Reading File

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

August 24, 2009

Carlos Montez
California Department of Transportation
District 7
100 S. Main Street
Los Angeles, CA 90012

Subject: Draft Environmental Impact Statement for the 6th Street Viaduct Seismic Improvement Project (CEQ# 20090226)

Dear Mr. Montez,

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the 6th Street Viaduct Seismic Improvement Project (Project). Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

EPA commends the California Department of Transportation (Caltrans) for their efforts to address seismic and safety concerns that prompted the proposal for the Project. EPA also understands that both Alternative 2 (Retrofit) and Alternative 3 (Replacement) could provide a net long-term benefit to the greater Los Angeles region.

EPA has identified areas where additional information or further analysis is needed. EPA's enclosed detailed comments include a request for broadening the scope of the alternatives analysis, as well as a request for the inclusion of a more rigorous cumulative impacts analysis. Through the enclosed detailed comments, EPA also highlights specific concerns and recommendations regarding: 1) historic and cultural resources, 2) environmental justice, 3) aquatic resources, 4) air quality/construction mitigation, and 5) bike/pedestrian facilities. For these reasons, we have rated the DEIS as *Environmental Concerns-Insufficient Information* (EC-2). Please see the enclosed "Summary of EPA Rating Definitions".

We appreciate the opportunity to review this DEIS. When the Final EIS is released for public review, please send one (1) hard copy and one (1) CD-ROM to the

address above (mail code: CED-2). If you have any questions, please feel free to contact Connell Dunning, Transportation Team Leader, at (415) 947-4161, or Jarrett Stoltzfus, the lead reviewer for this Project, at (415) 972-3810.

Sincerely,

For Kathleen M. Goforth, Manager
Environmental Review Office
Communities and Ecosystems Division

Enclosures:
Detailed Comments
Summary of Rating Definitions

CC: Wally Stokes, City of Los Angeles
Mark Cohen, US Army Corps of Engineers
Susan Nakamura, South Coast Air Quality Management District

US EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE 6th STREET VIADUCT SEISMIC IMPROVEMENT PROJECT, LOS ANGELES COUNTY, CA, AUGUST 24, 2009

Alternatives Analysis

Section 1502.1 of the National Environmental Policy Act (NEPA) states that agencies should "present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public." While EPA appreciates efforts throughout the Draft Environmental Impact Statement (DEIS) to highlight the benefits of Alternative 3 (Replacement), a more rigorous comparison of the merits of each alternative, including the multiple bridge design concepts considered under Alternative 3, better achieves the purposes of NEPA.

Currently, the Staff Analysis Summary section (pg. 2-55), based on input from a workshop on October 8th, 2008, appears to preference Alternative 3 (Replacement) over Alternative 2 (Retrofit) but does not provide the comparative rationale to fully justify the selection of Alternative 3. Section 2.3.4.1, which describes Alternative 2 - Retrofit, only contains reasons why Alternative 2 is not the recommended alternative, such as high life-cycle cost and geometric deficiencies in that particular Alternative. Section 2.3.4.1 does not provide sufficient information to conclude whether there are reasons why Alternative 2 may be preferable to Alternative 3. For instance, the selection of Alternative 2 could result in fewer impacts to air quality and less disruption to local communities as the result of less necessary construction.

Likewise, Section 2.4.3.2, which describes Alternative 3 – Replacement, does not contain reasons why Alternative 3 may not be preferable. Section 2.4.3.2 only contains a ranking system for consideration of the various alignments discussed in Alternative 3, and not advantages or disadvantages to the selection of Alternative 3 itself. The Alternatives Analysis section should reflect a balanced consideration of the advantages and disadvantages of all Alternatives considered, including the No-Build Alternative.

