UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

SEP 28 2012

OFFICE OF THE
REGIONAL ADMINISTRATOR

Michael Miles, Director
California Department of Transportation – District 7
100 South Main Street, Suite 100
Los Angeles, California 90012

Subject: Comments on the Draft Environmental Impact Statement for the Interstate 710 Corridor Project from Ocean Boulevard to State Route 60 Los Angeles County, California (CEQ# 20120229)

Dear Mr. Miles:

The U.S. Environmental Protection Agency has reviewed the Draft Environmental Impact Statement (Draft EIS) for the proposed Interstate 710 (I-710) Corridor Project (Project). EPA's comments are directed to Caltrans per assumption of National Environmental Policy Act (NEPA) responsibility as described in the *Memorandum of Understanding Between the Federal Highway Administration (FHWA) and Caltrans Concerning the State of California's Participation in the Surface Transportation Project Delivery Pilot Program.* Our review and comments are provided pursuant to NEPA, the Council on Environmental Quality (CEQ) Regulations (40 CFR Parts 1500-1508), and our review authority under Section 309 of the Clean Air Act (CAA).

EPA applauds Caltrans for declaring that "[improving] air quality and public health" is one of the key purposes and goals for the proposed I-710 expansion. We recognize that critical improvements are needed along the I-710 corridor to address traffic safety, congestion, and the increasing demand for moving goods from the Ports of Los Angeles and Long Beach to intermodal terminals and beyond. The solution to moving freight in southern California must also balance the need to protect human health and the environment and we appreciate Caltrans recognizing this. The Ports of Long Beach and Los Angeles receive more than 40 percent of all goods imported to the U.S. from Asia and have also positioned themselves as leaders in controlling air pollution from cargo transport with efforts such as the San Pedro Bay Ports Clean Air Action Plan. Complementing the Ports' efforts, a zero-emission freight corridor along the I-710 would serve as a catalyst for other large scale zero-emission technologies for Southern California, and would provide a precedent-setting model for achieving economic, environmental, and health objectives. We note that Southern California Association of Governments' 2012 Regional Transportation Plan includes the establishment of a regional zero-emission freight system. We commend LA Metro and Caltrans for considering a zero-emission freight corridor as a component of some of the alternatives in the Draft EIS. EPA is ready to work with Caltrans and other project partners to ensure the project can reduce a sizable contribution of conventional truck emissions in the I-710 corridor and ultimately meet its goal of "[improving] air quality and public health."

A well-planned and executed zero-emission freight corridor would contribute to improved air quality and reduced public health impacts for the already heavily burdened, low income and minority communities along the I-710 Corridor and for people throughout the Southern California Air Basin. Vulnerable populations (such as older adults, children, and those with pre-existing cardiovascular and

respiratory conditions), and people with "low socioeconomic status" are all particularly susceptible to PM2.5-related health impacts.[1] The project is within the South Coast Air Basin which has among the worst air quality in the United States, with the highest observed ozone concentrations in the country. South Coast Air Quality Management District's Multiple Air Toxics Exposure Study (MATES) found that air toxics-related cancer risks had increased 17% in the Ports of Los Angeles and Long Beach area between the MATES II (1998-99) and MATES III (2005) study periods, even when air toxics-related cancer risks in the Los Angeles area declined 8% during that same time period.[2] Numerous studies have examined air quality around the I-710, Ports of Los Angeles and Long Beach. A recent 2012 South Coast Air Quality Management District Study indicates that concentrations of primary PM2.5 and elemental carbon are elevated near the I-710 freeway, relative to background levels monitored at neighborhood or urban scale monitoring locations.[3] In addition, near-roadway exposure to air pollution is linked to a variety of adverse health outcomes including asthma and adverse birth and childhood outcomes.[4]

While the zero-emission freight corridor feature of this project appears to be a promising step towards reducing diesel emissions from the corridor, the Draft EIS's analysis of all of the build alternatives does not adequately assess air quality impacts of the proposed project, nor does it adequately assess possible benefits of the zero-emission alternatives. The air quality modeling, specifically the source characterization part of the modeling inputs, has major flaws which are further discussed in our detailed comments. The Draft EIS does not describe mitigation for air quality impacts, phasing of project construction/operation (and associated impacts in interim years), and quantification of construction impacts. For the largest public health impact from the project, PM2.5 emissions, the Draft EIS does not adequately present or discuss the potential concentration increases, nor are related mortality and morbidity impacts quantified. We note that Caltrans has not yet completed a project level conformity analysis that meets the requirements of the federal transportation conformity rule, which will be required before the NEPA process is completed. The Draft EIS does not have adequate information on the project's proposal to relocate major transmission lines within the Los Angeles River which could influence choice of alternatives.

We also note that all build alternatives include expanding the existing I-710 facility with additional general purpose lanes, which would contribute to increased vehicle emissions along the I-710 corridor and, for zero-emission alternatives (6B and 6C), possibly counter emission benefits expected from the zero-emission technologies. For those alternatives that include a zero-emissions component (6B/6C), due to the inadequacies of the document described above, we are unable to determine if expected emission reductions associated with the proposed zero-emission feature would be fully realized. The Draft EIS should more fully describe the magnitude of the benefits to distinguish between alternatives. For these and the above reasons, we are rating the zero-emission alternatives, Alternatives 6B and 6C, as "3" – Inadequate Information (see enclosed "Summary of Rating Definitions).

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[1] See Chapter 8 of EPA's Integrated Science Assessment for Particulate Matter (December 2009; http://oaspub.epa.gov/eims/eimscomm.getfile?p_download_id=494950).

[2] Based on photochemical modeling of air toxics emissions in the Los Angeles Area: South Coast AQMD's MATES III report, Page 4-16, http://aqmd.gov/prdas/matesIII/MATESIIIFinalReportSept2008.html

[3] Polidori, A.; Fine, P.M. (2012) Ambient concentrations of criteria and air toxic pollutants in close proximity to a freeway with heavy-duty diesel traffic. Final report, South Coast Air Quality Management District. [Online at http://aqmd.gov/tao/AQ-Reports/I710Fwy_Study.pdf]

[4] Padmanabhan, N. & Glenn, B. August 2009. *EPA Research Focus on Health Effects of Near-Roadway Air Pollution.* Air and Waste Management Association, EM Magazine.

We are rating Alternatives 5A and 6A as "EU-3" – Environmentally Unsatisfactory; Inadequate Information. This rating is based on the inadequacies as previously described, as well the additional impacts of adding capacity and encouraging additional conventional truck traffic without an aggressive solution to reduce diesel emissions, such as zero-emission technology, in a corridor that already carries tens of thousands of heavy duty diesel trucks daily. This expansion will result in increases in roadway-related MSAT and criteria pollutant emissions without the benefit of any foreseeable relief from diesel truck emissions. While the Draft EIS identifies that all build alternatives are projected to generally increase mobile source air toxic and criteria pollutant emissions within the I-710 study area relative to the no-build, most notably total PM2.5 emissions, the largest increases are from alternatives without proposed zero-emission technology (Alternatives 5A and 6A).[5] Increased emissions are likely to make it more difficult for the South Coast Air Basin to attain the National Ambient Air Quality Standards (NAAQS), and increases in PM2.5 or ozone in this area is a concern from a public health perspective. PM2.5 increases may lead to potential increases in heart attacks, pre-term birth, asthma attacks, and mortality among the already burdened low income and minority communities located throughout the corridor. Evidence from observational studies strongly indicates that higher daily ozone concentrations are associated with increased asthma attacks, increased hospital admissions, increased daily mortality, and other markers of morbidity.[6] The proposed project may disproportionately impact low-income, minority communities where there are existing asthma burdens and disparities for minority children. The communities will continue to be impacted with other port expansion and transportation projects, including the 710 expansion; these additional impacts along this corridor would be significant, given existing community vulnerabilities and disparities.

Because all of the build alternatives include increasing lanes along 710, potentially harming public health at many locations throughout the I-710 corridor, we recommend that Caltrans analyze a modified Zero-emission Freight Corridor Alternative, with no I-710 widening, as a way to reduce predicted increases in total PM2.5. EPA notes that an earlier alternatives screening assessed a similar alternative that did not include all of the arterial and freeway congestion relief and safety features of the other build alternatives, and as a result, did not perform as well for mobility and safety during screening. By including these additional congestion relief and safety features, this new alternative could address the substantive environmental issues identified through your analysis presented in the Draft EIS while also providing a solution to increasing safety and mobility. Circulating a revised or supplemental Draft EIS including this alternative, while also including the information identified above, will address the current inadequacies of the document and allow decision-makers and the public to be fully informed prior to the issuance of any decision regarding the project.

We look forward to Caltrans and partners implementing zero-emission technology as part of a solution to regional goods movement challenges that can also benefit neighboring communities along the I-710 Corridor. In our roles as a Participating Agency, a Cooperating Agency pursuant to NEPA, and a previous member of the Air Agency Technical Working Group (AATWG), EPA has offered technical support to Caltrans over the last four years for this project and we continue to be available to resolve the issues that we have identified here and in the attachment. Please send one hard copy of a revised or supplemental Draft EIS and three CD ROM copies to this office at the same time it is officially filed

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[5] There are noted beneficial differences for the zero-emission alternatives (6B/6C): exhaust emissions of PM2.5, diesel PM, and NOx -- critical for ozone and secondary PM2.5 formation in the Los Angeles Area – are predicted to decrease for the zero-emission alternatives (6B/6C) from operations along the I-710 and within the project area of interest, in contrast to Alternatives 5A and 6A, where exhaust emissions of PM2.5, diesel PM, and NOx are expected to increase for operations along the I-710 compared to the no-build (Draft EIS p. 3.13-41 and Tables 3.13-21 and 3.13-23).

[6] See EPA's website on health effects of ozone, see http://www.epa.gov/airquality/ozonepollution/health.html .

with our Washington, D.C. Office. If you have any questions, please contact me at 415-947-8702, or Susan Sturges, the lead reviewer for this Project. Susan can be reached at 415-947-4188 or sturges.susan@epa.gov.

