hard chrome plating operation that operated for approximately 40-years.

**Client: Confidential, San Francisco, California**

Coordinator of regional monitoring program to determine background concentrations of metals in air. Acted as liaison with SCAQMD and CARB to perform co-location sampling and comparison of accepted regulatory method with ASTM methodology.

**Client: Confidential, San Francisco, California**

Analyzed historical air monitoring data for South Coast Air Basin in Southern California and potential health risks related to ambient concentrations of carcinogenic metals and volatile organic compounds. Identified and reviewed the available literature and calculated risks from toxins in South Coast Air Basin.

**IT Corporation, North Carolina**

Prepared comprehensive evaluation of potential exposure of workers to air-borne VOCs at hazardous waste storage facility under SUPERFUND cleanup decree. Assessment used in developing health based clean-up levels.

## Professional Associations

American Public Health Association (APHA)
Association for Environmental Health and Sciences (AEHS)
American Chemical Society (ACS)
California Redevelopment Association (CRA)
International Society of Environmental Forensics (ISEF)
Society of Environmental Toxicology and Chemistry (SETAC)

## Publications and Presentations:

### Books and Book Chapters

Sullivan, P., **J.J. J. Clark,** F.J. Agardy, and P.E. Rosenfeld. (2007). *Synthetic Toxins In The Food, Water and Air of American Cities*. Elsevier, Inc. Burlington, MA.

Sullivan, P. and **J.J. J. Clark**. 2006. *Choosing Safer Foods, A Guide To Minimizing Synthetic Chemicals In Your Diet*. Elsevier, Inc. Burlington, MA.

Sullivan, P., Agardy, F.J., and **J.J.J. Clark**. 2005. *The Environmental Science of Drinking Water*. Elsevier, Inc. Burlington, MA.

Sullivan, P.J., Agardy, F.J., **Clark, J.J.J.** 2002. *America's Threatened Drinking Water: Hazards and Solutions*. Trafford Publishing, Victoria B.C.

**Clark, J.J.J.** 2001. "TBA: Chemical Properties, Production & Use, Fate and Transport, Toxicology, Detection in Groundwater, and Regulatory Standards" in *Oxygenates in the Environment.* Art Diaz, Ed.. Oxford University Press: New York.

**Clark, J.J.J.** 2000. "Toxicology of Perchlorate" in *Perchlorate in the Environment.* Edward Urbansky, Ed. Kluwer/Plenum: New York.

**Clark, J.J.J.** 1995. Probabilistic Forecasting of Volatile Organic Compound Concentrations At The Soil Surface From Contaminated Groundwater. UMI.

Baker, J.; **Clark, J.J.J.**; Stanford, J.T. 1994. Ex Situ Remediation of Diesel Contaminated Railroad Sand by Soil Washing. Principles and Practices for Diesel Contaminated Soils, Volume III. P.T. Kostecki, E.J. Calabrese, and C.P.L. Barkan, eds. Amherst Scientific Publishers, Amherst, MA. pp 89-96.

**Journal and Proceeding Articles**

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 Equialency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. Organohalogen Compounds, Volume 70 (2008) page 002254.

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, Volume 70 (2008) page 000527

Hensley A.R., Scott, A., Rosenfeld P.E., **Clark, J.J.J.** (2007). "Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility." *Environmental Research.* 105:194-199.

Rosenfeld, P.E., **Clark, J. J.,** Hensley, A.R., and Suffet, I.H. 2007. "The Use Of An Odor Wheel Classification For The Evaluation of Human Health Risk Criteria For Compost Facilities" Water Science & Technology. 55(5): 345-357.

Hensley A.R., Scott, A., Rosenfeld P.E., **Clark, J.J.J.** 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, August 21 – 25, 2006. Radisson SAS Scandinavia Hotel in Oslo Norway.