Further, Section 2.4.3.3, which describes Alternative 3 – Replacement: Bridge Concepts states that "the bridge type does not affect the results of the environmental impact analysis, all five bridge types are documented in this Draft EIR/EIS as viable options for the Replacement Alternative." (pg. 2-56) However, Bridge Concept 1, Concept 4 and Concept 5 appear to build directly in the Los Angeles River, as they include the construction of a new central support pylon, directly impacting the riverbed during and after construction. The remaining concepts (Concept 2 and Concept 3) do not have a central support pylon constructed in the riverbed and the bridge, in those cases, span the river without the same potential for water quality impacts. The Alternative Analysis should clearly define, in comparative form, the environmental impacts across all Bridge Concepts to help inform decision makers and the public.

Finally, the DEIS should fully justify the elimination of any alternatives that would result in fewer environmental impacts than the locally preferred alternative(s). The DEIS must also evaluate the No-Build Alternative as a bench mark against which to compare both the performance and environmental consequences of the other Project alternatives.

Recommendations:

- In the FEIS, expand Section 2.4.3 (Staff Analysis Summary) to reflect a balanced consideration of the advantages and disadvantages of both Alternative 2 and Alternative 3. For example, include a table indicating side-by-side the advantages and disadvantages of each alternative analyzed. This comparison could include life-cycle cost, impact to viaduct footprint, or traffic impacts.
- Assess the environmental impacts of each of the proposed Bridge Concepts and incorporate the results into the analysis of Alternatives Analysis.
- Fully justify the elimination of any alternatives that would result in fewer environmental impacts than the locally preferred alternative(s).

Cumulative Impacts

The cumulative impact analysis provided in the DEIS does not fully assess and quantify cumulative impacts associated with the Project, and does not link the Project's effects to the health of the affected resources. Cumulative impacts are defined in the Council on Environmental Quality's NEPA regulations as "the impact on the environment that results from the incremental impact of the action when added to the other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such actions" (40 CFR 1508.7). These actions include both transportation and non-transportation activities. The cumulative impact analysis should consider transportation and non-transportation projects such as large-scale industrial or commercial developments and approved urban and transportation planning projects that are reasonably foreseeable and identified within city and county planning documents.

EPA is aware of a number of potential forthcoming projects in the general area over the next few years (e.g. expansion of the I-710 corridor), which, if implemented, could lead to substantial cumulative impacts to air quality, historical resources, etc. in an already highly impacted area.

The recently adopted Los Angeles River Revitalization Plan (pg. 1-8) designated the area covering the 6th Street Viaduct and its surrounding area as the "Downtown Industrial Opportunity area", and makes note of a number of forthcoming projects. The purpose of the plan was to guide the revitalization of the Los Angeles River, which can include changes in land use and development. Likewise, the Central Industrial Redevelopment Project Area Plan (pg. 3-12), which is to the west of the proposed Project, and the Adelante Eastside Redevelopment Project Area (pg. 3-13), which is to

the east of the proposed Project, also are areas where development is proposed and/or planned.

However, the DEIS does not account for the cumulative impact of simultaneous development projects overlapping with the proposed Project. Likewise, the DEIS does not mention the impact of other public or private construction projects in the greater downtown/Boyle Heights area during the 6th Street Viaduct construction period, which combined, could lead to even greater issues with traffic circulation and community and environmental impacts.

The high volume of proposed projects combined with a highly urbanized setting, with low-income and minority communities in an already highly impacted area, demands a thorough cumulative impacts assessment with appropriate mitigation. Specifically, all feasible mitigation should be proposed and committed to along with timeframes for implementation.

While the DEIS acknowledges that the proposed Project does not include capacity addition or changes in traffic patterns (pg. 3-201), it does not include a full, comprehensive report on cumulative effects generated during the construction period. The Traffic Study referenced accounts for general traffic growth and foreseeable projects in the vicinity of the Project after project completion (pg. 3-105), but does not include foreseeable projects and resulting cumulative impacts during the extensive construction period.

Given the extensive cumulative impacts to air and water quality from past major infrastructure projects in the vicinity of the proposed Project, EPA recommends a more comprehensive analysis of cumulative impacts to resources of concern. The Final EIS (FEIS) should include a more robust cumulative impact assessment that effectively discloses: 1) a defined study area for each resource; 2) the health or status of the resource and the historical extent of losses and/or impacts to the resource; 3) the trends associated with those losses and/or impacts; 4) how reasonably foreseeable actions may impact those resources; 5) the Project's contributions to these cumulative effects; and 6) a mitigation strategy and timeframe of implementation to reduce impacts.

