Metro

Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza
3rd Floor Board Room

Agenda - Final

Wednesday, February 15, 2017

2:00 PM

One Gateway Plaza, Los Angeles, CA 90012,
3rd Floor, Metro Board Room

Planning and Programming Committee

Hilda Solis, Chair
Paul Krekorian, Vice Chair
Kathryn Barger
James Butts
Ara Najarian
Carrie Bowen, non-voting member

Phillip A. Washington, Chief Executive Officer

METROPOLITAN TRANSPORTATION AUTHORITY BOARD RULES
(ALSO APPLIES TO BOARD COMMITTEES)

PUBLIC INPUT

A member of the public may address the Board on agenda items, before or during the Board or Committee's consideration of the item for one (1) minute per item, or at the discretion of the Chair. A request to address the Board should be submitted in person at the meeting to the Board Secretary. Individuals requesting to speak on more than three (3) agenda items will be allowed to speak up to a maximum of three (3) minutes per meeting. For individuals requiring translation service, time allowed will be doubled.

Notwithstanding the foregoing, and in accordance with the Brown Act, this agenda does not provide an opportunity for members of the public to address the Board on any Consent Calendar agenda item that has already been considered by a Committee, composed exclusively of members of the Board, at a public meeting wherein all interested members of the public were afforded the opportunity to address the Committee on the item, before or during the Committee's consideration of the item, and which has not been substantially changed since the Committee heard the item.

The public may also address the Board on non-agenda items within the subject matter jurisdiction of the Board during the public comment period, which will be held at the beginning and/or end of each meeting. Each person will be allowed to speak for up to three (3) minutes per meeting and may speak no more than once during the Public Comment period. Speakers will be called according to the order in which the speaker request forms are received. Elected officials, not their staff or deputies, may be called out of order and prior to the Board's consideration of the relevant item.

In accordance with State Law (Brown Act), all matters to be acted on by the MTA Board must be posted at least 72 hours prior to the Board meeting. In case of emergency, or when a subject matter arises subsequent to the posting of the agenda, upon making certain findings, the Board may act on an item that is not on the posted agenda.

CONDUCT IN THE BOARD ROOM - The following rules pertain to conduct at Metropolitan Transportation Authority meetings:

REMOVAL FROM THE BOARD ROOM The Chair shall order removed from the Board Room any person who commits the following acts with respect to any meeting of the MTA Board:

a. Disorderly behavior toward the Board or any member of the staff thereof, tending to interrupt the due and orderly course of said meeting.
b. A breach of the peace, boisterous conduct or violent disturbance, tending to interrupt the due and orderly course of said meeting.
c. Disobedience of any lawful order of the Chair, which shall include an order to be seated or to refrain from addressing the Board; and
d. Any other unlawful interference with the due and orderly course of said meeting.

INFORMATION RELATING TO AGENDAS AND ACTIONS OF THE BOARD

Agendas for the Regular MTA Board meetings are prepared by the Board Secretary and are available prior to the meeting in the MTA Records Management Department and on the Internet. Every meeting of the MTA Board of Directors is recorded on CD's and as MP3's and can be made available for a nominal charge.

DISCLOSURE OF CONTRIBUTIONS

The State Political Reform Act (Government Code Section 84308) requires that a party to a proceeding before an agency involving a license, permit, or other entitlement for use, including all contracts (other than competitively bid, labor, or personal employment contracts), shall disclose on the record of the proceeding any contributions in an amount of more than $250 made within the preceding 12 months by the party, or his or her agent, to any officer of the agency, additionally PUC Code Sec. 130051.20 requires that no member accept a contribution of over ten dollars ($10) in value or amount from a construction company, engineering firm, consultant, legal firm, or any company, vendor, or business entity that has contracted with the authority in the preceding four years. Persons required to make this disclosure shall do so by filling out a "Disclosure of Contribution" form which is available at the LACMTA Board and Committee Meetings. Failure to comply with this requirement may result in the assessment of civil or criminal penalties.

ADA REQUIREMENTS

Upon request, sign language interpretation, materials in alternative formats and other accommodations are available to the public for MTA-sponsored meetings and events. All requests for reasonable accommodations must be made at least three working days (72 hours) in advance of the scheduled meeting date. Please telephone (213) 922-4600 between 8 a.m. and 5 p.m., Monday through Friday. Our TDD line is (800) 252-9040.

LIMITED ENGLISH PROFICIENCY

A Spanish language interpreter is available at all Board Meetings. Interpreters for Committee meetings and all other languages must be requested 72 hours in advance of the meeting by calling (213) 922-4600 or (323) 466-3876.

323.466.3876 x2
Español
323.466.3876 x3

한국어	日本語
中文	русский
Հայերէն	ภาษาไทย
Tiếng Việt	ហាមមិន

HELPFUL PHONE NUMBERS

Copies of Agendas/Record of Board Action/Recordings of Meetings - (213) 922-4880 (Records Management Department)
General Information/Rules of the Board - (213) 922-4600
Internet Access to Agendas - www.metro.net
TDD line (800) 252-9040

NOTE: ACTION MAY BE TAKEN ON ANY ITEM IDENTIFIED ON THE AGENDA

CALL TO ORDER

ROLL CALL

APPROVE Consent Calendar Item: 12.

Consent Calendar items are approved by one motion unless held by a Director for discussion and/or separate action.

CONSENT CALENDAR

12. RECEIVE AND FILE report on **Potential Change in CEQA Transportation Impact Metrics.** 2017-0018

Attachments: Attachment A - Draft CEQA Guidelines January 2016
Attachment B - Metro CEQA Update Comment Letter February 29 2016

NON-CONSENT

13. RECEIVE **oral report on the Long Range Transportation Planning Process** 2017-0048

Attachments: Attachment A - Presentation: LRTP Approach

14. ADOPT the **Development Guidelines for the joint development of 1.56 acres of Metro-owned property at Cesar E. Chavez Avenue and Fickett Street.** 2016-0903

Attachments: Attachment A - Site Map
Attachment B - Cesar E. Chavez and Fickett Avenue - Development Guidelines

15. ESTABLISH the Life of Project (LOP) budget for **Bike Share TAP Step 3A Integration** in the amount of $1.65 million 2016-0994

Attachments: Attachment A - November 2015 Board Report
Attachment B - November 2016 Board Report
Attachment C - LOP Budget and Funding Plan
Attachment D - Presentation Bike Share/TAP Integration Step 3

16. AUTHORIZE augmenting the life of project budget for **Union Station Metro Bike Hub** from $1.32 million to $2.47 million, to accommodate a more accessible and higher visibility bike hub facility for users and the community. 2016-0995

Attachments: Attachment A - July 2014 Metro Board Action 36 ExpressLanes Grant Awards
Attachment B - September 2010 Metro EMAC Motion 10
Attachment C - Union Station Metro Bike Hub Rendering
Attachment D - Union Station Metro Bike Hub Cash Flow Table
Attachment E - Union Station Metro Bike Hub Presentation

(ALSO ON FINANCE, BUDGET AND AUDIT COMMITTEE)

17. AUTHORIZE the Chief Executive Officer to extend the existing nine-month Short Term Exclusive Negotiation Agreement and Planning Document (Short Term ENA) with Trammell Crow Company and Greenland USA (together, Developer) for an additional 90 days, to **conduct community outreach and refine the project scope for a mixed-use real estate development (Project)** on the Metro-owned property at the North Hollywood Red Line Station (Site). 2017-0007

Attachments: Attachment A – Site Plan - North Hollywood Joint Development Site

35. CONSIDER: 2016-0958

A. APPROVING the recommended Alternative 1 with six Regional Rail run-through tracks and four High Speed Rail run-through tracks (also referred to as “6+4 Run Through Tracks” Alternative) to be carried forward in the **California Environmental Quality Act (CEQA) Draft Environmental Impact Report (EIR) and National Environmental Policy Act (NEPA) Draft Environment Impact Statement (EIS)** and continue to evaluate Alternatives 2, 3 and 4 as reasonable alternatives in the Draft EIR/EIS;

B. AUTHORIZING the Chief Executive Officer (CEO) to execute Modification No. 4 to Contract No. PS2415-3172, with HDR Engineering, Inc., for Link Union Station (Link US) to provide environmental and preliminary engineering services for the expansion of Link US to connect the Link US project with Patsaouras Transit Plaza to the east and the historic Union Station to the west, increasing the total contract value by $13,761,273, from $48,279,357 to a not to exceed amount of $62,040,630;

C. AUTHORIZING the CEO to increase Contract Modification Authority

(CMA) in the amount of $1,376,127, increasing the total CMA amount from $2,980,588 to $4,356,715;

D. AUTHORIZING the Chief Executive Officer to execute a funding agreement with California High-Speed Rail Authority (CHSRA) in the amount of $3,726,102 for project development work related to Contract Modification No. 4; and

E. APPROVING an amendment to increase the FY17 fiscal year budget in the amount of $9,200,000 for the LINK US Project in Cost Center 2145.

Attachments: Attachment A - Procurement Summary (LINK US).pdf
Attachment B - Modification Change Order Log (LINK US).pdf
Attachment C - DEOD Summary.pdf
Attachment D - Comp Mod 3 and 4 Study Areas
Attachment E - Alternative Overviews
Attachment F - Sources and Use of Funds

(ALSO ON FINANCE, BUDGET AND AUDIT COMMITTEE)

37. APPROVE **Motion by Garcetti, Hahn, Garcia and Dupont-Walker** that the MTA Board direct the CEO to: 2017-0091

A. evaluate and implement short-term Blue Line and Expo Line improvements, especially service reliability and schedule adherence improvements on at-grade sections of Washington Boulevard, Flower Street, and the downtown wye, including but not limited to signal optimization, signal priority, signal preemption, and consideration of street closures;

B. study long-term Blue Line improvements, including but not limited to:

1. creating Blue Line Express service between Long Beach and Downtown Los Angeles during peak hours, including:

a. provide information on current freight usage along the right-of-way,

b. provide a preliminary estimate on upgrading the right-of-way to light trail transit standards,

c. provide an operations plan to accommodate express

service,

d. quantify travel time savings for peak hour trains;

2. optimizing the Washington Boulevard wye by grade separating the Blue Line on Washington Boulevard and the Expo Line on Flower Street, including a full grade separation of Pico Station;

3. explore the feasibility for a full grade separation and/or station relocation including additional parking at Wardlow Station;

4. study of additional grade separations along the entire Blue Line alignment that would improve service reliability and schedule adherence; and

C. report back on all the above to the Construction Committee during the July 2017 Board cycle.

(ALSO ON CONSTRUCTION COMMITTEE)

38. APPROVE **Motion by Hahn and Garcetti** that the Board direct the CEO to work with Caltrans, Los Angeles County, and the City of Norwalk to enhance first-last mile access to Norwalk Station and identify first-last mile eligible funding that could be used towards a Metro contribution of up to 25% of the project cost, which is estimated to be up to a total of $673,000. 2017-0093

Adjournment

Consideration of items not on the posted agenda, including: items to be presented and (if requested) referred to staff; items to be placed on the agenda for action at a future meeting of the Committee or Board; and/or items requiring immediate action because of an emergency situation or where the need to take immediate action came to the attention of the Committee subsequent to the posting of the agenda.

Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

File #: 2017-0018, **File Type:** Policy **Agenda Number:** 12.

PLANNING AND PROGRAMMING COMMITTEE
FEBRUARY 15, 2017

SUBJECT: POTENTIAL CHANGE IN CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

ACTION: RECEIVE AND FILE REPORT ON POTENTIAL CHANGE IN CEQA

RECOMMENDATION

RECEIVE AND FILE report on **Potential Change in CEQA Transportation Impact Metrics.**

ISSUE

The Metro Board of Directors has established a range of policies and programs related to transit expansion, transit oriented development and transit oriented communities, active transportation, first/last mile, and sustainability. Taken collectively these policies suggest creating a range of transportation options to promote multimodal choice, improved environmental outcomes, safety and public health. In contrast, current CEQA practice, through the use of automobile Level of Service (LOS) as a metric, tends to promote automobile capacity and speed exclusive of these other objectives.

The State of California is currently considering updates to the CEQA Guidelines in order to better align the State's flagship environmental policy with intended environmental outcomes including greenhouse gas emission reduction (Attachment A). The proposed guidelines recommend phasing out the use of LOS statewide with a Vehicle Miles Traveled (VMT) as a substitute metric.

This policy change at the state level has several implications for Metro. To that end, Metro provided comments on the draft Guidelines in February 2016 (Attachment B). The proposed policy change is largely in line with Metro's established objectives and will aid implementation of Metro transit and active transportation projects. Some Metro projects, notably those that add mixed-flow auto capacity, will likely show a greater level of impact under a VMT metric, necessitating project mitigations that, while potentially costly, would benefit multimodal mobility in the areas where these projects exist. Staff suggests further work to assess the potential beneficial and negative impacts for Metro priorities and projects in advance of considering changes in policy for CEQA documents for which Metro is the Lead Agency.

DISCUSSION

State Policy
In 2011, the California Legislature passed SB 743, prompting the Governor's Office of Planning and Research (OPR) to prepare an update to the CEQA guidelines specifically on transportation impact metrics. The Legislature required that OPR eliminate use of LOS Active Transportation Strategic Plan (2016) in defined "transit priority areas," defined as a ½ mile radius around transit stops or stations with better than 15-minute headways at peak, and allowed discretion to eliminate LOS statewide.

As of February 2016, OPR has prepared a set of Draft Guidelines. Those guidelines, in fact, recommend the elimination of LOS as a CEQA metric statewide. The current draft is accompanied by a non-binding Technical Advisory that suggests various methods to apply the newly proposed VMT metric for a variety of project types, and describes appropriate mitigation for projects that will have an induced travel demand, or VMT, impact. Of note, the Technical Advisory suggests the creation of mitigation banks that would allow lead agencies to contribute to regional projects or programs that reduce VMT.

As context, it is important to note that CEQA analyses addressing transportation impacts are required for two broad categories of projects: land use development projects that generate traffic and other mobility impacts; and transportation projects per se.

Applicable Metro Policy
In recent years, Metro has adopted a number of policies intended to create better environmental outcomes, promote multimodal transportation, and improve the public right-of-way for all users. These include:

- Countywide Sustainability Planning Policy, 2012,
- Complete Streets Policy, 2014,
- First/Last Mile Strategic Plan, 2014,
- Transit Oriented Communities, 2015, and
- Active Transportation Strategic Plan, 2016.

Taken collectively these policies prompt consideration of a range of objectives for transportation facilities and projects beyond a singular focus on motor vehicle speed. Rather, current Metro policy suggests that public right-of-way should be allocated and designed for safety and modal choice over speed.

Current Metro Practice/Projects
Metro employs the standard practice for analyzing its transportation projects under current CEQA Guidelines, using LOS as the primary metric for transportation impact. This is the case for projects of all types often complicating and increasing cost for transit and active transportation projects to the extent that they impact vehicle speed (for construction as well as operation stages). At the same time, highway and other capacity projects viewed through an LOS approach will tend to show environmental benefits. Metro uses a variety of impact thresholds for LOS among various projects, typically deferring to the standard practice of the jurisdiction in which the project is located. Further study, as suggested in this report, will focus on the types and costs of mitigation committed by Metro

under LOS analysis. It should also be noted that current practice includes analyzing induced travel demand which would lead to very similar results compared to VMT.

In Los Angeles County and statewide, several agencies have either transitioned to a VMT metric or are in the process of doing so. Notably, the City of Pasadena adopted VMT as its primary transportation analysis metric in 2015, the City of San Francisco did so in 2016, and the City of Los Angeles is currently in process of doing so.

Impact of Local Development Policies and Practice on Metro

Metro is committed to implementation of complete streets and first/last mile improvements countywide. For new transit lines/stations, Metro is in a lead role for first/last mile design and in some cases implementation. Nevertheless, Metro's projects exist within a broader environment affected by projects in the surrounding area. The use of LOS as a metric for development projects (housing, commercial, etc.) directly affects Metro's complete streets and first/last mile efforts and often creates conflict and complication on a case-by-case basis. Specifically, LOS-oriented mitigations intended to increase speeds, such as adding travel lanes, often degrade conditions for pedestrians and cyclists, and may create new problems that Metro's upcoming first/last mile projects would need to reverse.

Conversely, mitigation from development projects under a VMT metric would benefit Metro substantially. Mitigations intended to reduce VMT would include purchase of transit passes, funding other Transportation Demand Management programs, direct implementation of first/last mile and active transportation infrastructure, and implementation of traffic calming. Also of note, OPR's draft guidelines suggest the creation of VMT mitigation banks which would allow project proponents to purchase VMT reduction credit through the establishment of regional programs.

Metro Projects Adversely Impacted

As noted above, Metro projects that add mixed-flow capacity for cars will, under a VMT metric, result in environmental impacts requiring mitigation. In the case of large scale projects of this type, the potential scale and cost of mitigation may be substantial. It should be noted, however, that mitigations to reduce VMT will benefit multimodal mobility in the same communities where these projects exist. Projects that add mixed-flow capacity will show greater impacts than projects where new capacity is intended for high occupancy or tolled lanes. Further, Metro has discretion as a lead agency to both set thresholds of significance which put VMT impacts in context and ultimately adopt a Statement of Overriding Considerations in the event that impacts cannot be feasibly mitigated. As part of the further analysis prompted by this report, Metro is compiling a list of potentially impacted projects, including those in the recently passed Measure M expenditure plan. Staff suggests additional study and analysis of future capacity projects to better understand the scale of impact. This work will involve preparing sample impact analysis under a VMT metric for selected projects.

ALTERNATIVES CONSIDERED

Metro may choose to not assess a potential shift in metrics unless and until state policy is finalized. This approach is not recommended as future decisions and actions will be greatly enhanced with such an assessment, particularly given current Board policy interests that align in the potential shift

as well as the ramifications across Metro's portfolio of projects.