Sincerely,

Jared Blumenfeld

Enclosures:
(1) Summary of Rating Definitions
(2) EPA's detailed comments on the Interstate 710 Corridor Project Draft EIS

cc via email: Malcolm Dougherty, Caltrans
Ron Kosinksi, Caltrans
Robert Pieplow, Caltrans
Vince Mammano, FHWA
Doug Failing, Metro
Colonel R. Mark Toy, U.S. Army Corps of Engineers, Los Angeles District
Dr. Barry Wallerstein, South Coast Air Quality Management District
James Goldstene, California Air Resources Board
Arsenio Mataka, California Environmental Protection Agency
Karen Goebel, U.S. Fish and Wildlife Service
LB Nye, Los Angeles Regional Water Quality Control Board
Bryant Chesney, NOAA Fisheries
Jerry Wood, Gateway Cities COG
Geraldine Knatz, Port of Los Angeles
J. Christopher Lytle, Port of Long Beach
Hasan Ikhrata, Southern California Association of Governments
Ronald Litzinger, Southern California Edison
Ron Nichols, Los Angeles Department of Water and Power
Ken Alex, Office of Planning and Research
Dr. Paul Simon, Los Angeles County Department of Public Health

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

U.S. DOT Commitments, Air Quality, Health Risk, and Environmental Justice Setting

Caltrans, in its NEPA-delegated lead role and as a recipient of Federal funds, should carefully consider all U.S. Department of Transportation commitments which are relevant for this project, including: 1) August 2011 Memorandum of Understanding (MOU) on Environmental Justice (EJ) and Executive Order 12898, and 2) the selection of the LA River Watershed as one of only seven National Urban Waters Federal Partnership[1] pilots. The EJ MOU reinforces the Federal government's commitment to environmental justice and applies to actions such as the I-710 Corridor project through its focus on NEPA, goods movement, and Title VI of the Civil Rights Act. Subsequent U.S. DOT and FHWA EJ Orders[2] clarify U.S. DOT and FHWA will, in part, identify and evaluate public health effects of proposed activities and propose measures and consider alternatives that would avoid, minimize and/or mitigate disproportionately high and adverse public health effects so as to identify and avoid discrimination and avoid disproportionately high and adverse effects on minority and low income populations. Further, given the Caltrans July 2010 Title VI policy statement, LA Metro's recent Title VI compliance review[3], and renewed national EJ policy commitments, Caltrans should work with all project proponents to avoid or further mitigate the project's likely disproportionate high and adverse impacts and increased health risks to nearby overburdened communities. Caltrans should also commit to working with stakeholders to ensure project compatibility with LA River Watershed revitalization efforts, and should confirm the project will not hinder partnership goals or other revitalization efforts described in existing master plans. A well-planned and well-coordinated project with thoughtful design and mitigation would likely best meet transportation, air quality, community, and LA River watershed needs in the corridor.

The Interstate 710 corridor is flanked with densely populated communities, predominantly minority and low income, which are negatively impacted by pollution from goods movement and industrial activity. EPA is strongly supportive of the need to improve air quality and public health. Air quality throughout the South Coast Air Basin remains one of the worst in the country, and the direct and indirect air pollutant emissions resulting from goods movement from the Ports of Los Angeles and Long Beach along the I-710 are a major contributor to this poor air quality.

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[1] On June 24, 2011, leaders of twelve federal agencies, including U.S. DOT, announced the formation of the Urban Waters Federal Partnership and committed to "revitalize urban waters and the communities that surround them, transforming overlooked assets into treasured centerpieces and drivers of urban renewal." The LA River Watershed pilot involves over 30 organizations, known as "Los Angeles River Watershed Urban Waters Partnership" with EPA as lead agency. Urban Waters Federal Partnership, including the LA River pilot project can be found at http://urbanwaters.gov/.

[2] Final U.S. DOT Environmental Justice Order dated May 2, 2012 available online at: http://www.fhwa.dot.gov/environment/environmental_justice/ej_at_dot/order_56102a/ and FHWA Order *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* dated June 12, 2012 available on-line at: http://www.fhwa.dot.gov/legsregs/directives/orders/664023a.htm.

[3] LA Metro's Final Title VI Determination Memorandum, April 23, 2012: http://www.fta.dot.gov/documents/LACMTA_4-23-12.pdf.

The most significant impacts from the project are likely to be caused by increases in PM2.5 emissions, based on Los Angeles area and national air quality studies.[4] While we have concerns about the accuracy of the modeling that was performed, the analyses in the Draft EIS and technical reports (Air Quality and Health Risk Assessment and EPA analysis of PM2.5 modeling files provided upon request) predict that all of the build alternatives would result in off-site locations with PM2.5 concentration increases. Well over half of the study area will experience increases in annual average PM2.5 for all of the build alternatives, with Alternative 6A predicted to cause the largest area of impact.[5] Areas of PM2.5 increase may lead to potential increases in heart attacks, pre-term birth, asthma attacks, and mortality among the already burdened low income and minority communities located throughout the corridor.

EPA acknowledges the effort of the Draft EIS to address the impacts on communities by examining minority, income, and age, in accordance with Executive Order 12898. The Draft EIS provides evidence that low income and minority communities bordering the I-710 are already heavily burdened as a result of exposure to air pollution from transportation-related activities. The communities will continue to be impacted with the many projects planned in the Region, including the I-710 expansion. There is a growing body of evidence that low income and minority communities are more vulnerable to pollution impacts than other communities.[6] Thus, certain subpopulations may be more likely to be adversely affected by a given stressor than the general population.[7] Near-roadway exposure to air pollution is linked to a variety of adverse health outcomes including asthma and adverse birth and childhood outcomes.[8] The communities bordering the I-710, on average, have a higher minority composition and are lower income than Los Angeles County. It is likely that those living within a closer range to the I-710, who are at a higher risk of near-roadway exposure, are also disproportionately low-income and minority.

Executive Order 13045 on Children's Health and Safety directs each Federal agency to make it a high priority to identify and assess environmental health and safety risks which may disproportionately affect children, and ensure that its policies, programs, activities, and standards address these risks. Analysis and disclosure of these potential effects under NEPA is necessary because some physiological and behavioral traits of children render them more susceptible and vulnerable than adults to environmental exposures and safety risks. Children may be more highly exposed to contaminants because they generally eat more food, drink more water, and have higher inhalation rates relative to their size. Children may be more vulnerable to the toxic effects of contaminants because their bodies and systems are not fully developed and their growing organs are more easily harmed.

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[4] For health impacts analyses of PM2.5, see for example EPA's Regulatory Impact Analysis for the Proposed Revisions to the National Ambient Air Quality Standards for Particulate Matter, http://www.epa.gov/ttn/ecas/regdata/RIAs/PMRIACombinedFile_Bookmarked.pdf, Ch. 5.7, or South Coast AQMD's 2007 Air Quality Management Plan (AQMP) and associated Socioeconomic Report, https://www.aqmd.gov/aqmp/07aqmp/07AQMP_socio.html.

[5] Based on the PM2.5 dispersion modeling performed for the AQHRA. EPA is concerned about the accuracy of the modeling in terms of ability to predict the magnitude of impacts, described further below, but the model results predicting a large spatial extent of impacts are likely accurate .

[6] Symposium on the Science of Disproportionate Environmental Health Impacts, March 17 - 19, 2010, see the fourteen scientific reviews commissioned by EPA and published in the American Journal of Public Health at: http://www.epa.gov/compliance/ej/multimedialalbums/epa/disproportionate-impacts-symposium.html.

[7] Sacks, Jason D. et al. 2010. Particulate Matter-Induced Health Effects: Who Is Susceptible? Environmental Health Perspectives 119(4).

[8] Padmanabhan, N. & Glenn, B. August 2009. *EPA Research Focus on Health Effects of Near-Roadway Air Pollution.* Air and Waste Management Association, EM Magazine. Available at: http://www.epa.gov/ord/ca/pdf/2009padmanabhan.pdf.

Caltrans should thoroughly identify mitigation measures, developed with support from the community, to further protect residents from the likely disproportionate and adverse health impacts of the proposed project. Because children can be more susceptible to mobile source air pollution and generally experience higher exposures to air pollution than adults, a revised or supplemental Draft EIS should further address the potential direct, indirect, and cumulative impacts of the proposed project on children's health, including consideration of prenatal exposures (exposures that may be experienced by pregnant women). Considering buffers and identifying mitigations to protect sensitive receptors and populations living in close proximity to the I-710 could improve the environmental and public health implications of the project.

In light of the setting and magnitude of the potential impacts of this project, EPA recommends implementing the following (as further described per numbers identified in remainder of this letter) for full public review at a draft stage in either a revised or supplemental Draft EIS:

1. ***Assess New Modified Zero-emission Freight Corridor Alternative (i.e., Alternative 6B and/or 6C without I-710 widening)*** Caltrans should fully analyze an alternative that includes a zero-emission freight corridor and all of the congestion relief and safety features of Alternatives 6B and 6C without the addition of general purpose lanes.

2. ***Include Plans for Project Phasing and Zero-Emissions Technology Implementation***
   Caltrans should identify a schedule of possible construction or operational phasing, and associated "phased" impacts, since the Draft EIS lacks a schedule for the zero-emission technology implementation and project construction and operation will likely be phased concurrently with funding availability. Construction and implementation of zero-emission features should be prioritized.

3. ***Provide a Complete Picture of PM2.5 Impacts, including Mortality and Morbidity, and Address Deficiencies in the Air Quality Modeling and Transportation Conformity Analysis***
   It is critical that a revised or supplemental EIS fully analyze, disclose, and provide mitigation for PM2.5 impacts in the context of annual regional PM2.5 anticipated at 2035 and in interim years throughout the project construction window. EPA is available to discuss the methodology for assessing air quality impacts, especially with respect to potential errors in source characterization in the dispersion modeling inputs. Caltrans must also address the substantial deficiencies that EPA identified with respect to the existing transportation conformity analysis and provide an analysis that complies with EPA's Transportation Conformity Requirements.

4. ***Quantify Construction Impacts, Including for Interim Years***
   Caltrans should quantitatively evaluate construction-related criteria pollutant and MSAT emissions, changes in ambient concentration, MSAT risk, and PM2.5 mortality and morbidity, including for interim project years.

5. ***Include and Commit to Substantial Mitigation to Further Reduce Emissions, Reduce Exposure to Emissions, and Compensate for Significant Near-Roadway Health Impacts***
   EPA strongly recommends more mitigation for construction and operational air quality impacts, given that Caltrans has only identified one mitigation measure (providing funding for four new air quality monitors). EPA anticipates, particularly after additional analysis requested above, that substantial mitigation will be necessary to reduce the burden of this project on neighboring communities from construction and interim and long term operations of the project.

6. ***Provide Additional Information on Impacts to LA River Flood Control Project***
EPA recommends Caltrans confirm constructability of project features and all associated connected actions that will impact the LA River and clarify descriptions, locations and impacts for those connected actions.

EPA also recommends that Caltrans address additional issues prior to public circulation of the Final EIS (Section 7).

1. Zero-Emission Freight Corridor Alternative (i.e., Alternative 6B and/or 6C <u>without</u> I-710 widening) and Alternatives Analysis

As highlighted in our September 26, 2008 scoping comments, February 2009 follow-up comments, and March 2012 Administrative Draft EIS comments, the EIS will need to explore and objectively evaluate a range of reasonable alternatives, including the no action alternative, and briefly discuss the reasons for eliminating some alternatives from further evaluation (40 CFR 1502.14). EPA provides the following comments regarding the No Action and Build Alternatives.