Rosenfeld, P.E., **Clark, J. J.** and Suffet, I.H. 2005. "The Value Of An Odor Quality Classification Scheme For Compost Facility Evaluations" The U.S. Composting Council's 13th Annual Conference January 23 - 26, 2005, Crowne Plaza Riverwalk, San Antonio, TX.

Rosenfeld, P.E., **Clark, J. J.** and Suffet, I.H. 2004. "The Value Of An Odor Quality Classification Scheme For Urban Odor" WEFTEC 2004. 77th Annual Technical Exhibition & Conference October 2 - 6, 2004, Ernest N. Morial Convention Center, New Orleans, Louisiana.

**Clark, J.J.J**. 2003. "Manufacturing, Use, Regulation, and Occurrence of a Known Endocrine Disrupting Chemical (EDC), 2,4-Dichlorophnoxyacetic Acid (2,4-D) in California Drinking Water Supplies." National Groundwater Association Southwest Focus Conference: Water Supply and Emerging Contaminants. Minneapolis, MN. March 20, 2003.

Rosenfeld, P. and **J.J.J. Clark**. 2003. "Understanding Historical Use, Chemical Properties, Toxicity, and Regulatory Guidance" National Groundwater Association Southwest Focus Conference: Water Supply and Emerging Contaminants. Phoenix, AZ. February 21, 2003.

**Clark, J.J.J.**, Brown A. 1999. Perchlorate Contamination: Fate in the Environment and Treatment Options. In Situ and On-Site Bioremediation, Fifth International Symposium. San Diego, CA, April, 1999.

**Clark, J.J.J.** 1998. Health Effects of Perchlorate and the New Reference Dose (RfD). Proceedings From the Groundwater Resource Association Seventh Annual Meeting, Walnut Creek, CA, October 23, 1998.

Browne, T., **Clark, J.J.J.** 1998. Treatment Options For Perchlorate In Drinking Water. Proceedings From the Groundwater Resource Association Seventh Annual Meeting, Walnut Creek, CA, October 23, 1998.

**Clark, J.J.J.**, Brown, A., Rodriguez, R. 1998. The Public Health Implications of MtBE and Perchlorate in Water: Risk Management Decisions for Water Purveyors. Proceedings of the National Ground Water Association, Anaheim, CA, June 3-4, 1998.

**Clark J.J.J.**, Brown, A., Ulrey, A. 1997. Impacts of Perchlorate On Drinking Water In The Western United States. U.S. EPA Symposium on Biological and Chemical Reduction of Chlorate and Perchlorate, Cincinnati, OH, December 5, 1997.

**Clark, J.J.J.**; Corbett, G.E.; Kerger, B.D.; Finley, B.L.; Paustenbach, D.J. 1996. Dermal Uptake of Hexavalent Chromium In Human Volunteers: Measures of Systemic Uptake From Immersion in Water At 22 PPM. Toxicologist. 30(1):14.

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McManus, M.S.; Gong, H., Jr.; Clements, P.; **Clark, J.J.J.** (1991). Respiratory Response of Patients With Interstitial Lung Disease To Inhaled Ozone. American Review of Respiratory Disease. 143(4):A91.

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Ozone Exposures in Residents of Los Angeles County. American Review of Respiratory Disease. 141(4):A70.

Tierney, D.F. and **J.J.J. Clark.** (1990). Lung Polyamine Content Can Be Increased By Spermidine Infusions Into Hyperoxic Rats. American Review of Respiratory Disease. 139(4):A41.

# EXHIBIT B

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4/30/2026

Alaura R. McGuire
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

**Re: Review and Comment on Noise Report**
**Philip Road Site Project DEIR**
**RWDI Reference No. 2601901_01.45**

Dear Mrs. McGuire,

Per your request, Wilson Ihrig has reviewed the information in Section 3.6 of the Draft Environmental Impact Report (DEIR) for the Philip Road Site Project in Roseville CA, prepared by Ascent, with emphasis on the noise analysis section 3.6. The Project proposes an approximately 176-acre mixed-use development with residential, retail, medical offices, and innovation center uses, as well as parks, open space, and trails. The project is surrounded by sensitive uses, including a neighborhood of single-family residences directly to the west of the project footprint, as well as residences located approximately 50 feet to the east in the Creekview Specific Plan area and approximately 600 feet to the south in the West Roseville Specific Plan area. (DEIR, p. 3.6-9)

Wilson Ihrig, Acoustical Consultants, has practiced exclusively in the field of acoustics since 1966. During our nearly 60 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 Roadway Construction Noise Model (RCNM), 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.