NEXT STEPS

Pending approval by the Board, Metro Planning staff will work with County Counsel, Highway Program, and Construction to evaluate the likely impact to projects, including the development of case study analysis for selected projects. This analysis will prompt a report back to the Board within six months.

ATTACHMENTS

Attachment A - Draft CEQA Guidelines, January 2016
Attachment B - Metro CEQA Update Comment Letter, February 29, 2016

Prepared by: Jacob Lieb, Sr. Manager, Transportation Planning, (213) 922-4132
Diego Cardoso, EO, Countywide Planning & Development, (213) 922-3076
Cal Hollis, SEO, Countywide Planning & Development, (213) 922-7319

Reviewed by: Therese W. McMillan, Chief Planning Officer, (213) 922-7077

Phillip A. Washington
Chief Executive Officer

ATTACHMENT A

Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA

Implementing Senate Bill 743 (Steinberg, 2013)

January 20, 2016

I. Explanation of Revised Updates to the CEQA Guidelines Implementing Senate Bill 743

A. Background

Senate Bill 743 mandates a change in the way that public agencies evaluate transportation impacts of projects under the California Environmental Quality Act. Legislative findings in that bill plainly state that California's foundational environmental law can no longer treat vibrant communities, transit and active transportation options as adverse environmental outcomes. On the contrary, aspects of project location and design that influence travel choices, and thereby improve or degrade our air quality, safety, and health, must be considered.

The Legislature mandated that these changes occur in the Guidelines that implement CEQA for several reasons. For one, as administrative regulations, updates to the CEQA Guidelines are vetted publicly and thoroughly. The Office of Planning and Research began to engage the public in the development of these recommendations as soon as Governor Brown signed Senate Bill 743 into law. Moreover, the development of these recommendations has been iterative, giving experts, the public and affected entities many opportunities to weigh-in. This revised draft of the Guidelines is the latest iteration. Further, as implementation is monitored, and methodologies improve, the Guidelines can be updated as needed.

Once finally adopted, these Guidelines should result in a better, more transparent evaluation of project impacts, and better environmental outcomes. Procedurally, traffic studies that accompany in-depth environmental review will now typically take days rather than weeks to prepare. Because models to estimate vehicle miles traveled are publicly available, decision-makers and the public will be better able to engage in the review process. Substantively, a focus on vehicle miles traveled will facilitate the production of badly-needed housing in urban locations. It will also facilitate transit projects and better uses of existing infrastructure as well as bicycle and pedestrian improvements. As a result, people will have better transportation options. It also means that CEQA will no longer mandate roadways that focus on automobiles to the exclusion of every other transportation option. It will no longer mandate excessive, and expensive, roadway capacity.

As indicated above, this revised draft is the product of many months of intensive engagement with the public, public agencies, environmental organizations, development advocates, industry experts, and many others. Because the changes from the preliminary discussion draft are meaningful and substantive, OPR again invites public review and comment on this proposal.

This document contains an explanation of how the proposal has changed from the preliminary discussion draft. It also briefly explains how the proposal changed in response to specific public input. Finally, this document includes the revised draft of proposed new section 15064.3 as well as a draft Technical Advisory that more thoroughly describes recommended methodologies.

B. Explanation of What Changed from, and What Remains the Same as, the Preliminary Discussion Draft

Many of the basics of the proposal will look familiar. OPR continues to recommend vehicle miles traveled as the most appropriate measure of project transportation impacts. Further, this proposal continues to recommend that development proposed near transit, as well as roadway rehabilitation, transit, bicycle and pedestrian projects, should be considered to have a less than significant transportation impact. Moreover, OPR continues to recommend application of that measure across the state. Finally, OPR continues to recommend that implementation be phased in over time.

Reviewers will also see several improvements on the preliminary discussion draft. First, much of the detail that OPR originally proposed to include in the new Guidelines section has been moved to a new draft Technical Advisory (see Section III of this document). Doing so will make more clear what in the proposal is a requirement versus a recommendation. Second, the recommended thresholds of significance have been refined to both better align with the state's climate policies and recognize the tremendous diversity of California's communities. Further, the threshold recommendations are accompanied by better access to relevant data (such as outputs from the Caltrans' Statewide Travel Demand Model). Third, OPR now recommends that the new procedures remain optional for a two-year period. This opt-in period will enable those agencies that are ready to make the switch from level of service to vehicle miles traveled to do so, but gives time to other agencies that have indicated that they need more time to become acquainted with the new procedures.

C. How the Revised Draft Responds to Public Input

OPR received nearly 200 comment letters on the preliminary discussion draft. The following contains excerpts from those comments representing some of the major themes in the input that OPR received. Following each excerpt is a brief explanation of how OPR responded to the comment in the revised draft.

1. "We applaud the State of California and [OPR] for taking this transformative step forward…"

OPR agrees that the outcome of these changes may be transformative. The degree to which consideration of a project's vehicle miles traveled leads to healthier air and better transportation choices will depend on the choices of individual lead agencies. Those agencies will need to find that project changes, such as increasing transportation options and mix of uses, are feasible. We are more likely to see improved outcomes if these changes in CEQA are coupled with changes in local land use policies, such as reduced parking mandates, greater emphasis on transit, and more walkable community design.

2. "We applaud the selection of Vehicle Miles Traveled (VMT) as the primary metric for evaluating transportation impacts under CEQA. VMT is not only a **better measure of environmental impacts** than LOS; it is also **more equitable**."

OPR agrees that vehicle miles traveled is the most appropriate measure to replace level of service. As explained in detail in the Preliminary Evaluation of Alternatives, and in the Preliminary Discussion Draft, vehicle miles traveled directly relates to emissions of air pollutants, including greenhouse gases, energy usage, and demand on infrastructure, as well as indirectly to many other impacts including public health, water usage, water quality and land consumption. Some comments expressed desire to maintain the status quo, and disagreement with the policy of analyzing vehicle miles traveled. However, none of the comments offered any evidence that vehicle miles traveled is not a measure of environmental impact. Moreover, none of the comments produced any credible evidence that level of service is a better measure of environmental impact, or would better promote the statutory goals set forth in CEQA. For these reasons, OPR continues to recommend vehicle miles traveled the primary measure of transportation impacts.

3. "… concerned that **regional average VMT** does not account for the diversity of communities within the various regions."

While OPR finds that vehicle miles traveled is the best measure of transportation impact in all locations, some variation in *thresholds* may be appropriate in different parts of regions and the state. (See State CEQA Guidelines § 15064(b)("…the significance of an activity may vary with the setting").) Therefore, OPR's revised threshold recommendations provide that outside of central urban locations, reference to a city's average, or within unincorporated county areas, the average of the cities in the county, may be appropriate.

4. "*Unlike activity based models used by some of the larger MPOs*, average VMT by land use type is **not readily available** from the typical 4-step travel demand model…."

OPR acknowledges the concern expressed in some comments regarding data availability. The adequacy of any analysis "is to be reviewed in the light of what is reasonably feasible." (State CEQA Guidelines § 15151.) Even outside of the large metropolitan planning organizations, statewide data on vehicle miles traveled are available. For example, the California Statewide Travel Demand Model provides data on vehicle miles traveled throughout the state which can be used both for setting thresholds and for estimating VMT resulting from a proposed project.

5. "… a threshold based on any average inherently **encourages only marginal improvement**…. [W]e recommend that the threshold of significance be based on the **SB 375 regional targets**."

OPR agrees. The numeric threshold recommendations in the draft Technical Advisory therefore recommends that, in many cases, a project will have a less than significant transportation impact if it

performs at least fifteen percent better than existing averages for the region or city. Fifteen percent is roughly consistent with the reduction targets set for the larger metropolitan planning organizations pursuant to SB 375. The greenhouse gas emissions reductions called for in AB 32 and Executive Orders B-30-15 (forty percent reduction by 2030) and S-3-05 (eighty percent reduction by 2050), which reflect scientific consensus on the magnitude of emissions reductions needed to avoid the worst effects of climate change, require that new development perform significantly better than average. Thus, OPR's revised threshold recommendation better reflects the greenhouse gas reduction goal set forth in SB 743, SB 375, AB 32 and other related climate goals.

6. The presumption [that projects near transit would have a less than significant impact] "would result in **missed opportunities** to include trip reduction measures where they are needed."

OPR disagrees that recommending a presumption of less than significant impacts for development projects located near transit would prevent local governments from requiring trip reduction in project design. First, local governments may condition project approvals pursuant to their police powers. (Pub. Resources Code § 21099(b)(4).) Thus, even if a project would have a less than significant impact under CEQA, cities and counties may condition project approvals based on local policy. Second, the recommended presumption may be rebutted. A lead agency may find that details about the project or its specific location indicate that the project may cause a significant transportation impact, despite being near transit, and thereby require trip reduction measures. Third, SB 743 specified that lead agencies may find use more stringent thresholds. (Pub. Resources Code § 21099(e).) OPR notes, however, that transit-oriented development itself is a key strategy for reducing VMT, and thereby reducing environmental impacts and developing healthy, walkable communities.

7. "…transit proximity is not an adequate indicator of VMT…. [W]e recommend adding one simple indicator…: **the project's parking ratio.**"

OPR agrees that excess parking may indicate higher vehicle miles traveled. OPR has, therefore, included parking among several factors that might lead an agency to determine that the presumption of less than significant impacts does not apply to a particular project.

8. "For some large roadway projects, **analysis of induced demand may be appropriate**." But there should be reasonable limits.

OPR agrees. Academic research shows us that adding new roadway capacity increases vehicle miles traveled. Not every transportation improvement will induce travel, however. The recommendations in the draft Technical Advisory clarify that certain transportation projects are not likely to induce significant new travel. Those projects include, among others, installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, or emergency breakdown lanes, new local or collector streets, conversion of general purpose lanes (including ramps) to managed lanes or transit lanes, etc.

9. "The factors affecting transportation safety are numerous and nuanced, and thus not well suited for enumeration within the CEQA Guidelines."

OPR agrees. While safety is a proper consideration under CEQA, the precise nature of that analysis is best left to individual lead agencies to account for project-specific and location-specific factors. OPR has removed the safety provisions from the proposed new section 15064.3. Instead, OPR describes potential considerations for lead agencies in the draft Technical Advisory.

10. "The inclusion of an explicit list [of mitigation measures and alternatives] creates the presumption that each of the measures listed should be analyzed for any project with a potentially significant impact."

OPR disagrees that a suggested list of mitigation measures and alternatives creates any presumption regarding the feasibility of any particular project. Nevertheless, moving the suggested mitigation measures and alternatives to the draft Technical Advisory will accomplish several goals. First, it continues to provide helpful information to lead agencies. Second, it reduces the size and increases the clarity of the regulatory text. Third, the list may be updated more frequently as the practice evolves. Because those goals can be accomplished in a technical advisory, OPR no longer proposes changes to Appendix F of the CEQA Guidelines at this time.

11. "A minimum of two years worth of time should be allowed between incorporation by local agencies in transit priority areas and implementation statewide."

OPR agrees that many lead agencies could benefit from additional time to implement the new rules. Indeed, OPR has seen significant strides in practitioners' understanding of vehicle miles traveled, and how best to study and mitigate it, in the time since OPR released the preliminary discussion draft. Recognizing that some agencies are ready to begin implementation immediately, the revised draft provides that analysis of vehicle miles traveled will be voluntary for two years following adoption of the new Guidelines. During that time, OPR will monitor implementation and may evaluate whether any updates to the Guidelines or Technical Advisory are needed.

D. Next Steps

OPR invites public review and comment on the revised draft Guidelines and draft Technical Advisory. Input may be submitted electronically to **CEQA.Guidelines@resources.ca.gov**. While electronic submission is preferred, suggestions may also be mailed or hand delivered to:

Christopher Calfee, Senior Counsel
Governor's Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

Please submit all suggestions before **February 29, 2016** at **5:00p.m**. Once the comment period closes, OPR will review all written input and may revise the proposal as appropriate. Next, OPR will submit the draft to the Natural Resources Agency, which will then commence a formal rulemaking process. Once the Natural Resources Agency adopts the changes, they will undergo review by the Office of Administrative Law.

E. Tips for Providing Effective Input

OPR would like to encourage robust engagement in this update process. We expect that participants will bring a variety of perspectives. While opposing views may be strongly held, discourse can and should proceed in a civil and professional manner. To maximize the value of your input, please consider the following:

- In your comment(s), please clearly identify the specific issues on which you are commenting. If you are commenting on a particular word, phrase, or sentence, please provide the page number and paragraph citation.
- Explain why you agree or disagree with OPR's proposed changes. Where you disagree with a particular portion of the proposal, please suggest alternative language.
- Describe any assumptions and support assertions with legal authority and factual information, including any technical information and/or data. Where possible, provide specific examples to illustrate your concerns.
- When possible, consider trade-offs and potentially opposing views.
- Focus comments on the issues that are covered within the scope of the proposed changes. Avoid addressing rules or policies other than those contained in this proposal.
- Consider quality over quantity. One well-supported comment may be more influential than one hundred form letters.
- Please submit any comments within the timeframe provided.

II. *Revised* Proposed Changes to the CEQA Guidelines

Section II of this document includes proposed additions to the CEQA Guidelines, which are found in Title 14 of the California Code of Regulations. Note, these additions, must undergo a formal administrative rulemaking process, and once adopted by the Natural Resources Agency, be reviewed by the Office of Administrative Law.

***Proposed* New Section 15064.3. Determining the Significance of Transportation Impacts**

(a) Purpose.

Section 15064 contains general rules governing the analysis, and the determination of significance of, environmental effects. Specific considerations involving transportation impacts are described in this section. Generally, vehicle miles traveled is the most appropriate measure of a project's potential transportation impacts. For the purposes of this section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel and the safety of all travelers. A project's effect on automobile delay does not constitute a significant environmental impact.

(b) Criteria for Analyzing Transportation Impacts.

Lead agencies may use thresholds of significance for vehicle miles traveled recommended by other public agencies or experts provided the threshold is supported by substantial evidence.

(1) Vehicle Miles Traveled and Land Use Projects. A development project that results in vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, development projects that locate within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor may be presumed to cause a less than significant transportation impact. Similarly, development projects that decrease vehicle miles traveled in the project area compared to existing conditions may be considered to have a less than significant transportation impact.

(2) Induced Vehicle Travel and Transportation Projects. Additional lane miles may induce automobile travel, and vehicle miles traveled, compared to existing conditions. Transportation projects that reduce, or have no impact on, vehicle miles traveled may be presumed to cause a less than significant transportation impact. To the extent that the potential for induced travel has already been adequately analyzed at a programmatic level, a lead agency may incorporate that analysis by reference.

(3) Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations (such as homes, employment and services), area demographics, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

(4) Methodology. The lead agency's evaluation of the vehicle miles traveled associated with a project is subject to a rule of reason. A lead agency should not confine its evaluation to its own political boundary.

A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project.

(c) Applicability.

The provisions of this section shall apply prospectively as described in section 15007. A lead agency may elect to be governed by the provisions of this section immediately provided that it updates its own procedures pursuant to section 15022 to conform to the provisions of this section. After [two years from expected adoption date], the provisions of this section shall apply statewide.

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Sections 21099 and 21100, Public Resources Code; *California Clean Energy Committee v. City of Woodland* (2014) 225 Cal. App. 4th 173.

Proposed Changes to Existing Appendix G

XVI. TRANSPORTATION~~/TRAFFIC~~ -- Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
	☐	☐	☐	☐
a) Conflict with a~~n applicable~~ plan, ordinance or policy ~~establishing measures of effectiveness for the~~ **addressing the safety or** performance of the circulation system**, including transit, roadways, bicycle lanes and pedestrian paths (except for automobile level of service)?** ~~, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit~~?				
	☐	☐	☐	☐
b) ~~Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county~~				

~~**congestion management agency for designated roads or highways?**~~ **Cause substantial additional vehicle miles traveled (per capita, per service population, or other appropriate efficiency measure)?**	☐	☐	☐	☐
c) ~~**Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks**~~?	☐	☐	☐	☐
Substantially **induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes) or by adding new roadways to the network?** ~~**increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)**~~?	☐	☐	☐	☐
d) Result in inadequate emergency access?	☐	☐	☐	☐
	☐	☐	☐	☐
~~**f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?**~~	☐	☐	☐	☐

III. Technical Advisory on Evaluating Transportation Impacts in CEQA

Section III of this document includes a draft Technical Advisory which contains OPR's technical recommendations and best practices regarding the evaluation of transportation impacts under CEQA. Unlike the provisions in Section II of this document, the Technical Advisory is not regulatory in nature. The purpose of this document is simply to provide advice and recommendations, which lead agencies may use in their discretion. Notably, OPR may update this document as frequently as needed reflect advances in practice and methodologies.

Technical Advisory on Evaluating Transportation Impacts in CEQA

Implementing Senate Bill 743 (Steinberg, 2013)

January 2016

Contents

A. Introduction

This technical advisory is one in a series of advisories provided by the Governor's Office of Planning and Research (OPR) as a service to professional planners, land use officials and CEQA practitioners. OPR issues technical guidance from time to time on issues that broadly affect the practice of land use planning and the California Environmental Quality Act (CEQA). Senate Bill 743 (Steinberg, 2013) required changes to the Guidelines Implementing the California Environmental Quality Act (CEQA Guidelines) regarding the analysis of transportation impacts. Those proposed changes identify vehicle miles traveled as the most appropriate metric to evaluate a project's transportation impacts. Those proposed changes also provide that the analysis of certain transportation projects must address the potential for induced travel. Once the Natural Resources Agency adopts these changes to the CEQA Guidelines, automobile delay, as measured by "level of service" and other similar metrics, will no longer constitute a significant environmental effect under CEQA.