Zero-Emission Freight Corridor Alternatives
<u>New Alternative – I-710 Modernization[9] plus Freight Corridor (Zero-Emission Vehicles) without I-710 Widening</u>
While EPA is encouraged by the proposed zero-emission freight corridor component of Alternatives 6B and 6C, currently, all of the build alternatives in the Draft EIS include widening of the existing I-710, as further described below. EPA believes Caltrans should analyze a modified build alternative that incorporates the zero-emission technologies presented in Alternatives 6B and 6C while excluding expansion of the general purpose roadway (i.e., no widening of existing I-710). We previously provided similar recommendations to explore alternatives which incorporate zero-emissions technology and do not expand highway capacity (EPA correspondence dated October 1, 2009, August 20, 2010, and March 22, 2012). While the project's 2009 alternatives screening analysis assessed a previous Goods Movement Enhancement by Rail and/or Advanced Technology Alternative, which could include battery/electric trucks, it did not include all of the arterial and freeway congestion relief and safety features of the other build alternatives, and as a result, did not perform as well for mobility and safety during screening. The screening did identify the alternative was superior for air quality, estimating an eliminated 20% of port truck trips and showing the greatest reduction in diesel PM emissions (reduction of 25 lbs/day, while the expansion alternatives all showed increases in diesel PM).

In addition, Figure 2.2-1 in the Draft EIS briefly notes several alternatives that were considered prior to identifying an I-710 Major Corridor Study Locally Preferred Strategy.[10] While the Draft EIS describes the final set of alternatives that came out of that major corridor study, earlier alternatives that were explored to specifically address environmental or community considerations, or would have resulted in meaningfully fewer environmental or community impacts, should also be briefly summarized with an explanation on why these alternatives were not carried forward in the Draft EIS.

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[9] As described in Chapter 2 of Draft EIS, in brief, this would modernize I-710 geometrics and include Transportation Systems Management/Transportation Demand Management, transit, and arterial system improvements; Intelligent Transportation Systems application; and improvements associated with the no-build.
[10] The Locally Preferred Strategy as identified in the November 2004 I-710 Major Corridor Study.

Recommendation:

- Assess a new, modified I-710 Modernization Plus Freight Corridor (Zero-Emission Vehicles) alternative that does not widen I-710. This build alternative should include an implementation schedule for the zero-emission truck corridor that prioritizes construction and implementation of zero-emission technologies, as well as design features that minimize community exposure to the PM2.5 exhaust and entrained dust emissions associated with the operational phase of the project.

- A revised or supplemental Draft EIS should fully justify the elimination of previous alternatives that would result in meaningfully fewer environmental and/or community impacts than what was identified as alternatives per the Locally Preferred Strategy.

Alternatives 6B and 6C

All build alternatives in the Draft EIS add two general purpose lanes to the existing six to eight lane 18-mile freeway with an additional four trucks-only lanes for the freight corridor alternatives (either a conventional truck freight corridor (Alternative 6A) or a zero-emission freight corridor (Alternatives 6B/6C), for a total of six new lanes, which could potentially counter emission benefits expected from the zero-emission freight corridor. We also want to highlight that emissions would substantially increase for Alternative 6C (tolled freight corridor) if tolling is allowed for conventional trucks. We reiterate that the Draft EIS states Alternative 6C includes all the components of Alternative 6B (zero-emission freight corridor) and for analytical purposes, tolling has only been evaluated for Alternative 6B.

Recommendation:

- Address in a revised or supplemental Draft EIS whether added capacity from two new general purpose lanes and/or possible induced demand from additional capacity in the existing lanes once trucks are relegated to a separate zero-emission freight corridor would counter the emission benefits expected from implementation of zero-emission technologies. As noted above, construction and implementation of zero-emission technologies should be prioritized. If significant impacts are identified, include measures to reduce emissions, reduce exposures to emissions, or mitigate impacts from increased emissions or exposure in a revised or supplemental Draft EIS.

No Build Alternative

While we recognize that the No Build Alternative should assume some percentage of demand not being realized per the lack of additional lane-miles available for moving cars and trucks, we believe the traffic estimates should be verified for the No Build Alternative. The No-Build Alternative assumes only approved and planned projects included in SCAG's 2008 Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP). The Draft EIS also notes that for purposes of the environmental analysis, including travel demand forecasting, the Southern California International Gateway (SCIG) project was not included as an assumed project, since there was uncertainty regarding future proposed near-dock rail expansion projects (see page 1-29 of the Draft EIS). However, the Cumulative Impacts section identifies construction for the SCIG project started in 2011 (see Table 3.25-1 in Draft EIS).

Recommendation:

- Confirm that traffic demand estimates evaluated in the Draft EIS are still valid when taking into consideration changes associated with the SCAG's 2012 RTP, latest RTIP and any approved, foreseeable projects affecting truck traffic. We recommend updating the traffic demand per the

SCAG 2012 RTP. A revised or supplemental DEIS should also provide the most current status of the SCIG project, and any other project that would affect truck traffic volumes on I-710. Revise the No Build Alternative traffic estimates if needed and adjust the estimated benefits achieved by the Build Alternatives. If a high estimate of trucks and autos are assumed to exist with the No Build Alternative, it could artificially inflate the benefit of the Build Alternatives.

2. Project Phasing – Construction and Operations

Caltrans should allow the public an opportunity to review at a draft stage any possible plans to phase the construction or operations of this significant project. The Draft EIS contains very limited information on construction staging in Chapters 2 and 3.24 and does not assess construction or operational impacts for interim years. If phasing is required for this project, the operational and construction impacts, including any expected emissions that are not currently assessed in the Draft EIS, should be fully disclosed and assessed in a revised or supplemental Draft EIS. The Draft EIS does not include a schedule for implementation of zero-emission technology even though it acknowledges development and deployment of this technology involve research, development, demonstration, pre-production and early production deployments and assessments (p. 2-23). EPA is also aware that the project has secured approximately a little over half a billion dollars for project construction, which is only a fraction of total project costs estimated up to $5.3 billion (see Table 2.1-1 of the Draft EIS). We understand the project may have other potential revenue sources, such as a possible public-private partnership or the tolling option of Alternative 6C as a way to help fund the construction and operation of the project.

Recommendations:

- Include in a revised or supplemental Draft EIS any plans to phase the project's construction or operations. If the project will be phased, assess how phased construction or operations would impact air quality and the surrounding communities and include measures to avoid, minimize, or mitigate any significant impacts.

- Include the latest information regarding the availability and deployment strategy of zero-emission technology for this project and disclose whether project phasing would be required to implement zero-emission technologies. For example, if Alternatives 6B or 6C were selected with the Zero-Emission Freight Corridor, disclose whether Caltrans would move forward with other aspects of the project, such as constructing and operating the general purpose lanes, or even allowing conventional trucks to use the freight corridor until such time that the zero-emission technology is available. EPA recommends prioritizing the construction and implementation of the zero-emission features of the project.

- Disclose how project funding availability may influence decisions to phase construction and operations.

- When determining phasing of construction activities, consider where schools, child care centers, and other sensitive receptors are located since construction could also affect children's travel to schools, preschools, day care centers, and parks. Once phasing, staging areas, and truck routes are established for the project, EPA recommends that Caltrans notify the schools, child care centers, and residences located near construction sites and/or along proposed truck routes of the construction activities, schedule, and increase in truck traffic.

3. Air Quality Impacts

EPA believes the analysis of the air quality impacts in the Draft EIS and in the AQHRA Technical Study is inadequate (Draft EIS; June 2012; AQHRA; February 2012). We reiterate recommendations that we have made on the Administrative Draft EIS, prior protocols, and analysis as part of this project through correspondence identified in the cover letter.[11] In addition, we recognize the errata for the Draft EIS dated August 10, 2012 prepared by Caltrans appears to move the section addressing risks associated with air toxics from sub-section 3.13.3.2 Public Health Considerations to Chapter 4 California Environmental Quality Act (CEQA) Evaluation of this joint NEPA/CEQA document. EPA notes that Caltrans indicates in the notice that this erratum does not change the analysis or conclusions of the Draft EIR/EIS. EPA agrees with this statement, however we further note that moving analysis into a CEQA Chapter does not change a lead agency's responsibility to disclose potentially significant impacts under NEPA, including the project's contribution to public health impacts. As such, we continue to provide comments on air toxics and risk and recommend including the analysis, and additional analyses recommended below, in the NEPA portion of the document or definitively stating that the CEQA analysis is relevant for NEPA and informing federal decisions.

Most significantly, we note that the analysis presented in both the Draft EIS and the AQHRA predicts that all of the project build alternatives will result in adverse air quality impacts (Alternatives 5A, 6A, 6B, and 6C) compared to the no-build alternative (Alternative 1). Specifically, with respect to emissions from the I-710, all of the build alternatives are predicted in Caltrans' analysis to increase CO, PM10, PM2.5, benzene, acetaldehyde, formaldehyde, 1,3-butadiene, and acrolein along the I-710 compared to the no-build, and Alternatives 5A and 6A are predicted to increase ROG, NOx, SO2, and Diesel PM compared to the no-build, (see Tables 3.13-23 and 3.13-21 of the Draft EIS). Also, to the extent that ambient concentrations were modeled, all of the build alternatives predicted increases in PM10, PM2.5, and Diesel PM within the I-710 study area. EPA is concerned with the modeling used to support the conclusions presented, and we recommend revising the modeling in a revised or supplemental EIS.

The magnitude of modeled ambient PM2.5 impacts presented in the Draft EIS may be unrealistic, given the apparent errors in the characterization of the sources in the model. The Draft EIS modeling approach is based on AERMOD, which is an appropriate model for this application, and the roadway emissions are simulated by a series of volume sources, which is an appropriate approach. However, the characteristics of the volume sources used as AERMOD model inputs, such as the location and number of volume sources, the release heights, and the initial sigma y and sigma z, are not clearly justified and appear to be inappropriate. These errors may contribute to overestimating ambient PM2.5 concentrations by understating the initial dilution of mobile source emissions due to vehicle-induced turbulence.[12] Each volume source may be more concentrated than it would have been with the correct characterization of the volume sources, and this may result in over prediction of ambient PM2.5 concentrations at some receptor sites. The initial dispersion parameters (sigma y and sigma z) appear to be too small, which may also result in over prediction of ambient PM2.5 concentrations at some receptor sites.

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[11] Scoping (September 26, 2008); Air Quality and Health Technical Report Methodology (February 5, 2009); Purpose and Need (October 2009); Children's Health, Environmental Justice, Health and Air Quality (August 2010); Restating EPA Concerns with Project (March 2011); and Administrative DEIS (March 9, 2012).

[12] For example, a review of all sources in 2008 modeling files shows that links were on average just under 50m long, but the average roadway width used 14.7m. This is an effective area of 216 m^2, when the roadway represented had an area of 735 m^2.