Recommendations:

- Include a more robust cumulative impact analysis that includes impacts to resources as well as transportation circulation in the FEIS. EPA recommends Caltrans follow the June 2005 *Guidance for Preparers of Cumulative Impact Analysis* prepared jointly by Caltrans, Federal Highway Administration, and the EPA for this additional analysis. The guidance is a useful reference and is available on-line at http://www.dot.ca.gov/ser/cumulative_guidance/approach.htm
- Include information on cumulative traffic impacts generated during the construction period, both by the 6th Street Viaduct project and other area projects that could affect circulation in the general area as well.

- Include a mitigation strategy to reduce impacts from the proposed project and include timeframes for implementation of all proposed mitigation.

Cultural and Historical Resources

Both Alternatives 2 and 3 would have a permanent, adverse impact on the aspects that characterize the 6th Street Viaduct as a historic resource (pg. 4-8). The DEIS indicates that Alternative 2 would result in the alteration of the Viaduct in a manner not consistent with the *Secretary's Standards for the Treatment of Historic Properties*, as the bridge is so structurally deficient that it cannot be rehabilitated to meet minimum seismic requirements without adversely affecting the Viaduct's historic integrity (pg. B-28). Alternative 3 involves the complete removal and replacement of the Viaduct (pg. B-29), and as such, would result in a permanent, irreversible effect on the historic integrity of the bridge.

The DEIS indicates that a Memorandum of Agreement (MOA) will be developed as part of the Section 106 consultation process with the State Historic Preservation Officer (SHPO) . EPA recommends that Caltrans and the City of Los Angeles include in the FEIS results of formal consultation with SHPO and any additional comments from agencies with such expertise. Further, Caltrans and the City should ensure that appropriate steps are taken (pgs. 3-148 and 3-149) to preserve as much of the existing viaduct as possible through various means (such as through print or film) before actual alteration or demolition, as well as continue to pursue appropriate mitigation measures with the SHPO as referenced on page 3-148.

Recommendations:

- If Alternative 2 is chosen, EPA urges that as many historically relevant features from the original bridge should be retained as possible without compromising the structural retrofit of the bridge itself.
- If Alternative 3 is chosen, it will not be possible to preserve any aspects of the original bridge. However, as the actual design of the bridge (Bridge Concept) is yet to be selected by the Los Angeles City Council, and the choice of final Bridge Concept is independent of potential alignments, EPA urges the selection of a Bridge Concept that embraces many of the same qualities that raised the original value of the 6th Street Viaduct as a historical and cultural resource for the City of Los Angeles.
- Mitigation measures, as well as the complete Section 106 MOA, should be included in the FEIS.

Environmental Justice

According to Executive Order 12898, "To the greatest extent practicable and permitted by law, ... each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on

minority populations and low-income populations. Consistent with this Executive Order, an EIS should fully analyze the environmental effects of the proposed Federal action on low-income or minority populations, and present opportunities for affected communities to provide input into the NEPA process. Guidance issued by the Council on Environmental Quality (CEQ) states that mitigation in impact statements "should reflect the needs and preferences of affected low-income populations (and) minority populations to the extent practicable" (*Environmental Justice Under the National Environmental Policy Act*, CEQ 1997).

The DEIS is thorough in the scope of its treatment of community and environmental justice impacts, as well as community outreach to minimize these impacts, but the scope of the analysis should be broadened with respect to anticipated benefits. Specifically, EPA recommends additional analysis of impacts on commuters, the local workforce and transit.

Local/Commuter Benefits and Impacts

EPA has concerns that the Project disproportionately impacts the local population, which is low-income and minority, when compared to the substantial benefits received from commuters outside of the area, which may not have a similar demographic distribution.