**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 cognitive decline, 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.

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[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://iris.who.int/handle/10665/66217)

## UNDEFINED THRESHOLDS OF SIGNIFICANCE

The DEIR does not directly evaluate or disclose construction-related noise or compare levels to established daytime thresholds. The DEIR states "the construction-generated noise during daytime could be as high as 76.1dBA Leq and 80.1 dBA Lmax at the nearest sensitive receptor as shown in Table 3.6-12" and that these levels "would exceed the city of Roseville Municipal code standard for daytime noise on sensitive receptors of 57 dBA Leq and 77 dBA Lmax." However, the DEIR continues, stating that according to the "City of Roseville's Municipal Code (Chapter 9.24.030 Exemptions), noise from construction (e.g., construction, alteration or repair activities) is exempt between the hours of 7:00 a.m. and 7:00 p.m" and because of this "all proposed construction activity would occur within the allowable construction daytime hours as established by the City of Roseville" and since "construction-generated noise would not operate outside of allowable hours" the "impact would be less than significant" (DEIR, page 3.6-15). As a result, the DEIR assumes that construction noise impacts would be less than significant and does not include any mitigation to reduce construction noise impacts.

This document's interpretation of the statute implies that there are no thresholds of significance for daytime construction noise, and any increase in noise is considered insignificant so long as the construction activities are conducted during daytime hours. Hypothetically, under the logic of this document, there is no noise level—no matter how extreme—at which daytime construction noise would be considered an impact. CEQA requires project applicants to assess if there would be a substantial increase in ambient levels.

Other applicable standards exist for daytime construction noise impacts, such as the Federal Transit Administration's (FTA) Transit Noise and Vibration Impact Assessment Manual[2]. Alternatively, the aforementioned 77 dBA LMax set by the City could still be used. The modeled construction noise level of 80 dBA exceeds this by 3 dBA. As a result, we believe that daytime construction noise levels are likely to generate an exceedance, resulting in significant construction noise impacts to nearby receptors, and mitigation, such as temporary sound walls, is necessary and should be incorporated in an updated EIR.

## NOT ALL FEASIBLE MITIGATION WAS CONSIDERED FOR TRAFFIC NOISE

The DEIR states that "existing residences on the segment of Blue Oaks Boulevard west of Westbrook Boulevard would experience a substantial increase (i.e., doubling) in noise perception compared to existing noise levels" resulting from the Project's operational increase in traffic volumes along project-affected roadways, resulting in significant, long-term permanent increases in traffic noise (DEIR, p. 3.6-17). However, the DEIR concludes that "all feasible mitigation was applied" for the Creekview Specific Plan, a similar project using the same feeder roads into the project, and that "the required mitigation has been completed." These mitigation methods include

[2] https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf

roads being "set back 40 feet from the edge of Blue Oaks Boulevard, separated by a landscape buffer" with "a 6-foot masonry sound wall." The DEIR therefore concludes that "No additional feasible mitigation is available" to reduce the Project's traffic noise impacts on these residences (DEIR, page 3.6-19).

The Creekview Specific Plan development is a different project located east of the Project site. (DEIR, p. ES-1) The City cannot rely solely on the mitigation used for a different project to conclude that no additional feasible mitigation is available to reduce the Phillips Road Project's impacts. The City must analyze all feasible mitigation measures available to mitigate this Project's impacts on the adjacent residents. It does appear that not all feasible mitigation was discussed, including the implementation of rubberized asphalt pavement.