This advisory contains technical recommendations regarding thresholds of significance, safety, and mitigation measures. OPR will continue to monitor implementation of these new provisions and may update or supplement this advisory from time to time in response to new information and advancements in modeling and methods.

B. Technical Considerations in Assessing Vehicle Miles Traveled

Many practitioners are familiar with accounting for vehicle miles traveled (VMT) in connection with long range planning, or as part of the analysis of a project's greenhouse gas emissions or energy impacts. While auto-mobility (often expressed as "level of service") may continue to be a measure for planning purposes, Senate Bill 743 directs a different measure for evaluation of environmental impacts under CEQA. This document provides technical background information on how to assess VMT as part of a transportation impacts analysis under CEQA.[1]

1. Considerations about what VMT to count

Consistent with the obligation to make a good faith effort to disclose the environmental consequences of a project, lead agencies have discretion to choose the most appropriate methodology to evaluate project impacts.[2] A lead agency can evaluate a project's effect on VMT in numerous ways. The purpose of this document is to provide technical considerations in determining which methodology may be most useful for various project types.

---

[1] Additionally, Caltrans is in the process of completing a comprehensive multimodal Transportation Analysis Guide and Transportation Impact Study Guide (TAG-TISG), in collaboration with OPR and a variety of external partners, industry stakeholders, and analysis experts.

[2] The California Supreme Court has explained that when an agency has prepared an environmental impact report:

> [T]he issue is not whether the [lead agency's] studies are irrefutable or whether they could have been better. The relevant issue is only whether the studies are sufficiently credible to be considered as part of the total evidence that supports the [lead agency's] finding[.]

(*Laurel Heights Improvement Ass'n v. Regents of the University of California* (1988) 47 Cal.3d 376, 409; see also *Eureka Citizens for Responsible Gov't v. City of Eureka* (2007) 147 Cal.App.4th 357, 372.)

Background on Estimating Vehicle Miles Traveled

Before discussing specific methodological recommendations, this section provides a brief overview of modeling and counting VMT including some key terminology, starting with an example to illustrate some methods of estimating vehicle miles traveled.

Example

Consider the following hypothetical travel day (all by automobile):

1. Residence to Coffee Shop
2. Coffee Shop to Work
3. Work to Sandwich Shop
4. Sandwich Shop to Work
5. Work to Residence
6. Residence to Store
7. Store to Residence

Trip-based assessment of a project's effect on travel behavior counts VMT from individual trips to and from the project. It is the most basic, and traditionally most common, method of counting VMT. A trip-based VMT assessment of the residence in the above example would consider segments 1, 5, 6 and 7. For residential projects, the sum of home-based trips is called *home-based* VMT.

A *tour-based* assessment counts the entire home-back-to-home tour that includes the project. A tour-based VMT assessment of the residence in the above example would consider segments 1, 2, 3, 4, and 5 in one tour, and 6 and 7 in a second tour. A tour-based assessment of the workplace would include segments 1, 2, 3, 4, and 5. Together, all tours comprise *household* VMT.

Both trip- and tour-based assessments can be used as measures of transportation efficiency, using denominators such as per capita, per employee, or per person-trip.

Trip- and Tour-based Assessment of VMT

As illustrated above, a tour-based assessment of VMT is a more complete characterization of a project's effect on VMT. In many cases, a project affects travel behavior beyond the first destination. The location and characteristics of the home and workplace will often be the main drivers of VMT. For example, a residential or office development located near high quality transit will likely lead to some commute trips utilizing transit, affecting mode choice on the rest of the tour.

Characteristics of an office project can also affect an employee's VMT even beyond the work tour. For example, a workplace located at the urban periphery, far from transit, can cause an employee to need to own a car, which in turn affects the entirety of an employee's travel behavior and VMT. For this reason, when estimating the effect of an office development on VMT, it may be appropriate to consider

total employee VMT if data and tools, such as tour-based models, are available. This is consistent with CEQA's requirement to evaluate both direct and *indirect* effects of a project. (See CEQA Guidelines § 15064(d)(2).)

Assessing Change in Total VMT

A third method, estimating the *change in total VMT* with and without the project, can evaluate whether a project is likely to divert existing trips, and what the effect of those diversions will be on total VMT. This method answers the question, "What is the net effect of the project on area VMT?" As an illustration, assessing the total change in VMT for a grocery store built in a food desert that diverts trips from more distant stores could reveal a net VMT reduction. The analysis should address the full area over which the project affects travel behavior, even if the effect on travel behavior crosses political boundaries.

Using Models to Estimate VMT

Travel demand models, sketch models, spreadsheet models, research, and data can all be used to calculate and estimate VMT (see Appendix F of the preliminary discussion draft.) To the extent possible, lead agencies should choose models that have sensitivity to features of the project that affect VMT. Those tools and resources can also assist in establishing thresholds of significance and estimating VMT reduction attributable to mitigation measures and project alternatives. When using models and tools for those various purposes, agencies should use comparable data and methods, in order to set up an "apples-to-apples" comparison between thresholds, VMT estimates, and mitigation VMT estimates.

Models can work together. For example, agencies can use travel demand models or survey data to estimate existing trip lengths and input those into sketch models such as CalEEMod to achieve more accurate results. Whenever possible, agencies should input localized trip lengths into a sketch model to tailor the analysis to the project location. However, in doing so, agencies should be careful to avoid double counting if the sketch model includes other inputs or toggles that are proxies for trip length (e.g. distance to city center). Generally, if an agency changes any sketch model defaults, it should record and report those changes for transparency of analysis. Again, trip length data should come from the same source as data used to calculate thresholds, to be sure of an "apples-to-apples" comparison.

Additional background information regarding travel demand models is available in the California Transportation Commission's "2010 Regional Transportation Plan Guidelines," beginning at page 35.

2. Recommendations Regarding Methodology

Proposed Section 15064.3 explains that a "lead agency may use models to estimate a project's vehicle miles traveled…." CEQA generally defers to lead agencies on the choice of methodology to analyze impacts. This section provides suggestions to lead agencies regarding methodologies to analyze vehicle miles traveled associated with a project.

Residential and Office Projects. A tour-based analysis is usually the best way to analyze VMT associated with residential and office projects. Where tour-based models are employed for office project analyses, because workplace location influences overall travel, either employee work tour VMT or VMT from all employee tours may be attributed to the employment center (and the same should be used to set the significance threshold). For this reason, screening maps (discussed in more detail below) using tour-based regional travel demand models can be used where they are available. Where tour-based tools or data are not available for all components of an analysis, an assessment of trip VMT can serve as a reasonable proxy. For example, where research-based evidence on the efficacy of mitigation measures is available for trip-based, then estimating the threshold, analyzing unmitigated project VMT, and mitigation would all need to be undertaken using a trip-based methods, for an apples-to-apples comparison. In this case, home based trips can be the focus for analysis of residential projects; home-based work trips can be the focus of the analysis for office projects.

For office projects that feature a customer component, such as a government office that serves the public, a lead agency can analyze the customer VMT component of the project using the methodology for retail development (see below).

Models and methodologies used to calculate thresholds, estimate project VMT, and estimate VMT reduction due to mitigation should be comparable. For example:

- A tour-based estimate of project VMT should be compared to a tour-based threshold, or a trip-based estimate to a trip-based VMT threshold.
- Where a travel demand model is used to estimate thresholds, the same model should also be used to estimate trip lengths as part of estimating project VMT
- Where only trip-based estimates of VMT reduction from mitigation are available, a trip-based threshold should be used

Retail Projects. Lead agencies should usually analyze the effects of a retail project by assessing the change in total VMT, because a retail projects typically re-route travel from other retail destinations. A retail project might lead to increases or decreases in VMT, depending on previously existing retail travel patterns.

Considerations for All Projects. Lead agencies should not truncate any VMT analysis because of political or other boundaries. CEQA requires environmental analyses to reflect a "good faith effort at full disclosure." (CEQA Guidelines § 15151.) Thus, where methodologies exist that can estimate the full extent of vehicle travel from a project, the lead agency should apply them to do so. Analyses should also consider both short- and long-term effects on VMT.

C. General Principles to Guide Consideration of VMT Thresholds

The CEQA Guidelines set forth the general rule for determining significance:

> The determination of whether a project may have a significant effect on the environment calls for **careful judgment** on the part of the public agency involved, **based to the extent possible on scientific and factual data**. An ironclad definition of significant effect is not always possible because **the significance of an activity may vary with the setting**. For example, an activity which may not be significant in an urban area may be significant in a rural area.

(CEQA Guidelines § 15064(b) (emphasis added).) SB 743 directs OPR to establish specific "criteria for determining the significance of transportation impacts of projects[.]" (Pub. Resources Code § 21099(b)(1).)

As noted above, CEQA Guidelines Section 15064(b) confirms that context matters in a CEQA analysis. Further, lead agencies have discretion in the precise methodology to analyze an impact. (*See Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal. 3d 376, 409 ("the issue is not whether the studies are irrefutable or whether they could have been better" … rather, the "relevant issue is only whether the studies are sufficiently credible to be considered" as part of the lead agency's overall evaluation).) Therefore, lead agencies may perform multimodal impact analysis that incorporates those technical approaches and mitigation strategies that are best suited to the unique land use/transportation circumstances and specific facility types they are evaluating. For example, pedestrian safety need not be addressed on the mainline portion of a limited access freeway that prohibits pedestrian travel. Likewise, where multimodal transportation is to be expected, analysis might address safety from a variety of perspectives.

To assist in the determination of significance, many lead agencies rely on "thresholds of significance." The CEQA Guidelines define a "threshold of significance" to mean "an identifiable **quantitative, qualitative or performance level** of a particular environmental effect, non-compliance with which means the effect will ***normally*** be determined to be significant by the agency and compliance with which means the effect ***normally*** will be determined to be less than significant." (CEQA Guidelines § 15064.7(a) (emphasis added).) Agencies may adopt their own, or rely on thresholds recommended by other agencies, "provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence." (*Id*. at subd. (c).) Substantial evidence means "**enough relevant information** and reasonable inferences from this information that a fair argument can be made **to support a conclusion**, *even though other conclusions might also be reached*." (*Id*. at § 15384 (emphasis added).)

Thresholds of significance are not a safe harbor under CEQA; rather, they are a starting point for analysis:

> [T]hresholds cannot be used to determine automatically whether a given effect will or will not be significant. Instead, thresholds of significance can be used only as a measure of whether a certain environmental effect "will normally be determined to be significant" or "normally will be determined to be less than significant" by the agency. … In each instance, notwithstanding compliance with a pertinent threshold of significance,

> the agency must still consider any fair argument that a certain environmental effect may be significant.

(*Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal. App. 4th 1099, 1108-1109.)

Finally, just as the determination of significance is ultimately a "judgment call," the analysis leading to that determination need not be perfect. The CEQA Guidelines describe the standard for adequacy of environmental analyses:

> An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to **make a decision which intelligently takes account of environmental consequences**. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is **reasonably feasible**. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The **courts have looked not for perfection** but for **adequacy**, **completeness**, and a **good faith effort** at full disclosure.

(CEQA Guidelines § 15151 (emphasis added).)

These general principles guide OPR's recommendations regarding thresholds of significance for vehicle miles traveled set forth below.

D. Recommendations Regarding Significance Thresholds

Section 21099 of the Public Resources Code states that the criteria for determining the significance of transportation impacts must promote: (1) reduction of greenhouse gas emissions; (2) development of multimodal transportation networks; and (3) a diversity of land uses.

Various state policies establish quantitative greenhouse gas emissions reduction targets. For example:

- Assembly Bill 32 requires statewide greenhouse gas reductions to 1990 levels by 2020, and continued reductions beyond 2020.

- Pursuant to Senate Bill 375, the California Air Resources Board establishes greenhouse gas reduction targets for metropolitan planning organizations to achieve based on land use patterns and transportation systems specified in Regional Transportation Plans and Sustainable Community Strategies. Targets for the largest metropolitan planning organizations range from 13% to 16% reduction by 2035.

- Executive Order B-30-15 sets a GHG emissions reduction target of 40 percent below 1990 levels by 2030.

- Executive Order S-3-05 sets a GHG emissions reduction target of 80 percent below 1990 levels by 2050.

- Executive Order B-16-12 specifies a GHG emissions reduction target of 80 percent below 1990 levels by 2050 specifically for transportation.

- Senate Bill 391 requires the California Transportation Plan support 80 percent reduction in GHGs below 1990 levels by 2050.

Considering these various targets, the California Supreme Court observed:

> Meeting our statewide reduction goals does not preclude all new development. Rather, the Scoping Plan … assumes continued growth and depends on increased efficiency and conservation in land use and transportation from all Californians.

(*Center for Biological Diversity v. California Dept. of Fish & Wildlife* (2015) 2015 Cal. LEXIS 9478.) Indeed, the Court noted that when a lead agency uses consistency with climate goals as a way to determine significance, particularly for long-term projects, the lead agency must consider the project's effect on meeting long-term reduction goals. (*Ibid*.)

The targets described above indicate that we need substantial reductions in existing VMT to curb greenhouse gases, and other pollutants. Those targets do not translate directly into VMT thresholds for individual projects for numerous reasons, however, including the following:

- Some, though not all, of the emissions reductions needed to achieve those targets will be accomplished by other measures, including increased vehicle efficiency and decreased fuel carbon content. The California Air Resources Board's updated Scoping Plan explains: "Achieving California's long-term criteria pollutant and GHG emissions goals will require four strategies to be employed: (1) improve vehicle efficiency and develop zero emission technologies, (2) reduce the carbon content of fuels and provide market support to get these lower-carbon fuels into the marketplace, (3) *plan and build communities to reduce vehicular GHG emissions and provide more transportation options*, and (4) *improve the efficiency and throughput of existing transportation systems*." (California Air Resources Board, Scoping Plan, at p. 46 (emphasis added).) In other words, vehicle efficiency and better fuels are necessary, but insufficient, to address the greenhouse gas emissions from the transportation system. Land use patterns and transportation options must also change.

- New projects alone will not sufficiently reduce VMT to achieve those targets, nor are they expected to be the sole source of VMT reduction.

- Interactions between land use projects, and also between land use and transportation projects, existing and future, together affect VMT.

- Some projects will exhibit significant and unavoidable (above threshold) VMT impacts, while others will exhibit below-threshold VMT.

- Because regional location is the most important determinant of VMT, in some cases, streamlining CEQA review of projects in travel efficient locations may be the most effective means of reducing VMT.

- When assessing climate impacts of land use projects, use of an efficiency metric (e.g., per capita, per employee) may provide a better measure of impact than an absolute numeric threshold. (*Center for Biological Diversity*, *supra*.)

"Each public agency is encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects." (CEQA Guidelines § 15064.7(a).) Further, "a lead agency may consider thresholds of significance … recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence." (Id. at subd. (c).) Public Resources Code section 21099 directs OPR to provide guidance on determining the significance of transportation impacts.

To that end, OPR finds, absent any more project-specific information to the contrary, that per capita or per employee VMT fifteen percent below that of existing development may be a reasonable threshold, for the reasons described below. (Note: Lead agencies may apply more stringent thresholds at their discretion (Section 21099).)

First, as described above, Section 21099 states that the criteria for determining significance must "promote the reduction in greenhouse gas emissions." SB 743 also states the Legislature's intent that the analysis of transportation in CEQA better promotes the state's goals of reducing greenhouse gas emissions. It cites in particular the reduction goals in the Global Warming Solutions Act and the Sustainable Communities and Climate Protection Act, both of which call for substantial reductions. As indicated above, the California Air Resources Board established long-term reduction targets for the largest regions in the state that ranged from 13 to 16 percent.

Second, Caltrans has developed a statewide VMT reduction target in its Strategic Management Plan. Specifically, it calls for a 15 percent reduction in per capita VMT, compared to 2010 levels, by 2020.

Third, fifteen percent reductions in VMT are typically achievable at the project level in a variety of place types. (Quantifying Greenhouse Gas Measures, p. 55 CAPCOA, 2010).

Fourth, the *First Update to the AB 32 Scoping Plan* states, "Recognizing the important role local governments play in the successful implementation of AB 32, the initial Scoping Plan called for local governments to set municipal and communitywide GHG reduction targets of 15 percent below then-current levels by 2020, to coincide with the statewide limit" (p. 113).

Achieving 15 percent lower per capita or per employee VMT than existing development is, therefore, both reasonably ambitious and generally achievable. The following pages describe a series of screening thresholds below which a detailed analysis may be not be required. Next, this advisory describes numeric thresholds recommended for various project types. Finally, this advisory describes analysis for certain unique circumstances.

1. Screening Thresholds

Screening Threshold for Small Projects

Many local agencies, including congestion management agencies, have developed screening thresholds (e.g., 100 vehicle trips per day) to indicate when detailed analysis is needed to determine consistency with the congestion management program. Projects that generate few trips will also generally tend to

generate low vehicle miles traveled. Absent substantial evidence indicating that a project would generate a potentially significant level of vehicle miles traveled, projects that generate fewer trips than the threshold for studying consistency with a congestion management program, or 100 vehicle trips per day, generally may be assumed to cause a less than significant transportation impact.

Map-Based Screening for Residential and Office Projects

Residential and office projects that locate in areas with low-VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Therefore, lead agencies can use maps illustrating areas that exhibit below threshold VMT (see recommendations below) to screen out residential and office projects which may not require a detailed VMT analysis. A travel demand model or survey data can provide the existing household or work tour (or home-based or home-based-work) VMT that would be illustrated on such a map. (*See illustration of home-based VMT in the Butte region*.) Note that screening maps illustrating per household VMT (for residential projects) and per employee VMT (for office projects) will typically show below-threshold VMT for these land uses exists over different geographies. For projects that include both residential and office components, lead agencies may use each map as a screen for the respective portion of the project.