Recommendation:

- Quantify, to the extent possible, the demographics of commuters moving through the project area and include this information in the environmental justice evaluation in the FEIS. The traffic analysis in Section 3.7 noted a strong tendency for directional traffic during peak commute periods, with the dominant flow westbound in the morning and eastbound in the afternoon. The analysis, such as Tables 3.7-1 and 3.7-2, also provided data on where traffic in the corridor originates and departs. This suggests that the facility serves both a local and regional need, and will continue to do so in the future (Figure 3.7-3).

Workforce Issues

While Alternative 3 does not include residential relocation, it does include impacts to area businesses. The DEIS notes that while no local business owners are identified as minority (pg. 3-39), the relocation of existing businesses could cause low-income and likely predominately minority workers to lose their jobs (pg. 3-59). The DEIS goes on to note that the affected business owners would be offered relocation benefits to the extent allowed by law in accordance with the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. The DEIS then notes that "loss of employment would be partially offset by unemployment insurance", but then recognizes that workers would have difficulty finding new jobs due to the economic downturn (pg. 3-59).

Recommendation:

- The FEIS should include a survey of the racial/ethnic and income characteristics of the workforce of businesses that would be relocated under the proposed action (Alternative 3), as well as relief measures that can be taken to preserve or generate new employment for local workers displaced by the Project.

Transit

The Los Angeles Metropolitan Transportation Authority (LACMTA) operates two bus lines on the 6th Street Viaduct: Route 18 and MetroRapid Route 720. As Route 720 serves one of the heaviest ridden corridors in the LACMTA system, and LACMTA ridership in general consists of many captive riders and those with low incomes, the projected closure of the 6th Street Viaduct for several years under Alternative 3 - Replacement will result in potentially significant delays for a significant number of bus riders that utilize that particular line. (pg. 3-104)

Recommendations:

- The FEIS should include information from the Traffic Management Plan (pg. 4-27) regarding transit impacts, and should quantify the disproportionate impact to low income, minority transit riders as a result of the closing of the viaduct.
- Include descriptions of proposed alternative transit routes and measures to be taken to limit disruptions to current service.

Aquatic Resources

Jurisdictional Waters

The Project may involve the discharge of dredged or fill material into jurisdictional wetlands and waterways. Discharges of dredged or fill material into waters of the U.S. require authorization by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). The Federal Guidelines at 40 CFR Part 230 promulgated under CWA Section 404 (b)(1) provide substantive environmental criteria that must be met to permit such discharges into waters of the United States. These criteria require a permitted discharge to: (1) be the least environmentally damaging practicable alternative (LEDPA); (2) avoid causing or contributing to a violation of a State water quality standard; (3) avoid jeopardizing a federally listed species or adversely modifying designated critical habitat for a federally listed species; (4) avoid causing or contributing to significant degradation of the waters of the United States; and (5) mitigate for unavoidable impacts to waters. A fully integrated DEIS that adequately addresses these criteria would facilitate the CWA Section 404 permit review process. EPA recommends integrating NEPA and CWA Section 404 requirements in the development of the DEIS.

A jurisdictional determination by USACE is needed prior to publication of the FEIS in order to provide a determination of potential significant impacts and identify mitigation and avoidance measures in the design of the Project. While Section 3.11 Water Quality and Stormwater Runoff discusses water quality, the DEIS does not address the status of consultation with USACE. The DEIS also does not disclose proposed permanent fill to waters of the United States from a numerical perspective nor does it sufficiently describe the activities proposed relevant to these waters and what functions would be affected with each alternative.

Recommendations:

- The FEIS should confirm whether a jurisdictional determination by USACE is needed prior to publication of the FEIS in order to provide a determination of potential significant impacts and identify mitigation and avoidance measures in the design of the Project.
- The FEIS should include an evaluation of the project alternatives in order to demonstrate the project's compliance with the 404(b) (1) Guidelines and authorization of the Least Environmentally Damaging Practicable Alternative (LEDPA). The alternatives analysis should include a reasonable range of alternatives that meet the Project purpose while avoiding and minimizing damage to waters. If, under the proposed project, dredged or fill material would be discharged into waters of the U.S., the FEIS should discuss alternatives to avoid those discharges.
- The FEIS should disclose for each Alternative:
    - the acreage of waters impacted,
    - the effect to aquatic resource function from the proposed activity. This should be summarized both in the text and in a table format for reader clarity.