Rubberized asphalt pavement (RAP) is widely recognized as an effective and readily implementable strategy. Rubberized asphalt can reduce tire-pavement noise by approximately 3 to 5 dBA compared to conventional dense-graded asphalt, which represents a perceptible reduction to nearby sensitive receptors. Rubberized asphalt is a feasible mitigation measure due to demonstrated acoustic performance and compatibility with standard roadway construction practices. Therefore, since this project would cause a significant traffic noise impact, the incorporation of rubberized asphalt should be analyzed and, where feasible, required as a mitigation measure in a revised DEIR.

## TRAFFIC NOISE ANALYSIS IS INCOMPLETE

The DEIR shows modeled traffic noise levels in Table 3.6-13 and presents measured noise levels in Tables 3.6-9 and 3.6-10. Long-term measurement location 1, which has an LdN of 59.2 dBA (see Table 3.6-10), is at a similar location as Modeling Segment #1, which had an LdN of 49.3 dBA (see Table 3.6-13). It is worth noting that this is not a direct comparison, as the distance from the main noise source, Blue Oaks Blvd, is further from measurement location 1 than it is for modeling segment 1. However, this would mean that the 59.2 measured level would be increased as the measurement is distance-adjusted closer to the main road if a direct comparison was made

The DEIR does not discuss this discrepancy, nor does it apply a calibration factor to the traffic noise model. There is no citation or discussion on how the model was validated, which is vital to verify that the model was built correctly in order to ensure its accuracy. Without such information, the conclusions in the DEIR are unsupported.

The Federal Highway Administration considers validation an important part of the noise model process[3] for the Traffic Noise Model (TNM) program, which was used in the analysis. A typical approach is to build the model, validate that noise levels taken from a physical measurement match modeled levels taken from traffic counts obtained from a period as close as possible to the

[3] https://www.fhwa.dot.gov/Environment/noise/resources/reviewing_noise_analysis/#toc494123470

measurement date, and then use this validated model to predict noise levels for different traffic conditions. The analysis makes no mention of validating the model, especially considering there are measured and modeled locations within close proximity. Without matching the results of the model to a known measurement result, there is no proof that the geometry of the model was built correctly.

The Caltrans Technical Noise Supplement to the Traffic Noise Analysis Protocol[4] (TeNS) provides procedures for traffic studies, including a discussion of model accuracy tolerances. The TeNS recommends that "differences of 5 dBA or more should be approached with caution" when validating traffic noise models [TeNS p. 4-13] as is the case here. The Project should address this discrepancy and validate the traffic model using measured baseline data.

## OPERATIONAL DATA CENTER NOISE SOURCES MAY BE UNDERESTIMATED

The DEIR states that "noise levels associated with air conditioning systems can reach levels of up to 78 dB at 3 feet (DEIR, page 3.6-20). However, the DEIR also states that the project can include "Specialized industrial" uses that could include "alternative energy products and related components and services, data center, or pharmaceutical and medicine manufacturing not exceeding biosafety level 2" (DEIR, Page ES-3).

Cooling systems associated with industrial uses can routinely exceed 78 dBA at 3 feet. However, this greatly underestimates the sources associated with air conditioning and cooling systems needed for a data center. Noise within data centers can reach as high as 96 dBA[5] and cooling towers associated with data center operations can reach levels up to 85 dBA with HVAC levels of up to 100 dBA[6]

The DEIR states that "nearest receptors [are] located approximately 200 feet east" and "reference noise level for a generator is 82 dBA Lmax." The DEIR calculates that this condition "would exceed the City's nighttime standards of 52 dBA Leq" (DEIR, page 3.6-20). It stands to reason that cooling tower noise from a data center, which potentially has a higher source level, would produce sound over this level, which would constitute an impact. Data Center noise resulting from cooling towers and HVAC activity should be studied in a revised EIR with revised mitigation measures, such as amending Mitigation Measure 3.6-4a to include an assessment for cooling noise associated with data center activity to address this noise source and reduce noise to below significant levels.