Several features of the receptor grid need further clarification and revision. The receptor grid was apparently made in small rectangular sections, with regular spacing between the grid points. The result from this grid placement means that the receptors are not regularly spaced from the roadway. An appropriately spaced receptor grid should use a constant distance from the roadway, so receptors should be added that follow the roadway more consistently. In addition, there appears to be a number of receptors that were included in the modeling, but excluded from the analysis. Clarification should be given to specify which receptors were excluded and why. An examination of the included and apparently excluded data points revealed a number of receptors that seemed to be included in the analysis, but had questionable placement. Thus, the whole receptor grid generally needs to be more carefully described and justified than has been done. Furthermore, we are concerned that many of the assumptions made in the Draft EIS may underestimate impacts from the build alternatives. In particular, as discussed above, the assumption of full goods movement traffic for all build alternatives would cause an overestimate of the impacts of the no-build alternative, which then makes the impacts of the build alternative look smaller in comparison. Similarly, the Draft EIS does not contain adequate analysis of construction impacts, nor does it quantify PM2.5-related mortality and morbidity, both of which cause systematic underestimation of risks for the I-710 at interim stages between 2008 and 2035.

PM2.5 Impacts

PM2.5 impacts may be the largest public health impact from the proposed I-710 Corridor Project.[13] The Draft EIS and the AQHRA do not quantify the associated mortality and morbidity impacts related to predicted increases in PM2.5. Furthermore, the discussion of PM2.5 concentration changes in the Draft EIS focuses mainly on comparisons to current conditions (Pages 3.13-54 and -55), which may be misleading to the public and decision-makers when all of the build alternatives show areas of PM2.5 increase in comparison to the no-build alternative (Figures 4.55 through 4.57 of the AQHRA), meaning that the actual project decision is predicted by Caltrans to worsen air quality and public health for some geographic areas. The PM2.5 dispersion analysis also predicts significantly greater air quality impacts from Alternative 6A, and possibly 5A, compared to Alternatives 6B and 6C, which is not adequately discussed in the Draft EIS, but may be important for deciding between alternatives.

The AQHRA includes maps showing concentration contours of annual PM2.5 impacts for build alternatives versus Alternative 1. However, only the maps for Alternatives 6B and 6C are brought forward into the Draft EIS Appendix R (Figures 19-22; the reference to Figures 4.54 through 4.57 on the Draft EIS page 3.13-55 being in Appendix R is incorrect), and the corresponding discussion of these critical dispersion modeling results in Chapter 3.13 of the Draft EIS is inadequate for both public disclosure and decision-making. The maps can be misleading due to the focus on only changes above or below 1 and 5 $\mu g/m^3$. Increases in PM2.5 concentration in this area, which has some of the highest PM2.5 concentrations in the U.S., are of substantial concern and inconsistent with the stated purpose of the project to improve air quality.

Recommendations:

- Revise or supplement the Draft EIS for this project to thoroughly discuss both 24-hour and annual PM2.5 impacts from all alternatives compared to both current conditions (2008) and the no-build alternative (2035), as well as interim years (discussed below). Tables 3.13-24 through 3.13-28 should be updated to present annual PM2.5 incremental impacts, which likely represent

[13] Using EPA methodology, California ARB estimates that there are 8,400 deaths per year (estimated range of 5,400 - 11,000) in California associated with PM2.5 concentrations above 5.8 $\mu g/m^3$., with over half of the deaths due to high PM2.5 levels in the South Coast air basin (http://www.arb.ca.gov/research/health/pm-mort/pm-report_2010.pdf). Air pollutant emissions due to goods movement is a major contributor to PM2.5 concentrations throughout the state.

the largest adverse air quality and public health impacts from the proposed project. Similarly, Tables 3.13-24 through 3.13-28 should additionally include comparisons of the build alternatives to the no-build (Alternative 1) in 2035 for all pollutants. Contour maps for changes in PM2.5 concentrations for all alternatives should be included in the main text of a revised or supplemental Draft EIS, and more policy relevant cut-points (e.g. ±0.1, ±0.5, ±1, ±2, $\mu g/m^3$ etc.) should be represented in the maps.

- Revise or supplement the Draft EIS for this project to thoroughly discuss, modify as necessary, and justify the model inputs to the AERMOD. The revised or supplemental Draft EIS should modify and justify source characteristics, including the release height, initial sigma-y, and initial sigma-z values for the roadway volume sources. EPA Transportation Conformity Guidance for Quantitative Hot-spot Analyses,[14] and appropriate AERMOD guidance[15] may be a useful basis for characterizing sources. Follow appropriate modeling protocols and coordinate with EPA and other appropriate agencies as the modeling is revised.

- The receptor grid needs to be more carefully described and justified. Clarify which receptors were excluded and why. Use an appropriately spaced receptor grid with a constant distance from the roadway, so that the receptors follow the roadway more consistently.

- A revised or supplemental Draft EIS should also quantitatively evaluate PM2.5 mortality and morbidity throughout the project area and air basin as a result of changes in PM2.5 emissions from the proposed project. EPA has previously offered a methodology for completing such an analysis and would work with project sponsors in the future to further scope the analysis, if needed. Examples of such analysis are readily available, especially for goods movement and mobile source-related impacts nationally and in California,[16] as well as analysis specific to the South Coast Air Basin.[17]

Disproportionate PM2.5 Impacts – Vulnerable Populations

The Draft EIS does not adequately consider the likely increased disproportionate air quality impacts on vulnerable populations, including children and low income, minority communities. For example, older adults, children, those with pre-existing cardiovascular and respiratory conditions (specifically asthma), people with "low socioeconomic status" and "low educational attainment" are all particularly susceptible to PM2.5-related health impacts.[18] Page 3.3-42 of Chapter 3.3 states that some areas with higher concentrations of minority, low-income, young, and disabled populations could have a higher cancer risk under the build alternatives compared to Alternative 1. Although Table 3.13-23 of Chapter 3.13 shows that incremental criteria pollutant emissions, including total PM10 and total PM2.5, are

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[14] *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas,* EPA, December 20, 2010. EPA-420-B-10-040. Available on-line at: http://www.epa.gov/otaq/stateresources/transconf/policy.htm#project.

[15] User's Guide for the AMS/EPA Regulatory Model - AERMOD EPA-454/B-03-001,September 2004. See also AERMOD Implementation Guide available on-line at: http://www.epa.gov/scram001/7thconf/aermod/aermod_implmtn_guide_19March2009.pdf

[16] As examples, see EPA's Regulatory Impact Analysis for the 2007 Heavy-Duty Highway Rule, www.epa.gov/otaq/highway-diesel/regs/2007-heavy-duty-highway.htm, or California ARB's "Estimate of Premature Deaths Associated with Fine Particle Pollution (PM2.5) in California." www.arb.ca.gov/research/health/pm-mort/pm-report_2010.pdf .

[17] For PM2.5 mortality and morbidity analysis related to the 2007 Air Quality Management Plan for South Coast Air Quality Management District, see www.aqmd.gov/aqmp/07aqmp/07AQMP_socio.html.

[18] See Chapter 8 of EPA's Integrated Science Assessment for Particulate Matter (December 2009; http://oaspub.epa.gov/eims/eimscomm.getfile?p_download_id=494950).

predicted to be higher within the I-710 study area for the build alternatives compared to Alternative 1, this is not explained in the community impacts discussion of Chapter 3.3. In addition, as discussed above in the air quality section and in the August 2010 letter from EPA to Caltrans, EPA recommends a quantitative assessment of PM2.5 mortality and morbidity. The AQHRA, however, has a qualitative assessment and does not fully discuss PM2.5 mortality and morbidity among vulnerable populations, including children and environmental justice groups. The addition of such an assessment would better inform the I-710 Corridor Project decision-making process of the potential health impacts to children and surrounding communities.

Recommendation:

- Add a more thorough discussion to Chapter 3.3 of a revised or supplemental Draft EIS that discloses the potential air quality impacts that would result from the build alternatives compared to the No-Build Alternative, and how these impacts would affect vulnerable populations, including children and environmental justice communities.

- A revised or supplemental Draft EIS should quantitatively evaluate changes in ambient PM concentrations and MSAT-associated risk with respect to minority status, income, older and younger populations, and other vulnerability factors. At a minimum, a revised or supplemental Draft EIS should include tables with the following information for each of the build alternatives compared to the no build alternative:

PM2.5 (annual average) Concentration Change	Population Exposed Within Concentration Range						
	Total	%<18 years	%>64 years	% Minority	<2*Poverty Level	% over 25 without high school diploma	% linguistically isolated households
<-5 $\mu g/m^3$							
-5 to -2 $\mu g/m^3$							
-2 to -1 $\mu g/m^3$							
-1 to -0.5 $\mu g/m^3$							
-0.5 to -0.1 $\mu g/m^3$							
-0.1 to 0 $\mu g/m^3$							
0 to 0.1 $\mu g/m^3$							
0.1 to 0.5 $\mu g/m^3$							
0.5 to +1 $\mu g/m^3$							
+1 to +2 $\mu g/m^3$							
+2 to +5 $\mu g/m^3$							
>+5 $\mu g/m^3$							

- A revised or supplemental Draft EIS should have similar tables for mobile source air toxic (MSAT)-related risks (recommended cut points of 0-10, 10-50, 50-100, 100-200, and 200+ in a million risk), MSAT-related hazard index, 24-hour PM2.5, and PM10 concentrations.

- Provide a quantitative assessment of PM2.5-related morbidity and mortality among vulnerable populations, including children and low income, minority populations.

- Include an analysis of the population that lives within a 500 foot buffer of the existing I-710, and also a 500 foot buffer from the roadway where the proposed project will be completed (as stated in our August 20, 2010 letter) in a revised or supplemental Draft EIS.

- Because children and older adults are more susceptible to environmental exposures, identify schools, daycares, and senior centers within this buffer. Chapter 3.3 discusses community impacts, with pages 3.3-12 through 3.3-18 identifying community facilities (e.g., schools, libraries, and places of worship) within 0.5 mile of the I-710 mainline and interchange improvements. Create a list of these facilities similar to Tables 3.3-5 and 3.3-6. In addition, add the location of these facilities to Figure 3.3-1. If there is a disproportionate and adverse impact within the buffer, a revised or supplemental Draft EIS should identify additional mitigations for protecting the vulnerable populations, including children, seniors, low income, minority populations, and other sensitive receptors.

Childhood Asthma and Asthma Disparities

Research has demonstrated that traffic-related air pollution can exacerbate asthma and may be associated with the onset of childhood asthma.[19] In a prior letter sent to Caltrans (August 20, 2010), EPA recommended that the AQHRA protocol consider existing asthma rates and asthma severity among children and the general community within the project area. EPA recommended that the Risk Characterization, Cumulative Impacts Analysis, and Environmental Justice Analysis identify impacts of the proposed project on asthma rates and severity in children near the project site and quantify the costs associated with these impacts, to the extent feasible.

Chapters 3.3 of the DEIS (Community Impacts), 3.13 (Air Quality), and 3.25 (Cumulative Impacts), and the AQHRA does not identify any discussion of existing asthma rates among children and the surrounding community nor a discussion of how the proposed project may impact asthma morbidity.