Avoidance and mitigation of aquatic resources is integral to the future 404 Clean Water Act permit process, yet is not discussed in the DEIS. The DEIS is an appropriate vehicle for the Project proponent to demonstrate compliance with future permit requirements, and EPA advocates that the avoidance and minimization be addressed to the extent practicable in the FEIS.

Recommendations:

- Include information provided in the FEIS so that estimated impacts are provided in acreage estimates. The FEIS should include estimates of acreages of direct and indirect impacts to waters.
- Differentiate between permanent and temporary impacts to aquatic resources.
- The FEIS should include a summary of avoidance and minimization measures for impacts to waters of the United States. This should include a summary of which Bridge Concepts will avoid impacts to aquatic resources. This will be particularly important for proposed impacts to soft bottomed waterways (i.e. turning soft bottom into concrete).

- If a discharge is permitted, the FEIS should discuss how potential impacts would be minimized and mitigated. This discussion should include: (a) acreage and habitat type of waters of the U.S. that would be created, restored, or preserved; (b) water sources to maintain the mitigation area; (c) a revegetation plan utilizing native plants; (d) maintenance and monitoring plans, including performance standards to determine mitigation success; (e) an Adaptive Management Plan; (f) the parties that would be ultimately responsible for the plan's success; and (g) contingency plans that would be enacted if the original plan fails. Mitigation should be implemented in advance of the impacts to avoid habitat losses due to the lag time between the occurrence of the impact and successful mitigation.

On March 31, 2008, EPA and the Corps issued new regulations ("Mitigation Rule") governing compensatory mitigation to promote no net loss of aquatic resources by improving restoration and protection policies, increasing the effective use of mitigation banks, and strengthening the requirements for the use of in-lieu fee mitigation. These new compensatory mitigation standards emphasize best available science, promote innovation, and focus on results. This rule follows the recommendations of the National Research Council by establishing equivalent, effective standards for all forms of wetland replacement projects under the Clean Water Act. We emphasize that mitigation for impacts to waters of the United States proposed in the FEIS must be consistent with the new rule.

Recommendation:

- The FEIS should reflect the new mitigation rule and how the requirements of the new rule will be met by the proposed Project.

Stormwater Pollution Prevention

The proposed action occurs over an impaired section of the Los Angeles River for nitrate, pH and scum.(pg. 3-162). As such, the DEIS mentions that a Stormwater Pollution Prevention Plan (SWPPP) will be prepared and implemented, as a significant amount of construction will occur directly over the Los Angeles waterway. The SWPPP will include a number of Best Management Practices (BMPs) for implementation (at pgs. 3-164 and 3-165), and the DEIS indicates that no additional mitigation will be required.

Recommendations:

- In the FEIS, include specific short and long-term commitments outlined and identified in the SWPPP.
- Provide clarification as to the exact structural and non-structural BMPs to be implemented, as well as any remaining impacts to water quality despite mitigation measures.

- Include information in the FEIS on the long-term maintenance plans for permanent structural BMPs in order to ensure long-term utility of the devices on the 6th Street Viaduct.

Air Quality/Construction Mitigation

The South Coast Air Basin (SCAB) is currently classified as a non-attainment area for ozone (O_3) and fine particulates PM_{10} and $PM_{2.5}$ (pg. 3-200). The SCAB has the worst 8-hour ozone, PM_{10} and $PM_{2.5}$ problems in the nation, and attainment of these NAAQS will require massive reductions from mobile sources, given the rapid growth in this emissions category and the long lifespan of diesel engines. Because of the air basin's non-attainment status, it is important to reduce emissions of ozone precursors, mobile source air toxics (MSAT) and particulate matter from this project to the maximum extent.