[4] https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf
[5] https://www.sensear.com/blog/the-harmful-sounds-of-data-centers
[6] https://www.soundtrace.com/blog/data-center-noise-levels-hearing-conservation-osha-compliance

## CONCLUSION

The DEIR contains an undefined daytime construction noise threshold, an uncalibrated traffic noise model, feasible mitigation measures that were unstudied, and inadequate analysis of potential data center noise. As a result, we believe that noise levels would constitute a significant impact and the DEIR requires revisions. Please feel free to contact us with any questions on this information.

Yours truly,

**Wilson Ihrig / RWDI**

Jack Meighan
Senior Acoustician

WILSON IHRIG
ACOUSTICS, NOISE & VIBRATION

# JACK MEIGHAN

*Associate*

Jack joined Wilson Ihrig in 2021 and is an experienced acoustics engineer with expertise in projects involving rail transit systems, highways, CEQA analysis, environmental noise reduction, mechanical drawing reviews, and construction noise and vibration mitigation. He has hands-on experience with project management, including client coordination and presentations, as well as in designing, developing, and testing MATLAB code used in acoustics applications. Additionally, his expertise includes taking field measurements, developing test plans and specifying, purchasing, setting up and repairing acoustic measurement equipment. He has experience in using Traffic Noise Model (TNM), CadnaA, EASE, Visual Basic, LabView, and CAD software.

## Education

- B.S. in Mechanical Engineering, University of Southern California, Los Angeles, CA

## Project Experience

***Metro Regional Connector, Los Angeles CA***
Planned, took, and processed measurements as part of a team to determine the effectiveness of floating slab trackwork for a new subway in downtown Los Angeles that travels below the Walt Disney Concert Hall and the Colburn School of Music.

***Rodeo Credit Enterprise CEQA Analysis for New Construction, Palmdale, CA***
Wrote an accepted proposal and executed it for a noise study project to determine noise mitigation requirements on a new housing development. Led all aspects of the project and managed the budget during all phases of project completion. Completed 5 separate projects of this type for this developer.

***Blackhall Studios, Santa Clarita, CA***
Led the vibration measurement effort for a new soundstage directly adjacent to an existing freight and commuter rail line. Tested equipment, processed data, and analyzed results to determine the vibration propagation through the soil to the proposed soundstage locations, and was part of the team that developed mitigation techniques for the office spaces directly next to the rail line.

***Octavia Residential Condos CEQA Study, San Francisco, CA***
Calculated the STC ratings for the proposed windows to meet Title 24 requirements, modeled the acoustic performance of floor and ceiling structures, researched noise codes, helped with a mechanical design review, and wrote a report summarizing the results for a new Condominium project being developed in San Francisco.

***San Diego International Airport Terminal I Replacement, CA***
Conducted interior noise and vibration measurements, analyzed measurement data to help determine project criteria, modeled the existing and future terminals in CadnaA, and was part of a team that did a complete HVAC analysis of the entire terminal, as part of a CEQA analysis where a new terminal for the airport is being designed.

***Five Points Apartments Noise Study, Whittier, CA***
Took measurements, researched sound data and solutions, and recommended mitigation for a new apartment complex that was located next to an existing car wash, as part of a CEQA review.

***USC Ellison Vibration Survey, Los Angeles, CA***
Conducted vibration measurements as part of a survey to determine the effectiveness of vibration isolation platforms that are used to insulate cell growth in a cancer research facility. Determined the effectiveness and presented this information to the client. Researched and recommended a permanent monitoring system so the client could view data in real time.

***TEN50 Condos 'Popping' Noise Investigation, Los Angeles, CA***
Was part of a team that investigated the noise source of an unwanted popping noise in luxury condos in Downtown Los Angeles. Helped isolate the noise source location with accelerometers to determine where vibrations were occurring first and used an acoustic camera to determine where in the condo the noise was coming from.