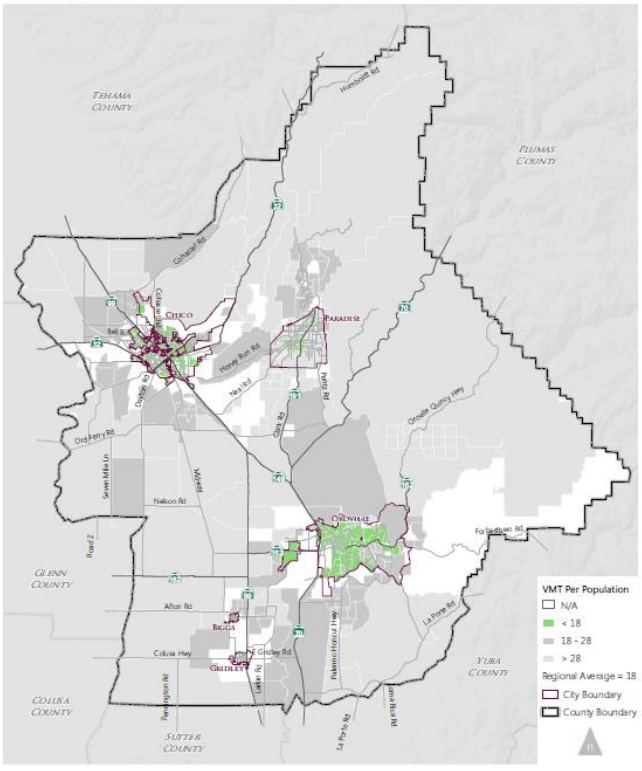


Figure x-x.

Home-Based (HBW & HBO) VMT Produced per Population

Presumption of Less Than Significant Impact Near Transit Stations

Lead agencies generally should presume that residential, retail, and office projects, as well as mixed use projects which are a mix of these uses, proposed within ½ mile of an existing major transit stop[3] or an existing stop along a high quality transit corridor[4] will have a less than significant impact on VMT. This presumption would not apply, however, if project-specific or location-specific information indicates that the project will still generate significant levels of VMT. For example, the presumption might not be appropriate if the project:

- Has a Floor Area Ratio (FAR) of less than 0.75
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (only for jurisdictions specifying a parking minimum)
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization)

If these exceptions to the presumption might apply, the lead agency should conduct a detailed VMT analysis to determine whether the project would exceed VMT thresholds (see below).

2. Recommended Numeric Thresholds for Residential, Office and Retail Projects

Recommended threshold for residential projects: A project exceeding *both*

- Existing *city* household VMT per capita minus 15 percent *and*
- Existing *regional* household VMT per capita minus 15 percent

may indicate a significant transportation impact

Residential development that would generate vehicle travel less than *both* a level of 15 percent below city-wide VMT per capita[5] *and* a level of 15 percent below regional[6] VMT per capita may indicate a less

[3] Pub. Resources Code § 21064.3 ("'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods").

[4] Pub. Resources Code § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours").

[5] Note, use of an efficiency metric (e.g., per capita) is particularly appropriate when assessing VMT of certain land use projects such as residential and office buildings. (*Center for Biological Diversity*, *supra* ("a significance criterion

than significant transportation impact. (In other words, a project that generates greater than 85 percent of regional per capita VMT, but less than 85 percent of city-wide per capita VMT, would still be considered to have a less than significant transportation impact.) Residential development in unincorporated county areas generating VMT that exceeds 15 percent below VMT per capita in the aggregate of all incorporated jurisdictions in that county, *and* exceeds 15 percent below regional VMT per capita, may indicate a significant transportation impact. These thresholds can be applied to both household (tour-based) VMT and home-based (i.e. trip-based) VMT assessments.

Recommended threshold for office projects: A project exceeding a level of 15 percent below existing *regional VMT per employee* may indicate a significant transportation impact.

Office projects that would generate vehicle travel exceeding 15 percent below existing VMT per employee for the region may indicate a significant transportation impact. In cases where the region is substantially larger than the geography over which most workers would be expected to live, it might be appropriate to refer to a smaller geography, such as the county. Tour-based analysis of office project VMT, for example development of a tour-based screening map, typically should consider either total employee VMT or employee work tour VMT. Where tour-based information is unavailable for threshold determination, project assessment, or assessment of mitigation, home-based work trip VMT may be used throughout the analysis to maintain and "apples-to-apples" comparison.

Recommended threshold for retail projects: A net increase in total VMT may indicate a significant transportation impact

Because new retail development typically redistributes shopping trips rather than creating new trips,[7] estimating the total change in VMT (i.e. the difference in total VMT in the area affected with and without the project) is the best way to analyze a retail project's transportation impacts.

By adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. Lead agencies generally, therefore, may presume such development creates a less than significant transportation impact. Regional-serving retail development, on the other hand, which can lead to substitution of longer trips for shorter ones, might tend to have a significant impact. Where such development decreases VMT, lead agencies may consider it to have a less than significant impact.

framed in terms of efficiency is superior to a simple numerical threshold because CEQA is not intended as a population control measure").)

[6] As used in these recommendations, the term "regional" refers to the metropolitan planning organization or regional transportation planning agency boundaries within which the project would be located.

[7] Lovejoy et al. 2012.

Many cities and counties define local-serving and regional-serving retail in their zoning codes. Lead agencies may refer to those local definitions when available, but should also consider any project-specific information, such as market studies or economic impacts analyses that might bear on customers' travel behavior. Because lead agencies will best understand their own communities and the likely travel behaviors of future project users, they are likely in the best position to decide when a project will likely be local serving. Generally, however, development including stores larger than 50,000 square feet might be considered regional-serving, and so lead agencies should undertake an analysis to determine whether the project might increase or decrease VMT.

Mixed Use Projects

Lead agencies can evaluate each component of a mixed-use project independently, and apply the significance threshold for each project type included (e.g. residential and retail). In the analysis of each use, a project may take credit for internal capture.

Other Project Types

Residential, office and retail projects tend to have the greatest influence on VMT, and so OPR recommends the quantified thresholds described above for analysis and mitigation. Lead agencies, using more location-specific information, may develop their own more specific thresholds, which may include other land use types. In developing thresholds for other project types, or thresholds different from those recommended here, lead agencies should consider the purposes described in section 21099 of the Public Resources Code, in addition to more general rules in the CEQA Guidelines on the development of thresholds of significance.

Strategies that decrease local VMT but increase total VMT, for example strategies that forego development in one location and lead to it being built in a less travel efficient location, should be avoided.

RTP-SCS Consistency (All Land Use Projects)

Proposals for development outside of areas contemplated for development in a Sustainable Communities Strategy (SCS) may be less travel efficient than most development with the SCS. Further, Section 15125(d) of the CEQA Guidelines provides that lead agencies should analyze impacts resulting from inconsistencies with regional plans. For this reason, development in a location where the Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) does not specify any development may indicate a significant impact on transportation.

3. Recommendations Regarding Land Use Plans

As with projects, agencies should analyze VMT outcomes of land use plans over the full area that the plan may substantively affect travel patterns, including beyond the boundary of the plan or jurisdiction geography. Analysis of specific plans may employ the same thresholds described above for projects. The following guidance for significance thresholds applies to General Plans, Area Plans, and Community Plans.

A land use plan may have a significant impact on transportation if it is not consistent with the relevant RTP/SCS. For this purpose, consistency with the SCS means all of the following must be true:

- Development specified in the plan is also specified in the SCS (i.e. the plan does not specify developing in outlying areas specified as open space in the SCS)
- Taken as a whole, development specified in the plan leads to VMT that is equal to or less than the VMT per capita and VMT per employee specified in the SCS

Thresholds for plans in non-MPO areas should be determined on a case-by-case basis.

4. Recommendations Regarding Regional Transportation Plans and Sustainable Communities Strategies

VMT outcomes of RTP/SCSs should be examined over the full area they substantively affect travel patterns, including outside the boundary of the plan geography.

An RTP/SCS achieving per capita VMT reductions sufficient to achieve SB 375 target GHG emissions reduction may constitute a less than significant transportation impact. In non-MPO counties, which do not receive GHG targets under SB 375, an RTP which achieves a reduction in per capita VMT may constitute a less than significant transportation impact.

5. Other Considerations

More Stringent Thresholds at Lead Agency Discretion

Public Resources Code section 21099 provides that a lead agency may adopt thresholds that are more protective of the environment than those that OPR recommends. Note that in some cases, streamlining projects in VMT-efficient locations may lead to larger VMT reductions than requiring VMT mitigation, by facilitating and thus increasing the share of location-efficient development.

Rural Projects Outside MPOs

In rural areas of non-MPO counties (i.e. areas not near established or incorporated cities or towns), fewer options may be available for reducing VMT, and significance thresholds may be best determined on a case-by-case basis. Note, however, that clustered small towns and small town main streets may have substantial VMT benefits compared to isolated rural development, similar on a percent per capita

reduction basis as transit oriented development described above. Therefore, evaluating per capita VMT is still recommended.

Impacts to Transit

Because criteria for determining the significance of transportation impacts must promote "the development of multimodal transportation networks," lead agencies should consider project impacts to transit systems and bicycle and pedestrian networks. For example, a project that blocks access to a transit stop or blocks a transit route itself may interfere with transit functions. Lead agencies should consult with transit agencies as early as possible in the development process, particularly for projects that locate within one half mile of transit stops.

When evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition of new users as an adverse impact. Any travel-efficient infill development is likely to add riders to transit systems, potentially slowing transit vehicle mobility, but also potentially improving overall destination proximity. Meanwhile, such development improves regional vehicle flow generally by loading less vehicle travel onto the regional network than if that development was to occur elsewhere.

Increased demand throughout a region may, however, cause a cumulative impact by requiring new or additional transit infrastructure. Such impacts may be best addressed through a fee program that fairly allocates the cost of improvements not just to projects that happen to locate near transit, but rather across a region to all projects that impose burdens on the entire transportation system.

E. Recommendations for Considering Transportation Project VMT Effects

A transportation project changes travel patterns and affects VMT. For example, a project that facilitates active transportation can cause mode shift away from automobile use, resulting in a reduction in VMT. Meanwhile, a roadway project can facilitate automobile travel, leading to more VMT. While CEQA does not require perfection in impact measurement, it is important to make a reasonably accurate estimate of effects on VMT from transportation projects in order to make reasonably accurate estimates of GHGs and other impacts associated with VMT.

Projects that would likely lead to an increase in VMT, and therefore should undergo analysis (including for purposes of accurately estimating GHG and other impacts that are affected by VMT), generally include:

- Addition of through lanes on existing or new highways, including general purpose lanes, HOV lanes, peak period lanes, auxiliary lanes, and lanes through grade-separated interchanges

Projects that would not likely lead to a substantial or measureable increase in VMT, and therefore should not require analysis, generally include:

- Rehabilitation, maintenance, replacement and repair projects designed to improve the condition of existing transportation assets (e.g., highways, roadways, bridges, culverts, tunnels, transit systems, and assets that serve bicycle and pedestrian facilities) and that do not add additional motor vehicle lanes
- Roadway shoulder enhancements to provide "breakdown space," otherwise improve safety or provide bicycle access
- Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety
- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, or emergency breakdown lanes that are not utilized as through lanes
- Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit
- Conversion of existing general purpose lanes (including ramps) to managed lanes or transit lanes, or changing lane management in a manner that would not substantially decrease impedance to use
- Reduction in number of through lanes, e.g. a "road diet"
- Grade separation to separate vehicles from rail, transit, pedestrians or bicycles, or to replace a lane in order to separate preferential vehicles (e.g. HOV, HOT, or trucks) from general vehicles
- Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority (TSP) features
- Traffic metering systems
- Timing of signals to optimize vehicle, bicycle or pedestrian flow
- Installation of roundabouts
- Installation or reconfiguration of traffic calming devices
- Adoption of or increase in tolls
- Addition of tolled lanes, where tolls are sufficient to mitigate VMT increase (e.g., encourage carpooling, fund transit enhancements like bus rapid transit or passenger rail in the tolled corridor)
- Initiation of new transit service
- Conversion of streets from one-way to two-way operation with no net increase in number of traffic lanes
- Removal of off-street parking spaces
- Adoption or modification of on-street parking or loading restrictions (including meters, time limits, accessible spaces, and preferential/reserved parking permit programs).
- Addition of traffic wayfinding signage
- Rehabilitation and maintenance projects that do not add motor vehicle capacity
- Any lane addition under 0.3 miles in length, including addition of any auxiliary lane less than 0.3 miles in length

Causes of Induced VMT. Induced VMT occurs where roadway capacity is expanded in a congested area, leading to an initial appreciable reduction in travel time. With lower travel times, the modified facility becomes more attractive to travelers, resulting in the following trip-making changes, which have implications for total VMT:

- **Longer trips.** The ability to travel a long distance in a shorter time increases the attractiveness of destinations that are further away, increasing trip length and VMT.
- **Changes in mode choice.** When transportation investments are devoted to reducing automobile travel time, travelers tend to shift toward automobile use from other modes, which increases VMT.
- **Route changes.** Faster travel times on a route attract more drivers to that route from other routes, which can increase or decrease VMT depending on whether it shortens or lengthens trips.
- **Newly generated trips.** Increasing travel speeds can induce additional trips, which increases VMT. For example, an individual who previously telecommuted or purchased goods on the internet might choose to accomplish those ends via automobile trips as a result of increased speeds.
- **Land Use Changes.** Faster travel times along a corridor lead to land development further along that corridor; that development generates and attracts longer trips, which increases VMT. Over several years, this component of induced VMT can be substantial, e.g. approximately half of the total effect on VMT.

These effects operate over different time scales. For example, changes in mode choice might occur immediately, while land use changes typically take a few years or longer. CEQA requires analysis to address both short term and long term effects.

Applying tolls to additional capacity will generally reduce the amount of additional VMT that results from adding that capacity. This is because tolls, like congestion, act as an "impedance factor" for traffic volumes in the lane. Because of the impedance effect, tolling can also be used to maintain free flow in a lane and keep it from becoming congested, resulting in the counterintuitive effect of impedance increasing flow. Studies have shown that *net* benefit from tolling improving vehicle flow can be greater than the sum of the tolls collected, leaving the tolls funds themselves as additional benefit that might be invested in transportation options.

Evidence of Induced VMT. A large number of peer reviewed studies have demonstrated a causal link between highway capacity increases and VMT increases. Of these, approximately twenty provide a quantitative estimate of the magnitude of the induced VMT phenomenon; of those, nearly all find substantial induced VMT.

Most of these studies express the amount of induced VMT as an "elasticity," which is a multiplier that describes the additional VMT resulting from an additional lane mile of roadway capacity added. For example, an elasticity of 0.8 would signify a 0.8 percent increase in VMT for every 1.0 percent increase

in lane miles. Many distinguish "short run elasticity" (increase in vehicle travel in the first few years) from "long run elasticity" (increase in vehicle travel beyond the first few years). Long run elasticity is typically larger than short run elasticity, because as time passes, more of the components of induced VMT materialize. Generally, short run elasticity can be thought of as excluding the effects of land use change, while long run elasticity includes them. Most studies find a long run elasticity between 0.6 and just over 1.0 (California Air Resources Board *DRAFT Policy Brief on Highway Capacity and Induced Travel*, p. 2.), meaning that for every increase in capacity of one lane-mile there is a concomitant increase in VMT of 0.6 to 1.0 lane miles. The most recent major study (Duranton and Turner, 2011) reveals an elasticity of VMT by lanes miles of 1.03; in other words, each lane mile built resulted in 1.03 additional miles of vehicle travel. (An elasticity greater than 1.0 can occur because new lanes leverage travel behavior beyond just the project location.) In CEQA analysis, the long-run elasticity should be used, as it captures the full effect of the project rather than just the early-stage effect.

Quantifying Induced VMT Using Models. Lead agencies can use the methodology provided below for most projects that increase roadway capacity. However, where a roadway capacity project may exhibit an unusual characteristic or be set in an unusual context, a travel demand model and other tools may be used to estimate VMT resulting from the project. If such analysis indicates a change in VMT per change in lane miles that is outside the range found in literature, reasons for the discrepancy should be discussed in the CEQA document.

Proper use of a travel demand model will yield a reasonable estimate of short run induced VMT, generally including the following components:

- Trip length (generally increases VMT)
- Mode shift (generally shifts from other modes towards automobile use, increasing VMT)
- Route changes (can act to increase or decrease VMT)
- Newly generated trips (generally increases VMT) (Note that not all travel demand models have sensitivity to this factor, so an off-model estimate may be necessary if this effect could be expected to be substantial.)

However, estimating long run induced VMT also requires an estimate of effects of the project on land use. This component of the analysis is important because it has the potential to be a large component of the effect. Options for estimating and incorporating the VMT effects that precipitate from land use changes resulting from the project include:

1. *Employ a land use model, running it iteratively with a travel demand model.* A land use model (such as a PECAS model) can be used to estimate the effects of a roadway capacity increase, and the traffic patterns that result from the land use change can be fed back into the travel demand model.
2. *Employ an expert panel.* In place of a model, an expert panel can estimate land use development resulting from the project. Once developed, the estimates of land use changes can then be analyzed by the travel demand model to assess VMT effects. (See, e.g., *Conservation Law Found. v. FHA* (2007) 630 F. Supp. 2d 183.)

3. *Acknowledge omission of land use in VMT analysis, and adjust results to align with the empirical research.* The travel demand model analysis can be performed without an estimate of land use changes, and then the results can be compared to empirical studies of induced VMT found in the types of studies described above. If the modeled elasticity falls outside of that range, then the VMT estimate can be adjusted to fall within the range, or an explanation can be provided describing why the project would be expected to induce a different amount of VMT than a typical project. (For an example of an EIR that includes a number of these elements, see *Interstate 5 Bus/Carpool Lanes Project Final EIR, pp. 2-52 to 2-56.*)

In all cases, any limitation or known lack of sensitivity in the analysis that might cause substantial errors in the VMT estimate, e.g. model insensitivity to one of the components of induced VMT described above, should be disclosed and characterized, and a description should be provided on how it could influence the analysis results. A discussion of the potential error or bias should be carried also into analyses that rely on the VMT analysis, such as greenhouse gas emissions, air quality, and noise.