The DEIS indicates that the implementation of either Alternative 2 (Retrofit) or Alternative 3 (Replacement) does not project any additional air quality impacts after construction, as vehicle throughput remains the same. The DEIS states that "the project is not a new facility, and does not include the addition of traffic lanes; therefore, no capacity enhancement or change in traffic pattern is anticipated". (pg. 3-201)

While no additional capacity or traffic pattern changes are planned as a result of the Project, EPA has concerns pertaining to the direct and indirect air quality impacts as a result of the construction required for the Project.

Construction Emissions

The DEIS states that estimates of localized direct and indirect emissions do not exceed air quality standards at sensitive receptors (pg. 3-216). We commend the construction mitigation measures detailed on Table 4-6 on page 4-29, based on the lead agency's estimate that peak daily construction emissions with mitigation would exceed the South Coast Air Quality Management District (SCAQMD) daily significance threshold for NO_x. In addition to this issue, and due to the extremely poor quality in the immediate vicinity of the Project, EPA recommends that Caltrans commit to all applicable state and local requirements and the measures listed below in the FEIS and ROD in order to reduce impacts associated with emissions of PM and other toxics from construction-related activities.

Recommendations:

Fugitive Dust Source Controls:

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to

both inactive and active sites, during workdays, weekends, holidays, and windy conditions.

- Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

Mobile and Stationary Source Controls:

- Reduce use, trips, and unnecessary idling from heavy equipment.
- Maintain and tune engines per manufacturer's specifications to perform at EPA certification, where applicable, levels and to perform at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications. The California Air Resources Board has a number of mobile source anti-idling requirements which could be employed. See their website at: http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm
- Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations.
- If practicable, lease new, clean equipment meeting the most stringent of applicable Federal or State Standards. Because of Project impacts to currently impaired air quality in the Project area and South Coast Air Basin (SCAB), Caltrans should commit to using Tier 4 standards when they become available, and ensuring the use of best available emission control technology for construction equipment that is used prior to Tier 4 standard availability. Utilize EPA-registered particulate traps and other appropriate controls where suitable to reduce emissions of particulate matter and other pollutants at the construction site.

Administrative controls:

- Identify all commitments to reduce construction emissions and update the air quality analysis to reflect additional air quality improvements that would result from adopting specific air quality measures.
- Identify where implementation of mitigation measures is rejected based on economic infeasibility.
- Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking. (Suitability of control devices is based on: whether there is reduced normal availability of the construction equipment due to increased downtime and/or power output, whether there may be significant damage caused to the construction equipment engine, or whether there may be a significant risk to nearby workers or the public.) Meet EPA diesel fuel requirements for off-road and on-highway, and where appropriate use alternative fuels such as natural gas and electric.

- Develop a construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow.
- Identify sensitive receptors in the project area, such as children, elderly, and infirm, and specify the means by which you will minimize impacts to these populations. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.

Mobile Source Air Toxics (MSATs)

EPA recommends an analysis of MSATs should be undertaken for the Project and disagrees with the conclusion in the statement that "FHWA has determend that this project will generate minimal air quality impacts for CAA criterial pollutants and has not been linked with any special MSAT concerns. Consequently, this effort is exempt from analysis for MSATs" (pg. 3-218). For Alternative 3 (Replacement), adverse impacts due to MSATs may occur to the surrounding community due to the traffic generated by a several-year detour in additional to multiple years of construction equipment emissions.

A large number of recent studies have examined the association between living near major roads and various adverse health endpoints. Several well-conducted epidemiologic studies have shown associations with cardiovascular effects, premature adult mortality, and adverse birth outcomes, including low birth weight and size. Traffic-related pollutants have been repeatedly associated with increased prevalence of asthma-related respiratory symptoms in children. Also, based on toxicological and occupational epidemiologic literature, several of the MSATs, including benzene, 1,3-butadiene, and diesel exhaust, are classified as known and likely human carcinogens. Thus, cancer risk, including childhood leukemia, is a potential concern in near roadway environments.