Poor and minority children are disproportionately impacted by asthma burdens. Nationally, the prevalence of asthma among non-Hispanic African American children is 16%, which is almost twice as high as the prevalence among non-Hispanic white children (8.2%). In addition, African-American children with asthma are twice as likely to be hospitalized and four times more likely to die due to asthma than white children. The President's Task Force on Environmental Health Risks and Safety Risks to Children released the Coordinated Federal Action Plan to Reduce Racial and Ethnic Asthma Disparities in May 2012, which presents strategies and priority actions to help address asthma disparities.[20]

According to the California Environmental Health Tracking Program Asthma Data Query,[21] asthma disproportionately affects minority children in Los Angeles County. In 2009, young African-American children (less than five years old) had much higher rates of asthma-related emergency department visits (more than four times higher) and hospitalizations (more than 2.5 times higher) than White children; and

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[19] HEI Panel on the Health Effects of Traffic-Related Air Pollution. 2010. *Traffic-Related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects.* HEI Special Report 17. Health Effects Institute, Boston, MA.

[20] President's Task Force on Environmental Health Risks and Safety Risks to Children. 2012. *Coordinated Federal Action Plan to Reduce Racial and Ethnic Asthma Disparities.* http://www.epa.gov/childrenstaskforce/federal_asthma_disparities_action_plan.pdf.

[21] http://www.ehib.org/page.jsp?page_key=24.

young Latino children had an emergency department visit rate that was 1.5 times the rate of young White children.[22]

Recommendation:

- Because the proposed project may disproportionately impact low-income, minority communities where there are existing asthma burdens and disparities, as well as air quality concerns, a revised or supplemental Draft EIS should assess existing asthma rates and asthma severity among children and the general community within the project area. To the extent feasible, identify the impacts of the proposed project's construction and operation on asthma rates and severity in children near the project area, and quantify the costs associated with these impacts in a revised or supplemental Draft EIS.

Consideration of Roadway Proximity and Potential Children's Health Impacts

Caltrans used AERMOD to assess air quality and health risk impacts at 1,173 sensitive receptors (e.g., schools, senior centers, child care centers, etc.).[23] The AQHRA states that the incremental cancer risk, chronic hazard index, and acute hazard index for all 2035 Alternatives compared to the 2008 baseline decrease at all sensitive receptors located within five kilometers of the I-710 freeway centerline. It is unclear whether health risk impacts to children at schools and child care facilities were determined using child-specific exposures.

Because children can be both more susceptible to mobile source air pollution and experience generally higher exposures from air pollution than adults, EPA recommended in its August 20, 2010, letter to Caltrans that the health risk assessment assess the impacts of the project on children's health, including consideration of prenatal exposures (exposures that may be experienced by pregnant women). EPA recommended that the health risk assessment characterize children's exposures and susceptibilities to pollutants of concern and incorporate child-specific exposure factors in the analysis of exposures at schools, daycares, and parks.

Recommendation:

- Discuss in a revised or supplemental Draft EIS the known and expected risks to children living, playing, or going to school near the project sites EPA in the risk characterization.

Air Quality Conformity

General Comment on Transportation Conformity Analysis

The Draft EIS currently includes a qualitative PM hot-spot analysis for the I-710 project. EPA has submitted several comments on previous drafts of the qualitative PM hot-spot analysis pursuant to EPA and FHWA current guidance on such analyses.[24] EPA has identified substantial deficiencies in the current draft analysis, which does not meet transportation conformity requirements. Further details on several issues are included below.

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[22] California Department of Public Health, California Environmental Health Tracking Program Asthma Hospitalization and Emergency Department Visits Query. Available at: http://www.ehib.org/page.jsp?page_key=124. Accessed on July 27, 2012.

[23] Sensitive receptors defined as: long-term health care facilities, rehabilitation centers, retirement homes, schools, and child care centers on page D-6 of the Air Quality and Health Risk Assessments Technical Study Appendix D (February 2012).

[24] See http://www.epa.gov/otaq/stateresources/transconf/policy/420b06902.pdf.

In addition, Caltrans has not adequately explained how its qualitative PM hot-spot analysis meets Clean Air Act conformity requirements to not worsen NAAQS violations or delay timely attainment, when its draft quantitative modeling analysis included in other parts of the Draft EIS predicts air quality concentrations higher than the PM NAAQS.

Finally, despite text to the contrary, the qualitative PM hot-spot analysis discussion, data, and conclusions included in Chapter 3.13 of the Draft EIS do not match those of the analysis it references in Appendix I of the February 2012 AQHRA, which appears to be a previous version of the analysis.

Recommendation:

- Caltrans needs to explain in a revised or supplemental Draft EIS how its qualitative PM hot-spot analysis for the selected alternative meets CAA conformity requirements for the annual PM2.5 NAAQS, the 24-hour PM2.5 NAAQS, and the PM10 NAAQS, in light of the draft modeling analysis of alternatives included in the Draft EIS. In the transportation conformity discussion, Caltrans should also more clearly explain and document how the qualitative analysis complies with the EPA/FHWA qualitative PM hot-spot guidance and applicable requirements. The technical documentation of the qualitative hot-spot analysis included in the AQHRA should be updated so that it is consistent with the methods, data, discussion, and conclusions included in Chapter 3.13 of any future analysis that meets conformity requirements. Completing a quantitative PM hot-spot analysis that meets applicable requirements and guidance and is fully documented for EPA and public review is an option that continues to be available.[25] Note that EPA has submitted comments on the ambient modeling included in the document and those comments would also need to be addressed.

Including Chosen Alternative in a Conforming Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP)

Alternative 6C is currently included in SCAG's RTP as "I-710 Corridor user-fee backed capacity enhancement – widen to 5 mixed flow plus 2 dedicated lanes for clean technology trucks [each direction], and interchange improvements". If another alternative is chosen as the preferred alternative, SCAG would need to revise their RTP/TIP to include the new alternative before the conformity documents for the project could be approved.

Recommendation:

- EPA recommends that Caltrans continue to work closely with SCAG and the Transportation Conformity Working Group to ensure that transportation conformity of the chosen alternative and the RTP/TIP.

Analysis Year

A revised or supplemental Draft EIS needs to clearly state why 2035 was chosen as the year of peak emissions for this analysis. The Draft EIS only states that the corridor will meet the design goals by 2035 and that an opening year analysis was not completed. The Draft EIS did not state why that year is expected to have the peak emissions from the project and existing sources in the various alternatives. This statement also makes it unclear if 2035 is indeed the opening year of the project.

[25] See http://www.epa.gov/otaq/stateresources/transconf/policy/420b10040.pdf) for details on completing such analyses and potential mitigation and control measures.

Recommendation:

- To help demonstrate conformity, EPA recommends including the rationale used in determining that 2035 should be the year of peak emissions for the conformity analysis in a revised or supplemental Draft EIS.[26]

Construction Emissions

In addition, the draft qualitative PM hot-spot analysis discussion in Chapter 3.13 does not address whether transportation-related construction emissions should be, or were, included in the PM hot-spot analysis. The qualitative conformity analysis indicates that construction would not occur at any one location for more than five years. Therefore, construction-related emissions are considered temporary and were not included in the hot-spot analysis. It is correct that construction-related PM emissions due to a particular project are not required to be included in a hot-spot analysis, if such emissions are considered temporary as defined in 40 CFR 93.123(c)(5) (i.e., emissions which occur only during the construction phase and last five years or less at any individual site). However, it is not clear how the construction schedule is being phased at different sites and over time for this large project. Note that this comment for conformity purposes is separate from EPA's significant comments in this letter on considering construction emissions for NEPA purposes.

Recommendation:

- Due to the extended construction phase of the I-710 project, Caltrans needs to explain and document that 40 CFR 93.123(c)(5) is met both over time and at different construction sites throughout the project area.

Re-entrained Road Dust

EPA is concerned that certain aspects of the road dust method used in the Draft EIS are inappropriate for project-level analyses. This application results in no change in fugitive dust emissions between alternatives, which underestimates the impacts associated with several of the alternatives.

EPA understands that Caltrans has estimated re-entrained road dust using a new methodology that CARB hopes to apply in the next PM2.5 State Implementation Plan (SIP) for the South Coast, but EPA and CARB agree that this revised AP-42 methodology should not be used for a project-specific application. According to the revised document, the CARB revised methodology for estimating future year re-entrained road dust was used instead of AP-42 in this analysis. This alternate method:

1) Uses lower silt loading in LA County for non-freeway roadways,
2) Uses a 15% PM2.5/PM10 ratio rather than the 25 % ratio in AP-42, and
3) Calculates future re-entrained road dust emissions for all road types to be proportional to increases in centerline miles, not vehicle miles traveled (VMT).

According to 40 CFR 93.123(c)(3), "Hot-spot analysis assumptions must be consistent with those used in the regional analysis." Both items 1 and 2 above are consistent with assumptions made in the regional conformity analysis, and EPA believes they are therefore acceptable for use for this project. However, EPA believes the AP-42 equation -- instead of the proportional centerline approach used by Caltrans in this analysis -- should be used to estimate future year re-entrained road dust for the analysis years of project-level hot-spot analyses, including this analysis of the I-710 alternatives. Use of centerline roadway miles is a method, rather than an assumption, and therefore EPA does not believe it must be consistent with the method used for estimating dust in the SIP. EPA has discussed the use of

[26] See EPA's July 2004 final conformity rule for further details (69 FR 40056-40058).

the modified version of AP-42 with the CARB contacts that Caltrans provided, and CARB agrees that calculating road dust proportional to increases in centerline miles rather than VMT is inappropriate for project-level analyses. Please refer to comments EPA provided Caltrans in May 2012 ("Comments on Revised PM Hot Spot Conformity Analysis for I-710 Corridor") for additional details.

Recommendation:

- Revise the hot-spot analyses to use AP-42 equations as approved by EPA for project-level use in a revised or supplemental Draft EIS.

Air Quality Health Risk Assessment – Detailed Comments and Recommendations

EPA has the following detailed comments on the I-710 Corridor Project Draft EIS and AQHRA to include in a revised or supplemental Draft EIS:

- (AQHRA, ES and Chapter 4) In addition to comparisons to 2008, all tables in the AQHRA should include a corresponding comparison between the build alternatives in 2035 and the no-build alternative (Alt. 1) in 2035, since this comparison is most relevant for the NEPA decision. Specifically, the following tables should be updated to reflect this change: ES.1, ES.2, ES.3, ES.4, ES.5, 4.3a, 4.3b, 4.3c, 4.4, 4.6b, 4.6c, 4.6d, 4.6e, 4.7b, 4.7c, 4.8d, 4.8e, 4.8a, 4.8b, 4.8c, 4.9, 4.10a, 4.10b, 4.10c, 4.10d, and 4.10e. These revised figures should be accompanied with an updated discussion in each corresponding section of impacts relative to the no-build scenario.

- (AQHRA, Section ES.7) The cumulative impact of the construction emissions in addition to other operational emissions need to be presented and discussed in Section ES.7, including modifications to Table ES.6.

- (AQHRA, Sections 4.2 and 4.3) Chapter 4 includes a separate section for construction (4.2) and operational (4.3) impacts, but should include a section that describes cumulative impacts of construction and operations during interim periods. This discussion should also include a discussion of particular impacts to sensitive and environmental justice populations.