1. Recommended Significance Threshold for Transportation Projects

As explained above, Public Resources Code section 21099 directs OPR to recommend criteria for evaluating transportation impacts that promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. These criteria would apply to all project types. This section of the technical advisory addresses criteria appropriate for transportation projects.

Transportation, including upstream (e.g. refinery) emissions, accounts for over half of California's greenhouse gas emissions. Achieving California's emissions reduction goals (described above) will, therefore, require steep reductions in emissions from the transportation sector. For example, the California Air Resources Board describes a scenario achieving the reduction goals set forth in Executive Order B-30-15 from the transportation sector in a fact sheet, *Cutting Petroleum Use in Half by 2030.* In sum, achieving those goals will require improving vehicle efficiency, reducing fuel carbon content, and improving travel efficiency (i.e. reducing VMT). Even with steep improvements in vehicle efficiency, a significant shift to zero emissions vehicles and sharp reductions in the carbon content of fuels, total statewide VMT could increase no more than 4 percent over 2014 levels.

Assuming, based on that information, that statewide VMT can increase up to 4 percent without obstructing California's long-term emissions reduction goals, we can determine a total increment of allowable increased VMT.

Therefore:

4% x [2014 statewide total VMT] = [Total Allowable VMT Increment]

This VMT increment can be divided among transportation projects expected to be completed by 2030 in order to determine a project-level VMT threshold:

[Total Allowable VMT Increment] / [Number of projects through 2030] = [Project VMT Threshold]

A project that leads to an addition of more VMT than the Project VMT Threshold may indicate a significant impact on VMT.

Following is an initial estimate of a recommended Transportation Project VMT Threshold:

California Statewide VMT (2014)	185,320,000,000 VMT/year
Allowable increase by 2030 (4 percent)	7,412,800,000 VMT/year
Estimated total transportation projects in California, expected completion date 2015-2030	3,572 Projects[8]
Fair share VMT per transportation project	2,075,220 VMT/year

2. Estimating VMT Impacts from Transportation Projects

CEQA requires analysis of a project's potential growth-inducing impacts. (Public Resources Code § 21100(b)(5); State CEQA Guidelines, § 15126.2(d).) Many agencies are familiar with the analysis of growth inducing impacts associated with water, sewer and other infrastructure. This technical advisory addresses growth that may be expected from roadway expansion projects.

Because a roadway expansion project can induce substantial VMT, incorporating estimates of induced VMT is critical to calculating both transportation and other impacts of these projects. Induced VMT also has the potential to reduce or eliminate congestion relief benefits, and an accurate estimate of it is needed to accurately weigh costs and benefits of a highway capacity expansion project.

VMT effects should be estimated using the *change in total VMT* method (as described in the previous section *Technical Considerations in Assessing Vehicle Miles Traveled/Considerations in what VMT to count*). This means that an assessment of total VMT without the project, and an assessment with the project, should be made; the difference between the two is the amount of VMT attributable to the project. The assessment should cover the full area in which driving patterns are expected to change; as with other types of projects, VMT estimation should not be truncated at a modeling or political boundary for convenience of analysis when travel behavior is substantially affected beyond that boundary.

[8] This preliminary estimate is based on a population-based extrapolation of SCAG's project list (SCAG's project list contains 1728 projects expected to be completed 2015-2030, and the SCAG region contains 48.4 percent of the population.) Agencies with more complete or specific data may use that data.

Transit and Active Transportation Projects

Transit and active transportation projects generally reduce VMT and therefore are presumed to cause a less than significant impact on transportation. This presumption may apply to all passenger rail projects, bus and bus rapid transit projects, and bicycle and pedestrian infrastructure projects. Streamlining transit and active transportation projects aligns with each of the three statutory goals by reducing GHG emissions, increasing multimodal transportation networks, and facilitating mixed use development.

Roadway Projects

Reducing roadway capacity (i.e. a "road diet") will generally reduce VMT and therefore is presumed to cause a less than significant impact on transportation.

Building new roadways, adding roadway capacity in congested areas, or adding roadway capacity to areas where congestion is expected in the future, typically induces additional vehicle travel. For the types of projects indicated previously as likely to lead to additional vehicle travel, an estimate should be made of the change in VMT resulting from the project.

For projects that increase roadway capacity, lead agencies can evaluate the potential induced VMT by applying the results of existing studies that examine the magnitude of the increase of VMT resulting from a given increase in lane miles. These studies estimate the percent change in VMT for every percent change in miles to the roadway system ("elasticity") (see U.C. Davis, Institute for Transportation Studies, "Increasing Highway Capacity Unlikely to Relieve Traffic Congestion," (October 2015); Boarnet and Handy, "Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions," California Air Resources Board Policy Brief, September 30, 2014). Given that lead agencies have discretion in choosing their methodology, and the studies on induced travel reveal a range of elasticities, lead agencies may appropriately apply professional judgment in studying the effect of a particular project. The most recent major study (Duranton and Turner, 2011), estimates an elasticity of 1.0, meaning that every percent change in lane miles results in a 1 percent increase in VMT.

To estimate VMT impacts from roadway expansion projects:

1. Determine the total lane-miles over an area that fully captures travel behavior changes resulting from the project (e.g. generally the region; for projects affecting interregional travel, all affected regions)
2. Determine the percent change in total lane miles that will result from the project
3. Determine the total existing VMT over that same area
4. Multiply the percent increase in lane miles by the existing VMT, and then by the elasticity from the induced travel literature:

[% increase in lane miles] x [existing VMT] x [elasticity] = [VMT resulting from the project]

Because the research providing these elasticity estimates was undertaken in congested urban regions, this method should be applied only within MPOs; it would not be suitable for rural (non-MPO) locations in the state.

Certain roadway capacity projects might be expected to induce greater or lesser VMT than typical projects; some will even reduce VMT. For example, adding an extra lane to an especially critical and congested link (e.g. the San Francisco Bay Bridge) may leverage VMT growth far beyond that link, increasing VMT to a greater degree. On the other hand, adding a link that greatly improves connectivity (i.e. provides drivers a shorter route in exchange for a longer one) may in select cases reduce total VMT. Such projects may require more detailed analysis using models, and execution of this analysis requires a more nuanced understanding of the factors involved in induced VMT.

This section assists lead agencies in determining the significance of VMT impacts by referencing statewide goals established to achieve the greenhouse gas emissions reduction scientists say is needed to avert global environmental catastrophe. The method for determining the significance of transportation projects described in this section could also be applied at a programmatic level in a regional planning process. In that case, lead agencies could tier from that analysis to streamline later analysis at the project level. (See State CEQA Guidelines Section 15168.) For example, the total expected statewide increase in VMT that would allow for attainment of statewide greenhouse gas emissions reductions could be divided between regions by population to determine a regional-level "threshold." That program-level analysis of VMT would include effects of the program and its constituent projects on land use patterns, and the VMT that results from those land use effects. In determining whether a program-level document adequately analyzes potential induced demand, lead agencies should note that analyses that assume a fixed land use pattern, and which does not vary in response to the provision of roadway capacity, do not fully account for induced VMT from a project or program of roadway capacity expansion. On the other hand, where the analysis accounts for land use investment and development pattern changes that react in a reasonable manner to changes in

accessibility created by transportation infrastructure investments (whether at the project or program level), the resulting changes in VMT might provide an appropriate basis for tiering.

Mitigation and alternatives.

Induced VMT has the potential to reduce or eliminate congestion relief benefits, increase VMT, and increase other environmental impacts that result from vehicle travel. If those effects are significant, the lead agency will need to consider mitigation or alternatives. In the context of increased travel induced by capacity increases, appropriate mitigation and alternatives that a lead agency might consider include the following:

- Tolling new lanes to encourage carpools and fund transit improvements
- Converting existing general purpose lanes to HOV or HOT lanes
- Implementing or funding travel demand management offsite
- Implementing Intelligent Transportation Systems (ITS) strategies to improve passenger throughput on existing lanes

Tolling and other management strategies can have the additional benefit of preventing congestion and maintaining free-flow conditions, conferring substantial benefits to road users as discussed above.

F. Analyzing Safety Impacts Related to Transportation

Public Resources Code section 21099 suggests that while automobile delay is not an environmental impact, lead agencies may still evaluate project impacts related to safety. The CEQA Guidelines currently suggest that lead agencies examine projects' potential to "[s]ubstantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)".

As with any other potential impact, CEQA requires lead agencies to make a judgment call "based to the extent possible on scientific and factual data." (State CEQA Guidelines § 15064(b).) Also like any other potential impact, "the significance of an activity may vary with the setting." (Ibid.) Lead agencies must base their evaluations of safety on objective facts, and not personal or subjective fears. The purpose of this section is to review some relevant considerations in evaluating potential transportation-related safety impacts.

Transportation by its nature involves some degree of collision risk. Every project will affect transportation patterns, and as a result may involve some redistribution of that risk.

Lead agencies may consider whether a project may cause substantially unsafe conditions for various roadway users. This section is not intended to provide a comprehensive list of potential transportation safety risks, but rather guidance on how to approach safety analysis given numerous potential risks.

Generally:

- Safety analysis in CEQA should focus on risk of fatality or injury, rather than property damage.
- Lead agencies should focus on concerns that affect many people, not just an individual.

- The potential safety concern must relate to actual project conditions, and not stem solely from subjective fears of an individual.
- Safety analysis in CEQA should focus on undue risks that can be reduced without adding other risks, particularly without increasing risk to vulnerable road users. (State CEQA Guidelines § 15126.2(a)(1)(D).) Safety analysis and mitigation under CEQA should not undermine overall public health, e.g. by reducing the physical activity benefits of active transportation.
- In analyzing safety, lead agencies should note that automobile delay in not an indication of environmental impact. (Pub. Resources Code § 21099(b)(2).)

In the past, transportation safety has focused on streamlining automobile flow and accommodating driver error, sometimes confounding motor vehicle mobility and speed with transportation system safety. An updated and more holistic approach has developed over the past decade, however. This updated approach focuses on three overlapping strategies:

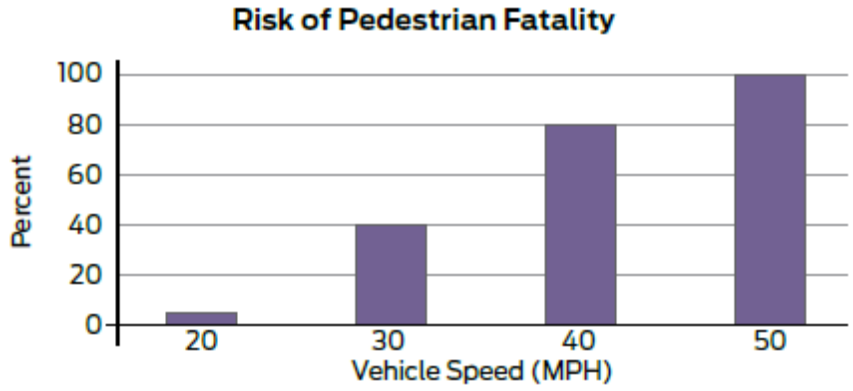
- Reduce speed and increase driver attention
- Protect vulnerable road users
- Reduce overall VMT and sprawl (see Ewing et al. (2003) below for definition of "sprawl")

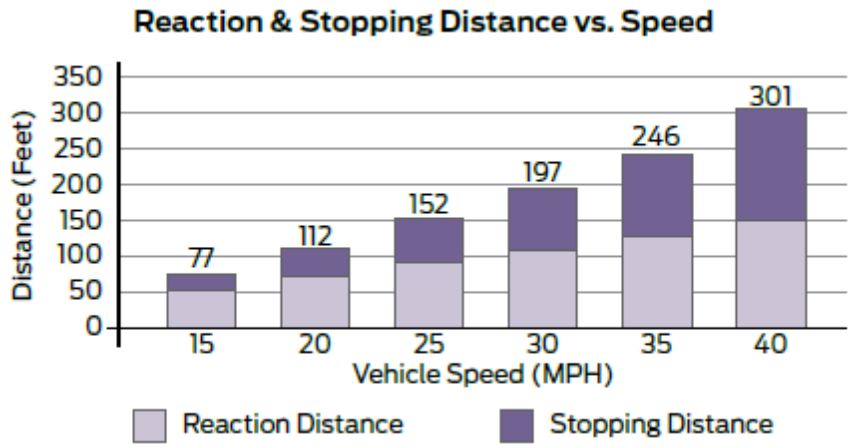
Newer design guidance builds on more recent research on transportation safety and articulates this updated approach. For example, the NACTO guidelines (which have been endorsed by Caltrans, as well as the cities of Davis, Oakland, San Francisco, San Diego, and San Mateo) state:

> "Conventional street design is founded in highway design principles that favor wide, straight, flat and open roads with clear zones that forgive and account for inevitable driver error. This is defined as "passive" design. In recent years a new paradigm has emerged for urban streets called proactive design. A proactive approach uses design elements to affect behavior and to lower speeds. Embracing proactive design may be the single most consequential intervention in reducing pedestrian injury and fatality. Since human error is inevitable, reducing the consequences of any given error or lapse of attention is critical. Cities around the country that have implemented measures to reduce and stabilize speed have shown a reduction in serious injuries and deaths for everyone on the road, from drivers to passengers to pedestrians."

Reducing Speed and Increasing Driver Attention

Vehicle speed plays a fundamental role in transportation safety. The NACTO Urban Street Design Guide, reports: "Vehicle speed plays a critical role in the cause and severity of crashes." Two charts from those guidelines below show risk associated with motor vehicle speeds.





Source: NACTO Urban Street Design Guide Overview

Higher speeds increase both the likelihood and severity of collisions. (Elvik (2005).) According to Elvik:

- "Speed is likely to be the single most important determinant of the number of traffic fatalities."
- "…[S]peed has a major impact on the number of accidents and the severity of injuries and that the relationship between speed and road safety is causal, not just statistical."
- "Changes in speed are found to have a strong relationship to changes in the number of accidents or the severity of injuries."
- "The relationship between speed and road safety is robust and satisfies all criteria of causality commonly applied in evaluation research."

Regardless of posted speed limits, designing roads to accommodate higher speeds safely actually leads to higher speeds. Except on limited access highways (i.e. freeways), widening and straightening roads does not increase safety. "Wider and straighter roadways lead motorists to travel at higher speeds, thus offsetting any safety benefits associated with increased sight distances." (Dumbaugh et al., 2009, citing Aschenbrenner & Biehl, 1994; Wilde, 1994).

Dumbaugh et al. (2009) breaks the problem down into its constituent parts, (1) crash incidence and (2) crash severity:

> "The safety problem with urban arterials can best be understood as a product of systematic design error. Widening and straightening these roadways to increase sight distances also has the effect of enabling higher operating speeds, which in turn increase stopping sight distance, or the distance a vehicle travels from the time when a driver initially observes a hazard, to the time when he or she can bring the vehicle to a complete stop. Higher stopping sight distances pose little problem when vehicles are traveling at relatively uniform speeds and have few reasons for braking. When these operating conditions can be met, as they are on grade-separated freeways, higher operating speeds have little or no effect on crash incidence.
>
> "But these operating conditions typically cannot be met on urban surface streets, where pedestrians, bicyclists, and crossing vehicles are all embedded in the traffic mix. Avoiding crashes under these conditions often requires motorists to bring their vehicles to a quick stop, which higher operating speeds and stopping sight distances make more difficult (Dumbaugh, 2005b; 2006…). The result is a systematic pattern of error in which drivers are unable to adequately respond to others entering the roadway, leading to increased crash incidence."

Dumbaugh et al. also points out that speed reduction requires design features and/or commercial vibrancy and activity that provide cues to motorists to slow their vehicle's speed, rather than simply a slower posted speed limit:

> "…placing commercial uses on arterial thoroughfares created a pedestrian safety problem... In practice, the solution to this problem in the United States has been to continue to locate such uses on arterial thoroughfares, but to reduce posted speed limits. In the absence of aggressive police enforcement, however, such practices have been uniformly unsuccessful at reducing vehicle operating speeds (Armour, 1986; Beenstock, Gafni, & Goldin, 2001; Zaal, 1994). The principal alternative, adopted by European designers, is to design urban surface streets to reduce vehicle speeds to safe levels.
>
> "We found pedestrian-scaled retail (the type of retail that was abandoned during the postwar period) to be associated with reductions in all types of crashes, and at significant levels for both total and injurious crashes. This is consistent with recent research on the subject, which finds that the pedestrian-scaled nature of these environments communicate to motorists that greater caution is warranted, leading to increased driver vigilance, lower operating speeds, and thus a better preparedness to respond to potential crash hazards that may emerge. The effective result is a reduction in crash incidence (Dumbaugh, 2005a; 2005b; 2006b; Garder, 2004; Naderi, 2003; Ossenbruggen, Pendharkar & Ivan, 2001)." (Dumbaugh et al. 2009, p. 323)

Dumbaugh et al. concludes that, except for limited-access freeways, reducing speeds is essential for safety, and also helps create livability:

> "In areas where pedestrian activity is present or expected, or where eliminating a roadway's access function [to businesses, residences, jobs, etc.] is either undesirable or inappropriate, the primary alternative to access management is to reduce operating speeds to levels that are compatible with the street's access-related functions (see Figure 8). This approach, sometimes referred to as the livable street approach, incorporates design features that encourage lower operating speeds, such as making buildings front on the street, incorporating aesthetic street lighting or landscaping along the roadside, enhancing the visual quality of pavement and signage, and adopting traffic calming or intersection control measures. In short, livable streets

> emphasize access over mobility. When compared to conventional arterial treatments, livable streets report roughly 35–40% fewer crashes per mile traveled, and completely eliminate traffic-related fatalities (Dumbaugh, 2005a; Naderi, 2003)." (Dumbaugh, 2009, p. 325)

Providing greater clear space around a roadway, e.g. wider shoulders or clearing trees, can lead to degraded driver attention, in addition to higher speeds. "In dense urban areas, less-"forgiving" design treatments—such as narrow lanes, traffic-calming measures, and street trees close to the roadway—appear to enhance a roadway's safety performance when compared to more conventional roadway designs. The reason for this apparent anomaly may be that less-forgiving designs provide drivers with clear information on safe and appropriate operating speeds" (Ewing and Dumbaugh, 2009). Greater accommodation of driver error especially increases risk to vulnerable road users such as pedestrians and cyclists.