For additional information on MSATs, please see EPA's MSAT website http://www.epa.gov/otaq/toxics.htm. MSAT analysis is further described in the March 2007 report entitled "Analyzing, Documenting, and Communicating the Impacts of Mobile Source Air Toxic Emissions in the NEPA Process" conducted for the American Association of State Highway and Transportation Officials (AASHTO) Standing Committee on the Environment and funded by the Transportation Research Board (http://www.trb.org/NotesDocs/25-25(18)_FR.pdf). Procedures for toxicity-weighting, which EPA has found to be especially useful for the targeting of mitigation, are described in EPA's Air Toxics Risk Assessment Reference Library (Volume 3, Appendix B, beginning on page B-4, http://epa.gov/ttn/fera/data/risk/vol_3/Appendix_B_April_2006.pdf).

These recommendations, and the recommendations included in the report for AASHTO referenced above, differ substantially from the FHWA interim guidance (February 2006) on MSAT analysis for transportation projects under NEPA. While there are positive elements to this guidance, especially the willingness to acknowledge potential MSAT concerns, EPA continues to disagree with major elements of this approach nationally.

Recommendations:

- In the FEIS, identify homes and sensitive receptors located within at least 200 meters from possible alternatives where there would be increases in truck and construction traffic/idling, increased roadway and rail traffic, construction activities, and staging area activity, and compare these numbers between alternatives. If the project would result in high average daily traffic (10,000 average daily traffic (ADT), for example), then the FEIS should at least identify the total tons per year anticipated for the six most significant MSATs, namely diesel particulate matter (DPM), acrolein, acetaldehyde, formaldehyde, benzene, and 1,3-butadiene, for each alternative.
- Include an assessment of diesel emissions and provide plans for improving air quality through reducing diesel emissions.
- Identify design alternatives and options to further minimize MSAT impacts including indoor air quality improvements for all sensitive receptors within the project area.

Bike/Pedestrian Facilities

As Alternative 2 (Retrofit) does not change the width of the viaduct or address viaduct design, Alternative 2 does not cause a loss for bicycling and pedestrian access, but similarly does not provide new mobility opportunities.

However, in Alternative 3 (Replacement), the complete replacement of the bridge creates an opportunity for providing additional bicycle and pedestrian capacity on the bridge, as the new bridge includes wide shoulders as well as a new pedestrian walkway on each side of the bridge.

In all viaducts and Bridge Concepts proposed under Alternative 3, 8 foot wide shoulders are currently planned to be designated as a bicycle routes under the City of Los Angeles Bicycle Plan Policy. In the DEIS, the roadway shoulder appears to be shared use between motorists and bicyclists. As the Bicycle Plan Policy states that any bridge reconstruction or replacement should be designed with adequate roadway to accommodate a bicycle facility (pg. 3-19), Caltrans and the City should ensure that bicyclists are given appropriate, secure access on the replacement viaduct instead of a shared-use facility that could potentially compromise their safety.

In addition, while all the Bridge Concepts under consideration are functionally equivalent for the purposes of motorized travel, and the bridge type does not affect the results of the environmental impact analysis (pg. 2-56), the pedestrian experience can vary greatly based on the bridge configuration. Bridge Concept 2 (Cast-in-place Box Girder with Steel Tied Arch Pedestrian Ways) is the only option that provides a significantly separated corridor for pedestrians on the bridge itself, and none of the concepts or viaduct designs appear to provide a pedestrian walkway that is separated from the roadway by a physical barrier, presenting a potentially serious safety issue.

Finally, there appears to be no mention of frequency or intensity of light fixtures on the viaduct. If the viaduct is to be increasingly used as a bicycle and pedestrian corridor, improved lighting facilities are critical – especially at night – for pedestrian and bicyclist safety.

Recommendations:

- If Alternative 3 is chosen, EPA recommends that final bridge concepts include formal eastbound and westbound bicycle routes that are clearly defined, signed and marked, as well as completely separated if possible.
- EPA also urges that the final bridge concept chosen provide appropriate and separated pedestrian accommodations in order to heighten both safety, as well as the aesthetic experience for pedestrians, such as the efforts made in Bridge Concept 2. In addition. the FEIS should include information on the number, location and intensity of light fixtures on the viaduct.

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) 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 Environmental Impact Statement (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 should 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 Council on Environmental Quality (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.