- (AQHRA, Section 4.3.4) Section 4.3 should include an analysis of annual average PM2.5 concentrations throughout the project area, as well as near-roadway (Section 4.3.4). All tables with modeled impacts for PM2.5 should include annual average in addition to 24-hour averaging time, specifically: Tables 4.7a, 4.7b, 4.7c, 4.7d, and 4.7e. Also, EPA does not agree that the CEQA thresholds are appropriate for comparison in these tables for NEPA purposes, as any increase of PM2.5 or PM10 in this area may be considered unacceptable and certainly counter to the stated purpose of the proposed project of improving air quality.

- (AQHRA, Section 4.8) The statement that "it is not expected that changes to PM2.5 and PM10 emissions levels associated with the proposed project would result in new violations of the federal air quality standards" is not sufficiently supported. As noted in our March 2012 comments on the AQHRA, the assumptions on background changes in the AQHRA are incorrect and this statement should be removed. Similarly, the first two bullets on Page 54 are incorrect and should be removed. The final two bullets can be similarly misinterpreted, since any increase of PM10 or PM2.5 emissions compared to the no-build scenario (comparing 2035 to 2035) may either delay attainment of the NAAQS or could cause new violations.

- (AQHRA, Appendix E) Appendix E (Health Risk Assessment) should, at a minimum, provide all the results for the six MSAT included in this study, as well as all of the interim calculations for the results presented in Tables 4.10a-e.

- (Draft EIS, Pages 3.13-21 through 3.13-25) In addition to the need for interim year analysis noted above, the section on "Traffic Changes Due to the Proposed Project" should also include an analysis of interim years, specifically Tables 3.13-8, 3.13-9, 3.13-10, 3.13-11, 3.13-12, and 3.13-13.

- (Draft EIS, Pages 3.13-26, 3.13-33 through 3.13-41) Traffic volumes for the proposed build alternatives are predicted to increase near 50% for most segments compared to the no-build alternative (see Pages 3.13-21 and 3.13-22), but MSAT (see Page 3.13-33) and criteria pollutant (see Pages 3.13-36 through 3.13-39) emissions are predicted to increase at most 20% and sometimes decrease. A revised or supplemental Draft EIS should thoroughly explain why emissions do not increase proportional to traffic, presumably due to speed effects, and the uncertainty associated with these results.

- (Draft EIS, Page 3.13-28 through 3.13-34) The MSAT Analysis should include a presentation of emissions by roadway segment or segment groupings, expanding upon Tables 3.13-20 and 3.13-21.

- (Draft EIS, Page 3.13-52) Table 3.13-29 should include a comparison of build alternatives to the no-build alternative (Alternative 1) for 2035, which is most relevant to the NEPA decision.

4. Construction Impacts

Quantification of Construction Impacts
The Draft EIS contains no meaningful discussion of construction-related air quality impacts, which is likely to be significant for a project of this magnitude. It is likely that construction impacts from this project will negatively impact both air quality and public health. Limited analysis of construction impacts was previously performed for the proposed project. The AQHRA quantifies worst-case, project-wide construction emissions, but does not quantitatively evaluate construction-related changes in criteria pollutant ambient concentrations, MSAT risk, or PM2.5 mortality and morbidity. Construction impacts should be quantitatively evaluated in a revised or supplemental Draft EIS.

Recommendations:

- A revised or supplemental Draft EIS should quantitatively evaluate construction-related criteria pollutant and MSAT emissions, changes in ambient concentration, MSAT risk, and PM2.5 mortality and morbidity, including for interim project years. Construction impacts should be added to operational impacts for interim years, including the peak construction years and ideally every five years between the current year and final build year.

- EPA recommends quantitatively predicting construction-related impacts at this stage using the following two approaches: First, the revised or supplemental Draft EIS should estimate the project-wide magnitude of construction impacts by using simple assumptions of emissions occurring throughout the linear project and spread out over the build years. This would provide a first-cut estimate of impacts throughout the project area. Second, the revised or supplemental Draft EIS should consider an example construction phase and quantitatively evaluate the likely

impacts for a model segment. More detailed assumptions should be possible for this segment, including improvements on assumptions for construction phasing, proximity to populated areas, and duration of impacts. For this more detailed example, EPA recommends evaluating a geographic area that is more highly populated and/or in closer proximity to construction activities.

- A revised or supplemental Draft EIS should provide more information on how the construction will be phased over time at the different locations around the facility. This information is needed to inform the decision to remove construction impacts from the transportation conformity hot spot analysis and to evaluate whether 2035 has the maximum expected emissions. The information would also be helpful for SCAG as they include the emissions from the various construction phases into the regional conformity analysis for the appropriate years; dust from road construction has already been included in the PM10 and PM2.5 motor vehicle emission budgets for the area.

Disproportionate Construction Impacts – Vulnerable Populations
The environmental justice analysis provided in the Final Community Impact Analysis (March 2012) does not fully take into account construction-related impacts on the community. Section 6.3.1.2 of the Final Community Impact Assessment states that it is not possible to analyze specific impacts on populations of concern from an environmental justice perspective. Chapter 3.24 (Construction Impacts) of the Draft EIS, however, indicates that construction activities will primarily affect environmental justice populations and would generate temporary noise increases and air emissions. In addition, a review of Chapter 3.13 and the AQHRA did not identify a complete discussion of the air quality impacts from construction activities on children's health and the surrounding community. The addition of such an assessment and discussion would provide a more complete understanding of the potential health impacts for the entire duration of the project.

Recommendation:

- More fully disclose in a revised or supplemental Draft EIS potential construction-related impacts on vulnerable populations, including children and environmental justice communities, bordering the I-710. If there are disproportionate and adverse construction related impacts, identify mitigations for these impacts. Please refer to the recommendation in our "Air Quality" comments under "Quantification of Construction Impacts" to identify a methodology for measuring potential construction related air quality impacts. Identify the impacts of the proposed project's construction on asthma rates and severity in children near the project area, and quantify the costs associated with these impacts.

5. Mitigation

EPA does not agree with the general statement in Section 3.13.4 of the Draft EIS that states "...the build alternatives will improve air quality and reduce public health risk in the South Coast Air Basin and the I-710 AOI [area of influence]". As noted above, the existing analysis in the Draft EIS and AQHRA predicts an increase in adverse air quality impacts for all alternatives, and we have serious concerns that the existing analysis is inaccurate. Identifying mitigation is particularly important given that the Draft EIS indicates that disproportionate and adverse impacts are identified and would have to be mitigated. Additional impacts may be unintended or difficult to characterize without a methodology that comprehensively looks at the health of a population and the distribution of those effects within the population.

We note that EPA provided extensive feedback concerning the validity of the scope and methodology of the health impact assessment (HIA) being completed as part of the Gateway Cities Air Quality Action in the I-710 Corridor Project.[27] Although EPA's critique of that process reflects concerns that were not addressed, that process may result in identified mitigation measures. While Section 7 of the Community Impact Assessment presents the research questions for the separately prepared HIA, this discussion is not as robust as a fully completed HIA and it is unclear how the information presented here links with the HIA process. The recommendations for mitigation, either developed from the HIA that is being conducted as part of the Gateway Cities Air Quality Action Plan or through collaborations with citizens, could be funded through a creative method like one of the programs implemented by the ports. The Ports of Long Beach and Los Angeles have developed creative solutions to mitigate community impacts from port-related activities that are not addressed in project EISs. The Port of Long Beach developed a Mitigation Grant Program to offset the impacts of port-related operations in the community through three programs to address health-care and senior facilities, schools, and greenhouse gas reductions programs.[28] The Port of Los Angeles developed a non-profit, the Harbor Community Benefits Foundation, to carry out mitigation and other public benefit projects that assess, protect, and improve health, quality of life, and the natural environment, with a focus on near-port communities.[29]

Recommendations: EPA strongly recommends a more aggressive approach for identifying air quality mitigation, and mitigation for other resource impacts, as described below, in a revised or supplemental Draft EIS. Caltrans should specifically identify where these impacts may disproportionately affect vulnerable populations (including children, seniors, low income, minority populations, and other sensitive receptors) and identify how these impacts will be reduced.

- EPA continues to recommend that further mitigation measures be developed through open, collaborative processes that include the public and affected citizens. Page 3.3-23 states that the build alternatives have been developed through an extensive community outreach process that involves input from multiple public agencies and stakeholders, and build alternatives have been refined to address the community. A review of community involvement activities as well as an explanation of how the proposed build alternatives address community concerns, including air quality concerns, should be added to Chapter 3.3.

- For impacts to schools and child care centers near the I-710 mainline, include measures identified in the voluntary EPA School Siting Guidelines (http://www.epa.gov/schools/siting/download.html), and Draft State School Environmental Health Program Guidelines (http://www.epa.gov/schools/ehguidelines/index.html). EPA's Office of Children's Health Protection has also posted a compilation of scientific data and methods to help improve the scientific understanding of children's environmental health concerns at: http://yosemite.epa.gov/ochp/ochpweb.nsf/content/whatwe_scientif.htm. This site contains information on risk assessment, toxicity and exposure assessment, and other information to help better understand potential environmental impacts on children's health.

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[27] Gateway Cities Council of Governments and Los Angeles County Metropolitan Transportation Authority. April 2011. *The Gateway Cities Air Quality Action Plan Fact Sheet.* Available at: http://www.metro.net/projects/gcaqap/gcaqap-fact-sheet/.
[28] Port of Long Beach Mitigation Grant Program: http://www.polb.com/environment/grants/default.asp.
[29] Harbor Community Benefit Foundation: http://www.hcbf.org/.

- Programs similar to the Port of Long Beach's Mitigation Grant Program or the Port of Los Angeles's Harbor Community Benefits Foundation could be implemented as potential instruments for supporting mitigation measures that provide a more holistic approach to protecting health. Some specific measures include:

    - Fund proactive measures to improve air quality in neighboring homes, schools, and other sensitive receptors (i.e., anti-idling policies near schools and child centers, implementing school indoor air programs or other school environmental health programs).
    - Provide the public educational nutrition[30] programs and programs on environmental health impacts to better enable residents to make informed decisions about their health and community (i.e., asthma management training).
    - Engage in proactive measures to train and hire local residents for construction or operation of the project to improve their economic status and access to health care.
    - Reduce asthma-related illness disparities for residents along the I-710 by working with the community to identify asthma-related mitigation measures.
    - To the extent that the separately completed HIA can inform mitigation measures, Caltrans should identify all feasible measures in a revised or supplemental Draft EIS.

- To further reduce air quality impacts, EPA recommends that Caltrans:
    - Meet and ideally go beyond CARB requirements for in-use diesel engines and equipment, particularly for non-road construction fleets.
    - Through December 31, 2014, ensure that all construction equipment meets or exceeds equivalent emissions performance to that of U.S. EPA Tier 3 standards for non-road engines.
    - From January 1, 2015 onward, ensure that all construction equipment meets or exceeds equivalent emissions performance to that of U.S. EPA Tier 4 standards for non-road engines.
    - Include a commitment to comply with CARB's anti-idling rule, which prohibit diesel truck idling in excess of five minutes (see http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm).