Lane width has a particularly discernable impact on safety. The traditional approach to sizing lanes opts for wider lanes to accommodate driver error and to attempt to increase throughput. However, research reveals that wider lanes hinder both of these objectives. Karim (2015) examined the relationship between lane width and crash rates. A number of findings were corroborated across cities:

- Wider lanes (over 10.8 to 11.2 feet) are associated with 33% higher impact speeds and higher crash rates.
- Both narrow (less than 9.2 feet) and wide (over 10.2 to 10.5 feet) lanes have proven to increase crash risks, with equal magnitude. Wider lanes (wider than 10.8 feet) adversely affect overall side-impact collisions.
- The overall capacity of narrower lanes is higher.
- For large vehicles, no difference on safety and carrying capacity is observed between narrower and wider lanes.
- Pedestrian volumes decline as lanes widen.
- Intersections with narrower lanes provide the highest capacity for bicycles.

The study finds that driver behavior is impacted by the street environment, and narrower lanes in urban areas result in less aggressive driving and more ability to slow or stop a vehicle over a short distance to avoid collision. It also points out that co-benefits of narrower lanes include utilization of space to provide an enhanced public realm, including cycling facilities and wider sidewalks, or to save money on the asphalt not used by motorists. (Karim, 2015)

Yeo et al (2014) summarizes past studies that show both reducing intersection density and widening traffic lanes to worsen safety:

> "Wider traffic lanes turn out to be the reason for a higher risk of fatal crashes (Noland and Oh 2004), whereas a street with a narrower curb-to-curb distance is relatively safe (Gattis and Watts 1999). Areas with a high level of intersection density also tend to have fewer fatal crashes (Ladron de Gue- vara et al. 2004). According to Ewing and Dumbaugh (2009), the aforementioned road designs and street patterns create a less forgiving environment for drivers and thus help decrease traffic speed." (Yeo et al., 2014, p. 402)

Numerous studies found that narrowing lanes from today's standard practice would improve safety. However, one multi-state study found three specific circumstances where narrower lanes did not increase safety in all states studied, but only some of them. The following is provided as a caveat:

> "The research found three situations in which the observed lane width effect was inconsistent—increasing crash frequency with decreasing lane width in one state and the opposite effect in another state. These three situations are:
>
> - lane widths of 10 feet or less on four-lane undivided arterials.
> - lane widths of 9 feet or less on four-lane divided arterials.
> - lane width of 10 feet or less on approaches to four-leg STOP-controlled arterial intersections.
>
> "Because of the inconsistent findings mentioned above, it should not be inferred that the use of narrower lane must be avoided in these situations. Rather, it is recommended that narrower lane widths be used cautiously in these situations unless local experience indicates otherwise." (Potts, et al. 2007)

Protecting Vulnerable Road Users

To the extent that a lead agencies address safety in a CEQA analysis, the focus must be on protecting people. Thus, for example, lead agencies might analyze how a land use project or transportation infrastructure project that increases traffic speeds may burden its travel-shed with additional, undue risk. These risks might be mitigated by, for example, (1) reducing motor vehicle travel speeds, (2) increasing driver attention, (3) protecting vulnerable road users (e.g. providing a protected, Class IV bicycle path and/or shortening pedestrian crossing distances and providing pedestrian refuges and bulb-outs), or (4) reducing VMT by providing VMT mitigation. Mitigation should avoid creating additional risk to vulnerable road users and it should not reduce active transportation mode accessibility or connectivity.

Generally speaking, the safety of vulnerable road users (e.g. pedestrians and bicyclists) should be given relatively more attention, due to their vastly increased risk of serious injury and fatality. Also, policy and planning priorities to encourage multimodal and low-carbon travel, and improving safety is a key step in increasing use of those modes. Where there are safety tradeoffs, therefore, it is important to prioritize protection of vulnerable road users. Impacts to potential vulnerable road users should be considered whether or not specific facilities for those users are present.

Active transportation has substantial health benefits, so restricting pedestrian or bicycle access and connectivity in order to reduce collision risk may worsen overall health outcomes. And, any decision about whether to apply a safety measure that restricts access by pedestrians and cyclists should consider (1) the reduction in walking and biking that will result, and the resulting reduction in "safety in numbers" as well as overall health, and (2) the risk created by pedestrians or cyclists subverting the design purpose for convenience (e.g. crossing a street where prohibited) that might lead to additional safety risk.

Reducing overall VMT and Sprawl

Higher total amounts of motor vehicle travel creates higher crash exposure. Reducing vehicle miles traveled reduces collision exposure and improves safety (Dumbaugh and Rae, 2009, p. 325; Ewing, Scheiber, and Zegeer, 2003). As a result, infill development, which exhibits low VMT, itself provides safety benefits by reducing motor vehicle collision exposure, lowering speeds, and increasing pedestrian and cyclist volumes leading to "safety in numbers" (in addition to improving overall health broadly and substantially).

The fundamental relationship between VMT and safety is summarized by Yeo et al. (2014):

> "Multiple traffic safety studies showed that higher VMT was positively associated with the occurrence of traffic crashes or fatalities (e.g., Ewing et al. 2002, 2003; NHTSA 2011). The causal relationship between the mileage of total vehicle trips and crash occurrences can be explained by probability. With higher VMT, it is more likely that more crashes will occur (Jang et al. 2012)."

Sprawl-style development has also been shown to lead to elevated crash risk. The cause lies both in higher VMT levels and in design variables which influence speed and driver behavior (Yeo 2014). Ewing et al. (2003) points out that "[s]uburban and outlying intersections have been significantly overrepresented in pedestrian crashes compared with more urban areas, after control for exposure and other location factors."

More generally, Ewing et al. (2003) reveals that sprawl development (measured by (1) lowness of density, (2) lack of mixing of uses, (3) absence of thriving activity centers such as strong downtowns or suburban town centers, and (4) largeness of block sizes and poorness of street connectivity) leads to elevated transportation risk levels:

> "Our study indicates that sprawl is a significant risk factor for traffic fatalities, especially for pedestrians. The recognition of this relationship is key; traffic safety can be added to the other health risks associated with urban sprawl—namely, physical inactivity and air and water pollution.
>
> "…Sprawling areas tend to have wide, long streets that encourage excessive speed. A pedestrian struck by a motor vehicle traveling at 40 mph has an 85% chance of being killed, compared with a 45% chance of death at 30 mph and a 5% chance at 20 mph. Thus, developing land in a more compact manner may reduce pedestrian deaths, provided that the street network is designed for lower-speed travel."

Ewing et al. (2003) further demonstrates that, on the whole, counties characterized by the most sprawling land use patterns exhibit substantially higher crash risk (between four and five times the all-mode fatality rate) compared to the most compact counties:

TABLE 2—US Counties With Highest and Lowest Sprawl Index Values

	County	Metropolitan Area	Sprawl Index[a]	All-Mode Traffic Fatality Rate (per 100 000)
1	New York County, NY	New York	352.07	4.42
2	Kings County, NY	New York	263.65	4.46
3	Bronx County, NY	New York	250.72	4.20
4	Queens County, NY	New York	218.90	4.58
5	San Francisco County, Calif	San Francisco	209.27	6.31
6	Hudson County, NJ	Jersey City	190.06	5.91
7	Philadelphia County, Pa	Philadelphia	187.78	8.04
8	Suffolk County, Mass	Boston–Lawrence–Salem	179.37	4.49
9	Richmond County, NY	New York	162.89	5.63
10	Baltimore City, Md	Baltimore	162.76	7.68
439	Stokes County, NC	Greensboro–Winston-Salem–High Point	71.26	15.66
440	Miami County, Kans	Kansas City	71.03	38.80
441	Davie County, NC	Greensboro–Winston-Salem–High Point	70.99	25.84
442	Isanti County, Minn	Minneapolis–St Paul	70.12	12.78
443	Walton County, Ga	Atlanta	69.61	19.77
444	Yadkin County, NC	Greensboro–Winston-Salem–High Point	69.17	38.52
445	Goochland County, Va	Richmond–Petersburg	67.59	35.58
446	Fulton County, Ohio	Toledo	66.83	38.02
447	Clinton County, Mich	Lansing–East Lansing	66.63	16.99
448	Geauga County, Ohio	Cleveland	63.12	20.90

[a]Higher values of the index indicate more compact urban form; lower values indicate more sprawling urban form.

Source: Ewing et al., 2003

Beyond crash incidence rates and severity, delay in receiving medical care after a crash contributes to worse health outcomes from transportation safety in sprawling neighborhoods. Traditional impact analysis focuses on congestion as an inhibitor to emergency responses times. However, research shows that emergency response suffers more from greater distances to destinations found in sprawling areas than from congestion in compact and congested areas:

> "Emergency medical service (EMS) delay is another possible mediator that could help explain the direct non-VMT-involved sprawl effect on traffic fatalities. Urban sprawl increases EMS waiting time, and delay in ambulance arrival can increase the severity of traffic-related injuries (Trowbridge et al. 2009). 'For every 10% increase in population density'…the models estimated by Lambert and Meyer (2006, 2008) predict 'a 10.4% decrease in EMS run time' in the Southeastern United States and nationwide 'an average 0.61 percent decrease in average EMS run time.'" (Yeo et. al, 2014)

Collectively, research points to an approach on safety that aligns well with other state priorities and laws (e.g. infill priority, greenhouse gas reduction), as well as with the visions of many local jurisdictions for their own growth. Compact infill development, in addition to providing livable and vibrant neighborhoods, walkable communities, environmental benefits, land conservation, fiscal benefit and cost reduction for citizens, also improves traffic safety:

> "Our study, which addresses the built environment in a more comprehensive manner [than past studies], found population density to be associated with significantly fewer total and injurious crashes. …Individuals living in higher density environments drive less (Ewing & Cervero, 2001), thus reducing their overall exposure to crashes. When these reductions in VMT are aggregated across a larger population, they can potentially add up to notable reductions in population-level crash incidence." (Dumbaugh and Rae, 2009)

> "[Our] research findings suggest that enhancing traffic safety by reducing fatalities can be achieved by fighting against urban sprawl and promoting smart growth countermeasures. It will be important to revive city centers, to increase density, and to provide for mixed land uses. Urban design solutions that can enhance walkability at the meso- and microlevels may help reduce traffic fatalities." (Yeo et. al, 2014)

Attribution of Safety Impacts

Some safety impacts result from the effects of many past projects accumulated over time. An infill project, for example, may add an additional vehicle to a queue in a turn pocket or on a ramp causing it to extend into mainline traffic. Such an impact is the cumulative effect of many projects. (In any case, vehicle queueing resulting from a particular project frequently cannot be estimated accurately, especially where traffic is affected by many factors. Typical modeling error on traffic volumes at an intersection can reach 40 percent, and microsimulation performed to estimate queue lengths introduce further error. Other factors affect travel demand (e.g. the economy, the price of gasoline). Therefore, it is frequently impossible to meaningfully predict whether the direct effect of a development in an infill area will be the cause of a vehicle queue extending onto a highway mainline.)

Meanwhile, if a development generates or attracts such large amounts of automobile travel that it contributes a substantial portion of the traffic that leads to a queue onto the mainline, attributing that proportion of the associated risk to that project would be appropriate. This might be particularly so on the urban periphery where that traffic would be easily attributable to the project.

Addressing Tradeoffs and Finding Win-Win Safety Improvements

Traditional solutions for safety risks sometimes create other safety risks, impact human health in other ways, and sometimes are at cross purposes with other state and community interests such infill priority, greenhouse gas reduction, cost reduction, or access to destinations. When addressing safety impacts, a jurisdiction should frame and address those risks in a manner that helps forward the community's overall goals, while improving safety. Some modern approaches to reducing safety risk, developed over the past decade or two based on research, allow all safety to be improved while meeting these other goals. Here are three examples:

(1) A queue extending out of a turn pocket or off ramp can increase the risk of rear-end collisions. However, addressing that risk by adding additional vehicle capacity such as a second lane will lead to additional risk for pedestrian crossing. Addressing that risk by adding extra green time in the traffic signal timing will lead to shorter pedestrian crossing times and/or additional pedestrian wait time. Addressing these secondary risks by prohibiting pedestrian crossing will reduce connectivity of the pedestrian network, leading to reduced pedestrian mode share, which will increase risk by decreasing "safety in numbers" benefits and impact the health benefits associated with active mode travel. Meanwhile, improving safety with street design features that lower travel speeds to reduce crash incidence and severity can improve walkability.

(2) Surface roadway lanes can be redesigned from traditional 12.0 foot widths to with 9.2 to 10.8 foot widths with little or no down-side. Such a narrowing of lanes maintains motor vehicle capacity, increases bicycle capacity, maintains large vehicle capacity and safety, improves pedestrian crossings safety and comfort, increases pedestrian volumes, improves driver attention, decreases crash rates, decreases crash severity, reduces construction costs, reduces maintenance costs, reduces impermeable surface area, reduces construction and maintenance air quality and GHG emissions, and reduces space consumption. (Karim, 2015).

(3) Improving safety by adding signage and pavement markings that help reduce speeds and increase pedestrian visibility can have an array of benefits, including:
- Decrease in crash incidence for all users, including vulnerable road users
- Decrease in crash severity for all users, including vulnerable road users
- Increase safety and comfort for pedestrians and cyclists, resulting in increased walking and biking mode share, in turn increasing safety in numbers effects for vulnerable road users and improving public health both via improved safety and increased physical activity.

While reductions in automobile speed may initially increase auto mode travel times, improving conditions for pedestrians and cyclists can lead to finer grain land use development over time, and ultimately improve destination proximity and overall access to destinations.

Examples and Mischaracterizations of Detriments to Overall Safety

The following are examples of possible detriments to overall safety if not mitigated:

- An increase in VMT. More vehicle travel exposes motorists and other road users to more crash risk.
- An increase in pedestrian wait times. Many studies have found that pedestrian wait times play a role in crashes. Long wait times increase the risk some pedestrians will cross against a signal, creating a vulnerable road user collision risk (FHWA-RD-03-042, 2004)
- Site design elements that would create hazardous conditions for vulnerable road users

- Substantially increasing motor vehicle speeds, or increasing them to greater than 25 miles per hour where vulnerable road users are present without providing proper infrastructure for vulnerable road users (e.g. Class IV bikeways for cyclists)
- Substantially increasing intersection pedestrian crossing distances, e.g. for addition of a through or turn lane
- Signal lengths of greater than 90 seconds, which may lead to people crossing on a red signal with a gap in the vehicle platoons
- Increase in curb radius
- Installation of large curb radii, promoting higher speed motor vehicle turning movements, particularly endangering pedestrians and cyclists
- Addition or widening of on- and off-ramps where they meet surface roadways that increases pedestrian crossing distances or times, increase pedestrian wait times, or lead to a prohibition of pedestrian crossing
- Addition or widening of off-ramps in a manner that leads to higher speeds on surface streets
- Excessively large clearance zones along shoulders
- Wider than needed travel lanes (e.g. wider than 10.8 feet on surface streets)
- Multiple turn lanes at an intersection (e.g. a double left or double right turn lane)
- Placement of driveways in locations which will lead to highly elevated collision risk
- Excessively large driveways across sidewalks
- Substantially increased distances between pedestrian and bicycle crossings
- Roadway design speed (regardless of posted speed limit) that leads to actual speeds that are unsafe for cyclists and pedestrians

Safety issues can be mischaracterized with overly narrow perspective or traditional design guidance that has not been updated to reflect research. The following are examples of mischaracterizations of safety issues.

- Avoidance of installation of corner or mid-block crossings to avoid additional pedestrian traffic and conflict with vehicles (reduces pedestrian mode share, undoing safety in numbers)
- Avoidance of narrow (e.g. 10 foot) travel lanes on surface roadways (see discussion above)
- Avoidance of implementing sidewalk bulbs, widened sidewalks, parklets, or other curb extensions or removal of on-street parking for fear of exposing vulnerable users to vehicular traffic (these features slow traffic and improve walkability as discussed above)
- Addressing off-ramp queuing by limiting stop control on an exit ramp (this can lead to vehicles flowing unimpeded and at high speeds onto a local street, increasing risk for all road users).
- Avoidance of protected bicycle facilities adjacent to transit boarding islands to avoid conflicts between transit users and cyclists (this is safe with good design)
- Maintaining or providing parking spaces out of concern that road rage could result from traffic congestion or circling for parking as an outcome of the removal of on- or off-street parking spaces (adding parking increases VMT and overall crash exposure)

Examples of Potential Transportation Safety Mitigation Measures

- Intersection improvements
  - Visibility improvement
  - Shortening corner radii
  - Pedestrian safety islands
  - Accounting for pedestrian desire lines
- Signal changes
  - Reducing signal cycle lengths to less than 90 seconds to avoid pedestrian crossings against the signal
  - Providing a leading pedestrian interval
  - Provide a "scramble" signal phase where appropriate
- Roadway improvements
  - Add curb extensions or bulb-outs
  - Add bicycle facilities (On higher speed roads, add protected bicycle facilities)
  - Reduce travel lane width below 10.8 feet (but not below 9.2 feet)
  - Add traffic calming measures
  - Add landscaping features
- Network improvements
  - Provide shorter blocks
  - Provide mid-block crossings
- Reduce VMT
  - Increase density and/or diversity of land uses
  - Provide travel demand management measures
  - Provide transit
  - Provide pedestrian facilities
  - Provide bicycle facilities

G. Mitigation and Alternatives

When a lead agency identifies a significant impact, it must consider mitigation measures that would reduce that impact. The selection of particular mitigation measures, however, is always left to the discretion of the lead agency. Further, OPR expects that agencies will continue to innovate and find new ways to reduce vehicular travel. Several potential mitigation measures and alternatives to reduce vehicle miles traveled are described below. Notably, the suggested mitigation measures and alternatives were largely drawn from the California Air Pollution Control Officers Association's guide on Quantifying Greenhouse Gas Mitigation Measures. That guide relied on peer-reviewed research on the effects of various mitigation measures, and provides substantial evidence that the identified measures are likely to lead to quantifiable reductions in vehicle miles traveled.