***2000 University Project, Berkely, CA***
Wrote a construction noise monitoring plan based on environmental noise calculations, wrote a report summarizing the results, and attending a meeting with the client to discuss options.

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***Bay Area Rapid Transit (BART) On-Track, CA, San Francisco Bay Area, CA****
Day to day project manager, responsible for meetings, presentations, and coordination with the client for an ongoing noise study on the BART system. Developed MATLAB code to process measurements and determine areas where high corrugation was present, contributing to excessively high in-car noise levels. Performed noise measurements inside both the right of way and the vehicle cabin, in addition to rail corrugation measurements.

***California I-605/SR-60 Interchange Improvement, Los Angeles, CA****
Developed a noise model of the area that predicted sound levels for abatement design, in addition to conducting noise measurements and analysis. Led the Team in use of the FHWA Traffic Noise Model Software for the project, involving three major highways and two busy interchanges extending over 17 miles in southern California.

***Sound Transit On-Track, Seattle, WA****
Took measurements, fixed equipment, and developed software in MATLAB to process Corrugation Analysis Trolley measurements as part of an ongoing noise study on the Sound Transit Link system. Tested vibration data to determine the best measurement and processing techniques to store the data in an online database for in-car measurements.

***LA Metro CRRC Railcar Testing, Los Angeles, CA****
Led the effort to plan the measurements, determine measurement locations and finalize the test plan. Formulated a method to capture speed data directly from legacy train vehicles. Executed noise and vibration specification measurements for new rail cars delivered by CRRC.

***City of Los Angeles, Pershing Square Station Rehabilitation Noise Monitoring, CA****
Built noise models, wrote a construction noise plan, and assisted in on-site construction noise issues as they arose for a renovation of the Pershing Square metro station in downtown Los

Angeles. Trained construction personnel in techniques for noise reduction and how to conduct noise monitoring measurements to meet project specifications.

***City of Orange Metrolink Parking Garage Construction Monitoring, CA****
Wrote an adaptive management vibration monitoring plan, set up equipment to monitor live vibration levels, and generated weekly reports as part of an effort to build a new parking garage. Designed, planned, and completed measurements to predict and mitigate pile driving construction impacts at three historic building locations adjacent to the construction site. Coordinated with the client whenever an on-site problem arose.

***LA Metro Westside Subway Construction, Los Angeles, CA****
Planned, organized, and processed noise measurements for the Purple Line extension construction. Implemented both long term microphones to measure noise levels and accelerometers to measure vibration levels in existing subway tunnels. Oversaw noise monitoring at sensitive construction sites for the project and worked with the contractor to find ways to reduce construction noise levels by approximately 10dB.

***Montreal Réseau Express Métropolitain, Canada****
Conducted vibration propagation measurements used to create models to predict operational vibration levels for an under-construction transit line. Managed equipment, solved problems in the field, and wrote parts of the report summarizing the findings of the acoustic study.

***NHCRP Barrier****
Took on-highway measurements and wrote, designed, developed, and tested MATLAB code to identify specific spectrograms to use for analyses for a project evaluating barrier reflected highway traffic noise differences in the presence of a single absorptive or reflective noise barrier.

***Siemens Railcar Testing for Sound Transit, Seattle, WA****
Measured in-car noise and vibration for new rail cars delivered by Siemens. Developed new internal techniques for measurements based on the written specifications. Contributed to the team that helped identify issues that new cars had in meeting the Sound Transit specifications for noise and vibration. Participated in developing the test plan and specified then acquired new equipment for the measurement.

***Toronto/Ontario Eglinton Crosstown Light Rail, Final Design, Canada****
Assisted in vibration propagation measurements, analysis, and recommendations for mitigation for a 12-mile light-rail line both on and under Eglinton Avenue. Set up and ran equipment for at-grade measurements with an impact hammer for underground measurements with an impact load cell that was used during pre-construction borehole drilling.