- To reduce construction-related air quality impacts, EPA recommends that Caltrans integrate the following modifications to mitigation measures CON-16 through CON-29 in Chapter 3.24:

    - CON-23 states that Environmentally Sensitive Areas for sensitive air receptors will be established and construction activities involving idling of diesel equipment will be prohibited to the extent feasible. EPA recommends that a strong anti-idling policy be implemented at *all* construction sites for this project.

    - CON-37 states that contractors and their employees will be educated about noise impact problems and noise control methods. EPA recommends that contractors and their employees also receive training on air quality impacts from construction activities and potential health risks to nearby receptors, and ways to reduce emissions (e.g., no idling, using PM filters, using alternative fuels, etc.).

[30] See Chapter 8 of EPA's Integrated Science Assessment for Particulate Matter (December 2009; http://oaspub.epa.gov/eims/eimscomm.getfile?p_download_id=494950).

- To reduce near-roadway community exposure to PM2.5 exhaust and entrained dust emissions, EPA recommends that Caltrans commit to specific design features, including, but not limited to:

    - Planting of shade trees along the I-710 Corridor,
    - Barriers that inhibit fugitive PM2.5 emissions from leaving the roadway, and
    - Use of materials that absorb entrained dust.

- To ensure a commitment for use of most advance impact-reducing technology, EPA recommends the following additional mitigation measures:

    - *MM-AQ1: Deploy Best Available Control Technology (BACT)*
      Project must require BACT during construction and operation of projects, meeting the most stringent alternatives available (e.g., CARB's in-use diesel off-road BACT requirements; EPA's most stringent non-road Tier standards available), including but not limited to:

      a) Soliciting bids that include use of energy and fuel-efficient fleets;
      b) Soliciting preference construction bids that use BACT, particularly those seeking to deploy zero-emission technologies (see MM-AQ2 below for more specific guidance on construction equipment deployment);
      c) Employing the use of alternative fueled vehicles;
      d) Using lighting systems that are energy efficient, such as LED technology;
      e) Using the minimum feasible amount of greenhouse gas (GHG)-emitting construction materials that is feasible;
      f) Use of cement blended with the maximum feasible amount of flash or other materials that reduce GHG emissions from cement production;
      g) Use of lighter-colored pavement where feasible;
      h) Recycling construction debris to maximum extent feasible; and
      i) Planting shade trees in or near construction projects where feasible.

    - *MM-AQ2: Electric Power during Construction*
      Project sponsors will ensure to the extent possible that construction activities utilize grid-based electricity and/or onsite renewable electricity generation rather than diesel and/or gasoline powered generators.

6. Transmission Towers and Utilities

Relocation of Los Angeles Department of Power and Water (DPW) Transmission Towers and Flood Risks in the LA River Watershed

The Draft EIS references additional design and environmental reviews needed for a U.S. Army Corps of Engineers (Corps) Major Section 408 Permit (33 U.S.C. § 408) to relocate transmission line towers within the Los Angeles (LA) River, a Federal Flood Control Project, in order to construct freight corridor alternatives. EPA recommends additional analysis and conclusions related to the relocation of DPW transmission towers. This request is consistent with statements made in the Corps' April 26, 2012 letter (Draft EIS, Appendix J) to LA Metro identifying issues with potential impacts of the proposed project on the hydraulic functioning of the LA River channel system and the potential for future modifications and improvements to the LA River. The Corps' letter states that ensuring that the current design flood 133-year discharge would be maintained requires a numerical model (HEC-RAS) substantiated by a physical model, followed with a second numerical model, adjusted to the results of the physical model. Section 3.8 of the Draft EIS states that HEC-RAS modeling results indicate that

localized channel modifications for Alternatives 6A/B/C transmission tower relocation would maintain existing base flows and that flood flows would be contained in the LA River channel. The Draft EIS does not appear to make reference to any physical model or to an adjusted numerical model based on the results of the physical model. Further, while Section 3.8 mentions that localized channel modifications would be required to maintain existing channel hydraulic capacity, the Draft EIS does not describe the specific channel modifications to address impacts from the proposed towers in the LA River and whether these modifications will result in additional impacts to waters of the U.S.

Based on an August 1, 2012 conversation with Corps LA District staff, it appears that Caltrans analysis to date has not provided the level of information necessary to determine potential flooding risk impacts. The proposed project, including relocation of the transmission towers, and the proposed bridge structures and modifications, have not been modeled as required by the Corps, and therefore it remains uncertain whether the proposed alternatives will potentially increase flood risks. This information should be disclosed for consideration by the public and decision makers.

Recommendations:

- Caltrans should consider alternatives that would avoid having to relocate the power towers in such a way that would encroach on the LA River channel. Possibilities could include using tubular steel single pole transmission towers that require less right of way or placing the power lines underground to reduce right of way requirements. EPA recognizes that Metro's June 8, 2012 response to the Corps, included in Appendix J of the Draft EIS, briefly mentions earlier alternatives considered, such as "double decking" the freeway, that were not carried forward due to community opposition. The appendix also includes a January 2003 Final Set of Alternatives in conjunction with Metro's letter. If these alternatives are determined to be unfeasible, reasons should be summarized in a revised or supplemental Draft EIS. Including summaries of other previously considered alternatives would be particularly informative when considering possible likely trade-offs between impacts to communities and impacts to the LA River from alternatives that include the freight corridor components and transmission tower relocations.

- A revised or supplemental Draft should include results of the hydraulic modeling prescribed by the Corps and verify that the project is capable of being constructed, with support from the Corps. Caltrans should also provide supporting information to demonstrate that the proposed project alternatives will not affect flood capacity of the LA River and tributaries.

- Clarify in a revised or supplemental Draft EIS if Table 3.17-3 in the Wetlands section also includes direct and indirect impacts from the transmission line towers proposed for placement in the LA River. In describing the project footprint, the Environmental Consequences discussion in the Draft EIS currently does not mention utilities, including the towers. Table 3.17-3 should also reflect any additional impacts to waters of the U.S. resulting from other channel modifications necessary to address hydraulic capacity impacts from the proposed towers in the LA River. Include the location and design of these channel modifications in a revised or supplemental Draft EIS.

- Clarify in a revised or supplemental Draft EIS the proposed design of the towers within the LA River. The Draft EIS appears to have conflicting information regarding the design of the transmission line towers proposed in the LA River. For example, the Executive Summary (p. 10) has an example figure on platforms and pilings with free flow water beneath structure. Appendix S-2 has figures that indicate 'bump out' areas into the LA River as permanent fill areas which

appear to be the locations of the proposed towers. Appendix O shows proposed 'retaining walls', which would imply complete fill, in areas which appear to be the relocated towers in the LA River.

Wayside Electric Power Distribution System and Electrical Substations
The document states that Alternatives 6B and 6C include a wayside distribution system and electrical substation as an element of the freight corridor. However, the specific technology for power distribution is not yet determined, though according to the Draft EIS "for purposes of analyses, an overhead caternary distribution system is assumed (Page 3.15-8)."

Recommendations:

- Caltrans should further describe the proposed technology and design, and placement of the electrical substations, including impacts to resources from siting such substations.

- Describe in a revised or supplemental Draft EIS measures to avoid, minimize, and mitigation impacts to neighboring residences and environmental resources.

7. Other Recommendations to Address Prior to Issuance of a Final EIS

Residential Relocations – Disproportionate Impacts
The Final Community Impact Assessment demonstrates that the relocations under each build alternative would disproportionately occur in low-income, minority communities. Page 3.3-50 of the Draft EIS states: "If any of the build alternatives are selected, a majority of the relocations would occur in areas where minority, low-income, disabled/mobility-limited, and young residents reside." It is unclear what process Caltrans followed to help ensure that the build alternatives and design options presented in the Draft EIS result in minimal relocations.

Recommendations:

- Provide a discussion in Chapter 3.3 (Community Impacts) that explains what steps were taken to minimize the number of relocation impacts to low-income, minority communities.

- Provide a discussion in Chapter 3.3 that clarifies why the estimated number of relocations substantially increased in the Draft EIS compared to earlier estimates, such as those provided in the Administrative Draft EIS. Please explain whether the procedure used to estimate the number of relocations for the Administrative Draft EIS is different from the procedure used for the Draft EIS. If the procedure is the same, then clarify whether the proposed build alternatives and design options were modified in a way that requires additional relocations.

Impacts to Water Quality in the LA River and Tributaries
The proposed project is located adjacent to water quality-impaired reaches of the LA River and LA River tributaries[31] and should maximize all opportunities to reduce inputs of pollutants resulting from the project. The proposal will add 110 to 326 acres of new impervious surface area, resulting in increased stormwater runoff that will contain pollutants common to roadways, such as heavy metals, oils and grease. The Draft EIS describes six measures to treat these pollutants but further clarification should be provided in the Final EIS. For example, Section 3.9 of the Draft EIS, based largely on the 2011 *Water Quality and Stormwater Runoff Study*, states that site-specific best management practices (BMPs) will

[31] Table 3.9-2 Expected and Approved Total Maximum Daily Loads lists the status for twenty-six TMDLs in reaches of the LA River, Compton Creek, Rio Hondo, and Dominguez Channel.

treat up to 83 percent of the total surface water runoff under Alternatives 6A/B/C, but lacks any mention of a similar treatment target for Alternative 5A. In addition, while the Draft EIS references the draft Caltrans Municipal Separate Storm Sewer Systems (MS4) permit, it does not discuss how the requirements would address potential runoff from the proposed project.

Recommendations:

- Discuss how BMPs will result in compliance with Total Maximum Daily Load allocations for reaches of the LA River and tributaries affected by the proposed project.

- Confirm that adequate space is available and/or obtainable for constructing sufficient stormwater treatment BMPs throughout the 18-mile project reach to avoid any adverse impacts to receiving waters. Because this is a highly urbanized region, acreage needed to locate and adequately size treatment BMPs may be a challenge for Caltrans. Discuss contingency measures if adequate land is unavailable.

- Clarify what is meant by the statement that BMPs will "treat up to 83 percent of the total surface water runoff" including whether this is a percentage from only new or all post-project impervious surface area and whether this also applies to Alternative 5A. The Final EIS should also explain whether this amount is intended to be consistent with federal and state regulatory requirements.

- Commit to following the order of preference for treatment BMPs identified in the draft Caltrans MS4 permit and first, infiltrate, harvest and re-use, and/or evapotranspire the stormwater runoff, and second, capture and treat.[32] The sizing criteria for treatment BMPs shall be based on the 85th percentile, 24-hour storm. The Final EIS should describe to what extent Caltrans will be able to implement treatment BMPs in this order of preference.