Potential measures to reduce vehicle miles traveled include, but are not limited to:

- Improve or increasing access to transit.
- Increase access to common goods and services, such as groceries, schools, and daycare.
- Incorporate affordable housing into the project.
- Incorporate neighborhood electric vehicle network.
- Orient the project toward transit, bicycle and pedestrian facilities.

- Improve pedestrian or bicycle networks, or transit service.
- Provide traffic calming.
- Provide bicycle parking.
- Limit or eliminating parking supply.
- Unbundle parking costs.
- Provide parking or roadway pricing or cash-out programs.
- Implement or provide access to a commute reduction program.
- Provide car-sharing, bike sharing, and ride-sharing programs.
- Provide transit passes.

Examples of project alternatives that may reduce vehicle miles traveled include, but are not limited to:

- Locate the project in an area of the region that already exhibits low vehicle miles traveled.
- Locate the project near transit.
- Increase project density.
- Increase the mix of uses within the project, or within the project's surroundings.
- Increase connectivity and/or intersection density on the project site.
- Deploy management (e.g. pricing, vehicle occupancy requirements) on roadways or roadway lanes.

IV. Case Studies

The following case studies provide sample applications of the *Draft Technical Advisory on Evaluating Transportation Impacts in CEQA* ("Draft Technical Advisory").

The first is a mixed use residential and retail development in the City of Sacramento (Sacramento County). This case study employs the Greenhouse Gas Quantification Methodology (GGQM) developed by the Strategic Growth Council for the Affordable Housing and Sustainable Communities program (AHSC). To provide a more fine-grained analysis, we replace CalEEMod's regional average default trip length estimates with data taken from the California Statewide Travel Demand Model (CSTDM). We use CSTDM home-based travel VMT output data for the region as a whole to calculate a significance threshold using the methodology recommended in the Draft Technical Advisory.

The second is an office development in a suburban area in the City of Mission Viejo (Orange County). This case study uses CSTDM home-based-work trip length data to estimate VMT of office uses in that location and to estimate the significance threshold, and the CAPCOA *Quantifying Greenhouse Gas Mitigation Measures* to quantify the VMT reduction of a set of mitigation measures.

The first and second case studies employ the CSTDM to estimate trip lengths and project VMT, and to help determine thresholds. In many cases, this methodology will be sufficient to adequately analyze a project's vehicle miles traveled. However, where a lead agency desires a more rigorous analysis, it might choose to use a regional travel demand model where available. Regional travel demand are typically better calibrated and validated for local conditions and so may provide more precise estimates of vehicle miles traveled.

The third is a hypothetical typical highway expansion project in an outlying area in the Kern Council of Governments region. This case study uses Caltrans Performance Measurement System (PeMS) lane mile and VMT data, and elasticity estimates from academic literature, to assess additional VMT caused by the addition of lane miles to the highway network.

Note, these case studies provide merely examples of how various projects may be analyzed. Proposed new Section 15064.3(b)(4) leaves to lead agencies the precise choice of methodology:

> A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project.

Thus, other models may appropriately be used to analyze vehicle miles traveled.

Mixed Use Project (Residential + Retail): Stockton and T

This case study provides an example of a VMT estimate for a mixed use (residential-retail) project. This case study is located in the City of Sacramento, Sacramento County, California.

Basic Project Characteristics

The proposed project is located at the corner of Stockton Boulevard and T Street—an inner-ring suburb near transit. It consists of 214 multifamily rental dwelling units and 6000 square feet retail in a 5 story building, as well as 24 single family dwelling owner-occupied units.

Analysis overview

Analyses for residential and retail portions of the development are conducted separately and results are compared to their respective recommended thresholds. For residential component, the AHSC GGQM is employed, with one enhancement: data recently made available from the California Statewide Travel Demand Model (CSTDM) are used to improve the accuracy of trip length estimates.

Note that a residential project that is located within ½ mile of transit is presumed to have a less than significant transportation impact. The project is located 0.27 miles from transit, and would therefore be presumed to have a less than significant transportation impact.

Further, the Draft Technical Advisory recommends that a residential project proposed in a location where existing development exhibits below-threshold VMT be presumed to have less than significant transportation impact. According to the CSTDM, the project is located in a Traffic Analysis Zone exhibiting 12.1 total VMT/cap and 8.4 Home Based VMT/capita. By comparison, the SACOG region as a whole exhibits an average 16.7 total VMT/capita and 12.8 Home Based VMT per capita. The Draft Technical Advisory's recommended threshold of fifteen percent below the regional average thus is 14.2 total VMT/capita and 10.88 Home Based VMT/per capita. Therefore, a screening map made using either total VMT/capita or Home Based VMT/capita would show the project to be in a below-threshold TAZ, and therefore may be presumed to lead to a less than significant transportation impact.

While the residential component of the project would be determined to have a less than significant impact on transportation by each of these two screening criteria, this case study nevertheless estimates VMT for the residential portion of the project in order to provide a demonstration of the methodology described in the Draft Technical Advisory.

The retail component consists solely of locally-serving retail, and therefore may be presumed to have a less than significant VMT impact. A lead agency that nevertheless chooses to estimate the retail component's vehicle miles traveled may conduct a travel demand model run. (CalEEMod is able to make a trip-based estimate of VMT from the retail portion of the project, but the Draft Technical Advisory cautions against using a trip-based methodology for retail uses, because it fails to account for the rerouting of trips from existing retail, and therefore falsely represents all trip-based VMT attracted to the project as new VMT.)

Estimate of Residential Project Component VMT

The following section provides a step-by-step description for using the AHSC GGQM to estimate project VMT. The AHSC GGQM employs the California Emissions Estimator Model (CalEEMod), a free and downloadable trip-based sketch model, substituting some off-model calculations where research and technical updates have not yet been incorporated into the model itself. We recommend obtaining a copy of the AHSC GGQM and referring to it alongside this description.

CalEEMod inputs on Project Characteristics and Land Use screens

On the CalEEMod Project Characteristics screen:

- Select "County" and enter "Sacramento"
- Set Land Use Setting to "Urban"
- Set operational year to 2016

CalEEMod Land Use Screen:

- Residential – Apartments Mid-Rise – 214 Units
- Residential – Single Family Housing – 24 Units
- Retail – Strip Mall – 6,000 square feet

Notes: The retail component is entered into CalEEMod solely so CalEEMod can estimate internal capture of the residential component trip-making activity by the retail contained within the project. We ignore CalEEMod's trip-based VMT estimate for the retail component itself, for the reasons described above.

Mitigation: CalEEMod Land Use and Site Enhancements and Commute Pages (Mitigation tab), and prescribed off-model methods

CalEEMod requires the project setting to be selected from a menu on the Land Use and Site Enhancements Screen. Per the GGQM, for this project, Urban Center is selected from the menu.

Increase Density (LUT-1):

Per AHSC GGQM, this calculation is undertaken outside CalEEMod.

Increase Density (LUT-1)		
Project density	48.6	du/ac
% Density increase	539%	
% VMT reduction	37.8%	
% VMT reduction taken	**30.0%**	

Increase Diversity:

The project contains retail development, so the Increase Diversity checkbox is checked in CalEEMod.

Improve Walkability Design (LUT-9):

Per the AHSC GGQM, this calculation is undertaken outside CalEEMod.

Improve Walkability Design (LUT-9)		
Intersections per sq. mi.	141.4	intersections/sq. mi.
%VMT reduction	35.1%	
%VMT reduction taken	**21.3%**	

Improve Destination Accessibility (LUT-4):

Rather than use CalEEMod or the AHSC GGQM to adjust for regional location (i.e. "distance to Downtown/Jobs Center), trip lengths from the California Statewide Travel Demand Model are inputted into CalEEMod.

Increase Transit Accessibility (LUT-5):

Inputted distance to nearest transit station, 0.27 mi, into CalEEMod.

Integrate Below Market Rate Housing (LUT-6)

The project does not contain below market rate housing, so this items is left unchecked in CalEEMod.

Improve Pedestrian Network (SDT-1)

The project includes new sidewalks along its borders, so the item is checked in CalEEMod, and "project site" is selected from the menu.

Provide Traffic Calming Measures (SDT-2)

The project does not provide traffic calming measures, so the item is left unchecked and the menus are left blank.

Implement NEV Network (SDT-3)

The project does not implement an NEV network, so the item is left unchecked and the input field is left at 0.

Limit Parking Supply (PDT-1)
The project is not parked below zoning, so the item is left unchecked and the input field is left at 0.

Unbundle Parking Costs (PDT-2)

Parking costs are not unbundled, so the item is left unchecked and the input field is left at 0.

On-Street Market Pricing (PDT-3)

On street parking is by neighborhood parking permit, not priced, so the item is left unchecked and the input field is left at 0.

Provide BRT System (TST-1)

The project does not provide a BRT system, so the item is left unchecked and the input field is left at 0.

Expand Transit Network (TST-3)

The project does not expand transit the transit network, so the item is left unchecked and the input field is left at 0.

Increase Transit Frequency (TST-4)

The project does not increase transit frequency, so the item is left unchecked, the level of implementation is left blank, and the input field is left at 0.

Commute Mitigation

The project provides no commute reduction programs, so all fields on this page are left blank (at their default values).

CalEEMOD output

Per the AHSC GGQM, CalEEMod output data on VMT are recorded:

From "4.2 Trip Summary Information"	Annual VMT	
Land Use	Unmitigated	Mitigated
Apartments Mid Rise	2,673,841	1,917,994
Single Family Housing	433,117	310,682
Total	3,106,958	2,228,677

Addition of mitigation accounted for off-model

Per the AHSC GGQM, off model calculations, detailed above, are incorporated and an estimate of project VMT is made (in this case, capped at the maximum for a project in this location type):

Sum of additional % VMT Reductions	51.3%	
Additional VMT Reductions	1,593,869	VMT/year
Total Annual VMT Reductions	2,472,151	VMT/year
Percent VMT Reduction	79.6%	
Maximum Reduction for Urban Center (Compact Infill) Project Setting	40%	
Project VMT Reduction	40%	
Project VMT	1,864,175	VMT/year

Project per-capita VMT

CalEEMod estimates residential project population on the Land Use screen. For the Stockton and T project, it estimates a residential population of 635 persons.

Project Residential Population	635	persons
VMT/cap	*2,936*	*VMT/pers-yr*

Recommended Threshold

The CSTDM estimates Home Based VMT per capita in the SACOG region to be 12.8 VMT/cap per day. Applying an annualization factor of [Annual VMT] = [Daily VMT] * 365, annual per capita VMT is estimated at 4,672 VMT/cap per year. The threshold recommended by the Draft Technical Advisory is fifteen percent below regional VMT/cap, in this case 3,971 VMT/cap per year.

Daily VMT per capita	12.8	VMT/pers-day
Annual VMT per capita	4,672	VMT/pers-yr
Recommended threshold	3,971	VMT/pers-yr

Significance Determination

The project, factoring in mitigation (using the AHSC GGQM) and regional location (by employing the CSTDM trip lengths) would be expected to generate 2936 VMT/person-year. The threshold recommendation is 3971 VMT/person-year. The residential component of the Stockton and T project will generate VMT at rates well below the recommended threshold. This result is unsurprising for a centrally-located infill project near transit.

As discussed above, the retail portion of the project is locally-serving, and is therefore presumed to have a less than significant transportation impact. As a result, the project has a less than significant impact on transportation.

Office Project: Mission Viejo Medical Center

This case study provides an example of a VMT estimate for an office project. This Case Study is located in Mission Viejo, Orange County, California.

Basic Project Characteristics

The proposed project is located west of Medical Center Road, between Crown Valley Parkway and Marguerite Parkway. It is an office building consisting of 110,000 square feet of office space.

Analysis overview

An estimate of base (unmitigated) project VMT is made using data from the California Statewide Travel Demand Model (CSTDM). The threshold is also estimated using the CSTDM. Mitigation measures are quantified with substantial evidence from *Quantifying Greenhouse Gas Mitigation Measures* (California Air Pollution Control Officers Association (CAPCOA)).

VMT Quantification and Significance Determination

The CSTDM estimates average commute VMT for existing office uses in the vicinity of the project (specifically, within the Traffic Analysis Zone (TAZ) which encompasses the project) as 15.3 VMT/employee.

Meanwhile, the CSTDM estimates VMT/employee in the SCAG region as a whole to be 15.9 VMT/employee. Applying the threshold recommended by the Draft Technical Advisory, 15 percent below regional overall commute VMT/employee, the significance threshold would be 13.5 VMT/employee. Without any mitigation, therefore, this project could trigger a significant impact. To reduce its impact to below the recommended significance threshold, the project would need to reduce commute VMT to below 13.5 VMT per employee (in other words, reduce its VMT by 12.9 percent).

To mitigate VMT to less than significant levels, the project could implement a Trip Reduction Program. For example, the program could implement the following commute VMT reduction strategies to bring VMT below the threshold:

Mitigation Measure	*Percent Reduction*	*Substantial Evidence*
Implementation a 9/80 workweek for 10 percent of employees	0.7%	CAPCOA TRT-6
Provide a transit subsidy to all employees of 1.49/day	7.3%	CAPCOA TRT-4
Implement car sharing program	0.4%	CAPCOA TRT-9
Provide an employee vanpool program	2%	CAPCOA TRT-11
Implement a $6 daily employee parking charge	6.8%	CAPCOA TRT-14
Total	17.2%	

Source: Quantifying Greenhouse Gas Mitigation Measures, CAPCOA

According to the CAPCOA *Quantifying Greenhouse Gas Mitigation Measures,* a Commute Trip Reduction Program can reduce VMT by up to 21 percent. The 12.9 percent reduction required is therefore achievable using proven mitigation for which substantial evidence exists. The mix of strategies listed above would be expected to reduce VMT by 17.2 percent. As mitigation measures, these measures would be identified in the project's mitigation monitoring and reporting program.

Roadway Capacity Expansion Project: Addition of 2.2 Lane Miles

This case study provides an example of a VMT estimate for a roadway expansion project. This case study estimates the VMT impact of a hypothetical project that adds 2.2 lane-miles to a highway in the Kern Council of Governments region.

Analysis

Research on VMT effects of lane mile additions can be used to estimate the VMT effects of proposed roadway expansions, as described in the Draft Technical Advisory:

> Elasticity = [% Change in VMT] / [% Change in Lane Miles]
>
> or
>
> VMT Impact = [% Change in Lane-Miles] * [baseline VMT on those lane-mi] * [elasticity]

Lane mile and VMT data are available from the Caltrans Performance Measurement System (PEMS):

PEMS Data (2013)	Interstate		Principal Arterial - Other Freeways and Expressways	
	Existing Lane-Miles	VMT (millions)	Existing Lane-Miles	VMT (millions)
KernCOG	385.22	1,288.79	285.25	1,045.15

In order to best align this analysis with the academic research from which the elasticities are taken, this case study focuses on interstate highways, freeways, and expressways. Lane miles and VMT from these facilities are aggregated from the raw data, and VMT is calculated using the formula above:

Interstate, Principal Arterial (Freeways and Expressways only)			
Lane Miles	VMT (millions)	%chg in LM	Induced VMT/year
670.47	2,333.94	0.328%	7,658,312

The most recent major study on induced travel, Duranton and Turner (2011), reveals an elasticity of VMT by lane miles of 1.03.

The percent change in lane miles is calculated by dividing project lane miles (2.2 miles) by the total lane miles of the applicable functional classes (670.47 miles) to yield a percent change in lane miles (0.328 percent). This is multiplied by the baseline VMT on those facilities (2,333,940,000 VMT) and an elasticity from the academic studies (1.0) to yield the total induced travel: 7,658,312 VMT/year.

Significance Determination

The Draft Technical Advisory provides a methodology for calculating a VMT threshold. Making use of draft data from the California Air Resources Board and an estimate of the number of transportation projects statewide through 2015, the Draft Technical Advisory recommends a transportation project threshold of 2,075,220 VMT/year. The project is estimated to induce 7,658,312 miles/year, a significant amount of VMT.

As mitigation, the project could administer a toll on the new and/or existing lane miles sufficient to reduce VMT to below-threshold levels, or manage new and/or existing lane miles (e.g. with an HOV requirement) to similarly reduce VMT. Alternately or in conjunction, travel demand management measures such as providing transit or active transportation service or facilities, providing park and ride facilities, or providing a vanpool program could be employed to similarly reduce VMT.

Los Angeles County
Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.2000 Tel
metro.net

Metro

February 29, 2016

Christopher Calfee, Senior Counsel
Governor's Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

RE: 2016 Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA

Dear Mr. Calfee:

Thank you for the opportunity to comment on the *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA (Guidelines),* released January 20, 2016. The Los Angeles County Metropolitan Transportation Authority (Metro) commends the Office of Planning and Research for providing leadership and guidance to find alternative measures of analysis for traffic impacts.