Support for Los Angeles River Watershed Revitalization Efforts

The goals of the Los Angeles River Watershed Urban Waters Partnership include supporting local watershed revitalization efforts, such as enhancing flood protection, improving water quality through green infrastructure, enabling safe public access, and restoring ecosystems. Many efforts are underway to revitalize the LA River Watershed, and it is critical that the project be designed in such a way to not prevent implementation of such efforts. The Draft EIS makes reference to cooperative planning efforts of community and government groups to revitalize the LA River, such as the Los Angeles River Master Plan and the Los Angeles River Revitalization Master Plan, but appears to lack any discussion of how project alternatives would limit the implementation of these master plans or other efforts. We were unable to find any mention in the Draft EIS of outreach efforts on behalf of the project to work with these groups to ensure that implementation of LA River revitalization efforts are not obstructed in the project reach. Issues to consider in the Final EIS should include whether and how the proposed Freight Corridor and transmission tower relocation would limit future efforts to improve public access to open space and recreational amenities, and improve water quality and ecological restoration.

The Draft EIS identifies potential impacts to several parks and trails near the LA River, including the 8.6-acre Parque Dos Rios at South Gate that is planned for construction in 2012. The Los Angeles River Watershed Urban Waters Partnership identified the planned Parque Dos Rios as an on-going partnership activity which many organizations have invested in. Parque Dos Rios would provide a variety of

[32] Section E.2.d.2.b) Numeric Sizing Criteria for Storm Water Treatment Control BMPs from the Second Revised Draft Tentative Order, April 27, 2012.

benefits including native riparian habitat restoration, public education, and passive recreational use at a unique parcel located at the confluence of the LA River and Rio Hondo. The proposed project would relocate the I-710 and place the Freight Corridor directly through the Parque Dos Rios site rendering it unusable as a park. Section 3.1 discusses impacts and mitigation measures but does not consider alternatives that would avoid the park.

Recommendations:

- Caltrans should meet with groups that are actively involved with revitalization efforts, in reaches of the LA River Watershed that fall within the project footprint, including the Los Angeles River Watershed Urban Waters Partnership, to discuss potential impacts to future revitalization efforts. The Final EIS should include results of these discussions, including identification of any priority revitalization areas within the project footprint. Caltrans should commit to ongoing coordination during the design of a final alternative to ensure revitalization efforts are adequately considered.

- Alternative alignments should be evaluated that would avoid or minimize impacts to Parque Dos Rios and preserve the habitat and other amenities planned for the site. If it is determined that there are no other options for realigning the project, the Final EIS should discuss what was considered and why Parque Dos Rios avoidance options are not practicable.

- Any impacts to the Parque Dos Rios should be mitigated in advance of the actual impacts and should take into account the unique setting of the current site at the confluence of the LA River and Rio Hondo. If acquisition and grading of the site happens several years from the implementation of the current design plan (to be constructed in 2012), then the temporal loss of established habitat should be compensated for.

Impacts to Jurisdictional Waters

The Draft EIS lacks a clear discussion of measures to avoid and minimize impacts to waters of the U.S. and instead focuses on proposed mitigation measures. Section 3.17 of the Draft EIS describes the Corps' Clean Water Act (CWA) Section 404 requirements to approve only the least environmentally damaging practicable alternative, but Section 3.17.4, Avoidance, Minimization and/or Mitigation only references Measure NC-1 described in Section 3.16, Natural Communities. Measure NC-1 briefly describes the proposed compensatory mitigation approach to prepare a Habitat Mitigation Monitoring Plan. As stated in the CWA Section 404(b)(1) Guidelines and in the Draft EIS, no discharge of dredged or fill material shall be permitted if there is a practicable alternative that would have less adverse impact to the aquatic resource. The Draft EIS has not clearly demonstrated what avoidance and minimization measures have been considered that would further avoid impacts to the LA River and tributaries.

Recommendation:

- Clearly identify steps to avoid and minimize impacts to waters of the U.S.

Noise Impacts

Chapter 3.14 discusses the project's noise impacts primarily by comparing estimated project impacts to Noise Abatement Criteria (NAC) or a substantial increase of 12 dBA. To meet noise reduction design goals, an abatement measure must be acoustically feasible of reducing noise levels by 5 dBA and meet a design goal to reduce noise by 7 dBA to at least one receptor. Additionally, abatement measures consider reasonableness, by comparing abatement costs to a reasonable allowance per benefited receptor, in this case $55,000 per person.

As explained in FHWA guidance, "the NAC are based upon noise levels associated with interference of speech communication and that the NAC are a compromise between noise levels that are desirable and those that are achievable."[33] The NAC was not intended to address "annoyance, sleep, and task interference or disturbance." In *Technology for a Quieter America*, the National Academy of Sciences recommended a multidisciplinary study to evaluate recent European studies linking noise and health impacts. These studies resulted in a joint World Health Organization and European Commission Joint Research Center report estimating that the disease burden from environmental noise is second only to air pollution among environmental factors.[34]

EPA recommends supplementing the noise analysis to also address EO 13045 *Protection of Children from Environmental Health Risks and Safety Risks*, which directs federal agencies to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children, and to ensure that their policies, programs and activities address these risks. EPA believes that speech interference in schools should be considered when determining disproportionate impacts. Children's ability to learn in school is very important to their development and future success. Studies have shown that classroom noise lowers performance on standardized tests,[35] and academic achievement has a well documented effect on health.

Currently, the Draft EIS only identifies one school, Vista High School, as feasible for interior noise abatement. At a cost of less than $55,000 per student, retrofitting classrooms may achieve the American National Standards Institute (ANSI) design standard of 35 dBA. This seems particularly relevant for schools where sound walls were not used because they did not provide the minimum noise reduction of 5 dBA for acoustical feasibility and 7 dBA noise reduction to at least one receptor.

Another concern about the noise analysis is the quantity used to determine a substantial increase to the existing noise level, 12 dBA. FAA regulations at 23 CFR 772 (f) state: Highway agencies shall define substantial noise increase between 5 dBA to 15 dBA over existing noise levels. Because a 12 dBA increase is more than twice as loud to the human ear, and this highway is through a dense urban corridor, for this project, we suggest considering a lower threshold for a substantial noise increase.

Finally, Caltrans Project EA 202100 (which is clarified to be the I-710 Pavement Rehabilitation Project in the January 2012 Traffic Noise Study Report) is referenced in the Noise section and briefly mentioned in the Cumulative Impacts section, but the Draft EIS does not appear to discuss the rationale for repaving a road and building soundwalls shortly before expanding the road and requiring those sound walls to then be removed. EPA recommends the Final EIS explain how the construction of both EA 202100 and this project are being coordinated. The Draft EIS also seems to have conflicting information regarding whether soundwalls were constructed/will be constructed for the I-710 Pavement Rehabilitation Project, as Table 3.25-1 on page 3.25-5 indicates that noise barriers were originally planned to be included with the project but were withdrawn from the project scope due to the lack of funding. The Noise section of the Draft EIS indicates that several of the soundwalls associated with project EA 202100 are assumed to be existing and would be removed as a part of this project. Additionally, it's unclear in text of the Draft EIS whether existing, or soundwalls presumed to be existing, will be reconstructed, once removed, with this project.

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[33] Noise Policy FAQs, http://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/faq_nois.cfm#note15.
[34] Burden of Disease from Environmental Noise, Quantification of Health Life Years Lost in Europe, World Health Organization and European Commission Joint Research Center, 2011. http://www.euro.who.int/__data/assets/pdf_file/0008/136466/e94888.pdf .
[35] See the studies referenced by ANSI/ASA S12.60-2002 (R2009) American National Standard Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools.

Recommendations:

- Update the noise analysis to consider children's health and learning-related noise impacts, and the quantity used to determine a substantial noise increase. If significant impacts are identified, commit to additional interior noise abatement measures, such as retrofitting impacted classrooms with acoustic insulation.

- Explain the coordination of construction of both EA 202100, which is referenced in the Noise section, and this project in an appropriate section of the Final EIS. Also verify whether noise barriers/soundwalls associated with EA 202100 I-710 Pavement Rehabilitation Project referenced in the noise analysis were actually constructed/are planned for construction. Clarify as a summary in the text which existing soundwalls will not be replaced for this project, if that is the case. While the sheets for Figure 3.14-1 identify locations, the text describing removal of existing soundwalls is confusing since some indicate feasible noise abatement, but do not further identify if they will be replaced.

Cumulative Impacts

The Council on Environmental Quality's (CEQ) regulations for implementing NEPA define cumulative effects as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such other actions (40 CFR Part 1508.7). The Draft EIS lists projects to consider regarding potential cumulative impacts, but the list appears to have some outdated information and no information noted for some of the projects. We recommend that Caltrans update the status of the cumulative impacts project list to reflect current project status, included, but not limited to the following specific suggestions. In addition, EPA recommends that Caltrans also include the latest information regarding the potential to create/extend other new, clean truck-only lanes/freight corridors, such as the proposed East-West Freight Corridor near SR 60, as identified in the 2012 SCAG RTP/Sustainable Communities Strategy (SCS), or potentially the SR-710 Project, intended to close the gap between the northerly terminus of I-710 and I-210. It is critical to understand the full scope of the construction and timing of operation for the multiple ongoing projects.

Recommendations:

- Include a summary in the Cumulative Impacts section regarding the latest information on other possible zero-emission freight corridors in proximity to this project, such as the East-West Freight Corridor Project or potentially the SR-710 Project.
- On Page 3.25 -14 through 3.26-20, provide updates to reflect current project status in order to better inform an assessment of cumulative impacts and identify if mitigation is warranted.
    - Project P-2, San Pedro Waterfront Project. The Draft EIS states "construction was expected to begin in 2009 and be completed by 2014". With updated information considered, are there cumulative impacts that can be mitigated?
    - Project P-6, Berths 136-147 [TraPac] Container Terminal Project (west basin development). The Draft EIS states an EIS Addendum was prepared in June 2012, but does not identify anticipated construction window. With updated information considered, are there cumulative impacts that can be mitigated?
    - Project P-9, Crescent Warehouse Relocation. The Draft EIS states a Draft EIS was recirculated in April 2008. Include potential cumulative impacts.
    - Projects P-28 (Mitsubishi Cement Corporation Facility Modifications) and P-29 (Cemera Long Beach Aggregate Terminal) are presented with no descriptions or status for P-29.

Greenhouse Gas Emissions

The State of California continues to increase its focus on potential climate change and impacts of increasing GHG emissions. Specifically, the Global Warming Solutions Act of 2006 and the Governor's Executive Order S-3-05 recognize the impact that climate change can have within California and provide direction for future reductions of greenhouse gases. As a major transportation corridor in Southern California, this Project will garner significant attention as a source of GHGs.

Recommendations:

- EPA recommends that Caltrans identify and commit to specific mitigation measures needed to 1) protect the project from the effects of climate change, 2) reduce the project's adverse air quality effects, and/or 3) promote pollution prevention or environmental stewardship. Caltrans and the project proponents should incorporate all relevant, feasible air quality and GHG mitigation measures listed in Appendix G of the 2012 SCAG RTP/SCS Program Environmental Impact Report (PEIR).