Metro is tasked with implementing both public transit and highway improvements for some of the most heavily congested corridors in the country. Over the years, Metro has been a champion for sustainability and has incorporated policies that specifically address station area planning: the Metro TOD Planning Grants, the Metro First/Last Mile Strategic Plan, Countywide Sustainability Planning Policy, Complete Streets Policy, Metro Rail Design Criteria, Draft Active Transportation Strategic Plan (anticipated completion April 2016), and the Transit Oriented Communities pilot program. Metro supports the Office of Planning and Research's selection of Vehicle Miles Traveled (VMT) as an alternative to Level of Service (LOS) for analyzing transportation impacts and the proposed mitigation measures that would prioritize multi-modalism.

Metro acknowledges the Office of Planning and Research (OPR) for your efforts in refining the Guidelines from the August 2014 version, including addressing comments from Metro. In particular:

- We appreciate the use of a Technical Advisory to contain OPR's technical recommendations and best practices regarding the evaluation of transportation impacts under CEQA, including the most detailed guidance about thresholds of significance, analysis techniques and mitigation.
- The allowance for two-year opt-in period gives time to agencies that have indicated that they need more time to become acquainted with the new procedures.
- The inclusion of detailed suggestions of appropriate mitigations to reduce VMT. We think this information will assist lead agencies in identifying feasible mitigations, and will also create opportunities to implement improvements that we have identified as areas of high need. In particular, we are pleased to see first/last mile access improvements to transit included.

- As a builder and operator of public transit, we acknowledge the brief suggestion for fee based mitigation programs (page 26) that might provide a mechanism for a variety of projects to mitigate impacts by paying into a system to fund transit improvements.

The following suggestions are respectfully submitted to further enhance OPR's guidelines.

Section II: Revised Proposed Changes to the CEQA Guidelines

Proposed Changes to Existing Appendix G
Question C: The proposed wording for the question implies that all physical roadway projects will produce adverse results. A distinction must be made for goods movement, particularly where those projects are dedicated facilities or exclusive to zero and near-zero emissions vehicles, and bus-dedicated lane projects.

Notification to Transit Agencies:
Metro appreciates the reference to notification of transit agencies in the Technical Advisory but strongly supports language within the legislation (Section II) to ensure that transit agencies are notified (1) to suggest mitigation measures to the lead agency, and (2) to adapt transit operations, or lead agencies should consult with transit agencies, in particular for projects within one half mile of transit stops to protect transit facilities.

Transit agencies should be given an opportunity to suggest mitigation measures that must be taken into consideration by lead agencies. In addition, notification to the transit agency is needed to protect transit facilities and inform transit operations. Buildings planned adjacent to rail right-of-way may impact the safety of the rail line or the project may be impacted if noise or vibration from rail operations are transmitted into the proposed structure. Projects adjacent to bus operations may impact service operations and require that operators be notified or buses rerouted. Required notification would allow more efficient coordination surrounding such impacts. In addition, this section could be strengthened by discussion of the particular needs of transit vehicles as users of the roadway.

Induced Vehicle Travel and Transportation Projects:
Metro recommends that a distinction be made between roadway capacity projects that focus on passenger vehicles versus goods movement versus public transportation (bus) vehicles. Capacity projects that focus on goods movement have significant economic benefits and are a State priority. Public transportation (bus) projects, especially dedicated bus only lanes, can increase the efficiency and reliability of public transportation, thereby reducing VMT. It is critical that the Guidelines call for municipalities to assess projects and the system holistically. The goal of the legislation is to reduce GHG emissions via reducing VMT; one key way to do this is increased public transit ridership. Transit service should take precedent position over the auto and not be constrained by the language. Transit projects could be adversely affected with a broader interpretation of the Guidelines. Transit projects should be raised as a solution to accomplishing the goals of SB743 and should not be broadly defined in the same stroke as passenger automobile projects.

Section III: Technical Advisory on Evaluating Transportation Impacts in CEQA

Using Models to Estimate VMT:
As feasible, models should be calibrated with local data and be statistically validated. We suggest OPR facilitate webinars to assist agencies in the various VMT methods. Further, CEQA does not require perfection in impact measurement, it is important to make a reasonably accurate estimate of effects in order to make reasonably accurate estimates of impacts.

Lane Widths:
Reduction in lane widths should also be informed by operational needs of buses, which are substantially larger than passenger vehicles. It is critical that implementing municipalities coordinate these improvements with transit agencies to ensure safe operations for all modes.

Impacts to Transit:
We suggest that additional discussion, guidance, and examples be provided regarding fee programs. Additional guidance would be helpful for agencies that might consider implementing fee based mitigation programs. Additionally we would suggest that a fee based program might fund other VMT reducing mitigations such as active transportation projects and first/last mile improvements.

Recommendations for Considering Transportation Project VMT Effects:
Metro supports the shift to VMT, promotion of multi-modalism, and transit supportive planning. However, we stress that road diets and other traffic calming devices should be coordinated with transit agencies to ensure that the overall improvements do not worsen traffic conditions and hence lower bus speeds, reliability and necessitate the need for additional buses to in order to maintain reliability. Where proposed mitigation measures reduce transit speeds alternative mitigation measures that do not have adverse impacts on transit operations should be considered. To avoid conflicts with traffic plans and policies designed to improve public transit, it is imperative that lead agencies coordinate their projects with transit agencies. Lead agencies should be encouraged to plan proactively to accommodate transit vehicles along with other users of the roadway, including designating corridors that are a priority for transit.

In addition, Metro has concerns related to the proposed assessment of major roadway capacity projects as it relates to:

- The need to distinguish between passenger projects, goods movement projects, and public transportation (bus) projects.
    - Goods movement projects are an economic and environmental priority for the state. Considerations should be incorporated such as higher thresholds, exclusive facilities (truck only lanes) and incentives for advanced technology (zero and near zero emissions).
    - As discussed previously, public transportation (bus) capacity projects should be distinguished as their implementation would result in reduced VMT. Where the SB 743 and the draft guidelines consider building roadway capacity is likely an environmental impact, it should be noted that capacity and accommodations for transit vehicles that

use the roadway generally improve air quality and reduce congestion. We suggest specifically noting that the addition of dedicated bus lanes is an appropriate and effective mitigation for projects with VMT impacts.

- Develop models that adequately assess the regional effects of VMT.
- Recalibrate the fair share of VMT threshold so that the fair share is apportioned to capacity only projects.
- Grandfather in projects in sales tax measures and in the STIP adopted prior to formal implementation.

Supported Mitigation Strategies:

Metro would like to emphasize our *strong support* of the sample potential transportation safety mitigation measures outlined on page 45. These measures, where implemented, will provide support identified areas of critical need for Metro, including, but not limited to first/last mile connectivity to transit, transit expansion, active transportation and complete streets. However, as noted above, we strongly urge OPR to include language that requires local municipalities to coordinate these public improvements with transit agencies to ensure safe multi-modalism and to ensure public transportation reliability. It is critical that the Guidelines stress the importance of project specific context and the need to accommodate all modes, including public transportation.

Suggested Additional Mitigation Strategies:

Metro would like to resubmit the following mitigation measure recommendations to reduce VMT and to reinforce regional multi-modal strategies and implementation of the SCS and subsequent planning.

- Implementation of local or regional plans and programs that are focused on multi-modal implementation, such as Metro's First/Last Mile Strategic Plan. For projects that are beyond ½ mile but less than 3 miles from high quality transit, mitigation could include implementation of first/last mile, and multi-modal access strategies identified in an applicable plan.
- The application of such mitigations may reduce project impacts to less than significant levels.
- Other multi-modal strategies not necessarily linked to first/last mile, such as the implementation of a complete streets policy or ordinance.
- Transit station improvements or expansions that would be necessary due to increased use of a transit station.
- Paying an in-lieu fee for transit improvements or maintenance.
- As discussed above, addition of dedicated bus lanes is an appropriate and effective mitigation measure for projects with VMT impacts.

Addressing Tradeoffs and Finding Win-Win Safety Improvements

Based on the studies cited, surface roadway lanes can be redesigned from the traditional 12.0 foot widths to 9.2 – 10.8 foot widths with little or no down-side. It is critical that any consideration to narrow lane widths be consulted with transit agencies and informed by transit operations to ensure that there is not an increased risk of being sideswiped due to the narrowing of the dynamic envelope. The curb lane should be reserved for buses and other large vehicles and be wide enough to safely accommodate buses. The rule should also consider the removal of on-street parking and installation of off street parking to create a true transit/pedestrian environment.

Once again, thank you for the opportunity to comment and for incorporating many of our comments from the 2014 draft Guidelines. If you have any questions regarding this response, please contact Elizabeth Carvajal at 213-922-3084 or by email at CarvajalE@metro.net.

Sincerely,

Phillip A. Washington
Chief Executive Officer

Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

Metro

Board Report

File #: 2017-0048, **File Type:** Informational Report **Agenda Number:** 13.

PLANNING AND PROGRAMMING COMMITTEE
FEBRUARY 15, 2017

RECEIVE **oral report on the Long Range Transportation Planning Process**

DISCUSSION

Measure M's passage set the stage for a new Long Range Transportation Plan (LRTP) for Los Angeles County, and the opportunity to approach this task with the innovative thinking that shapes much of the Board's recent policies and direction.

Key objectives include:

- following through on the transportation vision for the region;
- working with our diverse partner communities to do so;
- setting critical investment priorities with funds that are still challenged when compared to need; and
- conducting the process with analytic discipline and transparency.

Staff will present the plan's overall structure, process, and anticipated schedule in an oral report.

ATTACHMENTS

Attachment A - Presentation: LRTP Approach

Prepared by: Therese W. McMillan, Chief Planning Officer, (213) 922-7077

Reviewed by: Phil Washington, Chief Executive Officer, (213) 922-7555

LRTP Approach: Connecting the Dots Dynamic and Integrative Planning

Board Meeting, February 23, 2017, 9:00 a.m.
Chief Planning Officer Therese W. McMillan

Introduction

Measure M's passage set the stage for a new Long Range Transportation Plan (LRTP) for Los Angeles County, and the opportunity to approach this with innovative thinking that is shaping so much of this Board's philosophy and direction.

Metro is not required to strictly adhere to federal structures and timelines, as SCAG serves as the MPO.

Key Objectives

- Following through on the transportation vision for the region;
- Working with our diverse partner communities to do so;
- Setting critical investment priorities with funds that are still challenged when compared to need; and
- Conducting the process with analytic discipline and transparency.

MAY NOT HAVE ALL THE ANSWERS BUT NEED TO RAISE THE CRITICAL QUESTIONS.

Metro Strategic Plan

Metro is also conducting a Strategic Plan.

- Will directly inform the Long Range planning process; and
- Coordination is critical, and proposed LFTP flexible approach will greatly facilitate that.

Propose a New Approach

A NEW, “modular” approach is proposed:

- Treats LRTP major elements as stand-alone deliverables;
- Identifies and addresses **areas of overlap and influence** among these discrete elements;
- Allows for planning over a **continuum**, with multiple planning milestones or horizons - no “one size fits all”.

Modular Approach

Modular approach allows maximum flexibility to actively engage departments within the agency.

- **Will not duplicate or replace existing plans and programs within the agency.**
- Will inventory relevant current efforts, highlight connections, and fill in any “gaps” among Metro’s planning needs.
- Will provide LA County required elements to regional planning per federal and state mandates.

Public Engagement

Meaningful public engagement is a significant opportunity:

- The breadth and scope of the planning effort can be overwhelming if all at once (traditional approach).
- Individual modules can be rolled out for stakeholder information and participation, as appropriate.
- Not all stakeholders will engage in every element, and outreach programs can be managed at different scales.
- However, stakeholders and the public need to know the relationships between modular efforts and engage in the “intersections”.

LRTP Planning Process Modular Outline

Section 1: **Who** we serve, **what** they need, and **where** do they go?

A. A Plan for Communities

Demographics and socio-economic analysis; include an **equity element** to address the real "opportunity gap" in Los Angeles County and how transportation assists in breaching that gap

LRTP Planning Process Modular Outline

Section 1: **Who** we serve, **what** they need, and **where** do they go?

B. A Plan for Partners

Define roles of Metro and its local, regional, state and federal partners to **catalyze change** and/or **sustain critical activities**

C. A Plan for Outcomes

Mission, goals, objectives; provide the foundation for relevant **system** performance metrics → and how to **measure and monitor** them

LRTP Planning Process Modular Outline

Section 2: **How** we achieve system outcomes: today and in the future

A. A Plan to Manage

Address the **transportation core**: operations, maintenance, safety and security

B. A Plan to Serve

Identify and coordinate Metro's multiple planning and programming activities impacting the 3 Es: **Equity, Economy and the Environment**

LRTP Planning Process Modular Outline

Section 2: **How** we achieve system outcomes: today and in the future

C. A Plan to Build

Develop the **Capital Investment Program** for a 40-50 year period → priorities, project delivery, and preparing for innovation

D. A Plan to Fund

Determine and **prioritize** the investments needed for the **entire plan** – resources and costs; priorities where funding gaps are anticipated; **scenarios** to test assumptions and position for uncertainty

Estimated LRTP Timeline

FY 2017-18: Establishing the Baseline

<u>Section 1</u>:

- Plan for Communities — Sept. 2017
  - Equity Analysis — Mar. 2018
- Plan for Partners — Dec. 2017
- Plan for Outcomes → Identify and Assign Performance Metrics to Section 2 elements: Manage, Serve, Build — Mar. 2018

Estimated LRTP Timeline

Section 2:

- Plan to Manage → Define System **Baseline**, Metrics and key questions — Mar. 2018
- Plan to Serve → Define System **Baseline**, Metrics and key questions — Jun. 2018
- Plan to Fund — Dec. 2017
  - Identify 40-year **Baseline** System and Program Costs
  - Identify 40-year **Baseline** Revenues and growth assumptions
- Plan to Build → Define System **Baseline**, Metrics and key questions — Dec. 2017

Estimated LRTP Timeline

FY 2018-19: Scenario Building and Recommendations

- Define Alternative System Futures — Sept. 2018
  - Priority scenarios/variations
- Define and "stress test" financial investment packages to match scenarios — Dec. 2018
- Analyze tradeoffs and present recommendations — Mar. 2019
  - Final Capital Investment Program
- ***Public outreach program will be developed to support all activities in 2017 and 2018.***

Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

File #: 2016-0903, **File Type:** Project **Agenda Number:** 14.

PLANNING AND PROGRAMMING COMMITTEE
FEBRUARY 15, 2017

SUBJECT: CHAVEZ & FICKETT JOINT DEVELOPMENT GUIDELINES

ACTION: ADOPT DEVELOPMENT GUIDELINES FOR THE CHAVEZ & FICKETT JOINT DEVELOPMENT

RECOMMENDATION

ADOPT the **Development Guidelines for the joint development of 1.56 acres of Metro-owned property at Cesar E. Chavez Avenue and Fickett Street.**

ISSUE

In November 2009, the Metro Gold Line Eastside Extension opened and began providing eastside residents light rail transit service including four stations in Boyle Heights. As part of the construction of the extension, numerous parcels were acquired by Metro to build the stations and for construction staging. The properties at Cesar E. Chavez and Fickett (Site - Attachment A) were originally acquired for construction of the Red Line extension through Boyle Heights. Subsequently, the properties were used for staging of the Gold Line Eastside Extension. These properties have potential for transit oriented development and create an opportunity for civic engagement and visioning. Over the course of the past year, the Joint Development staff undertook a robust community outreach and engagement process with the objective of preparing Development Guidelines (Guidelines - Attachment B) for the Site. The end result of this effort is a set of Guidelines which reflect the vision and desires of the Boyle Heights residents and stakeholders. If adopted by the Board, the Guidelines will be part of a Request for Proposals (RFP) for joint development of the Site to be released in March 2017.

DISCUSSION

Site Description

The Site is along a historic commercial corridor dating back to the 1870s. Formerly known as Brooklyn Avenue, Cesar E. Chavez Avenue is a thriving, eclectic, major commercial corridor and serves as an important shopping area for the residents of Boyle Heights. Additionally, the City of Los Angeles has identified Cesar E. Chavez Avenue as part of its Great Streets initiative, promoting streets that are livable, accessible, and engaging for all people. The Site consists of two development parcels, Parcel A and Parcel B (see Attachment A), which collectively comprise a total of 68,000 square feet of developable space.

Community Outreach

Metro began the outreach process in February 2016 together with a consultant team made up of Gwynne Pugh Urban Studio (urban design), Perkins and Will (architecture), and DakeLuna (outreach). The community outreach process consisted of various community workshops. There were two 2-hour community workshops, one on Saturday, April 16, 2016, and one on Wednesday, May 4, 2016, along with a culminating community workshop on Saturday, August 6, 2016. The first workshop was aimed at identifying community desires - their wish list - as well as their concerns. Metro presented four topics for discussion to participants in the initial outreach meetings to encourage discussion about the Development potential of the Site:

- What are the goals of this community?
- What is working within the community?
- What is not working within the community?

There were approximately 40 participants at both community workshops, and nearly 60 participants in the culminating workshop. Comments were also taken online and accepted by the team via email and regular mail for those who were not able to make it to the meetings. Metro staff and the consultant team then presented the initial findings and guidelines to the Boyle Heights Design Review Advisory Committee (DRAC). The DRAC made some minor amendments and supported moving forward with the Guidelines and the RFP. The Boyle Heights Neighborhood Council (BHNC) will review the Guidelines in February 2017.

Vision for Development

Through the community engagement process, a number of recurring themes evolved which became the foundation for the vision and the Guidelines themselves. These themes included:

- Provide access to healthy grocery options at reasonable prices;
- Provide flexible spaces for art education and community partnerships;
- Strive to keep local businesses in Boyle Heights;
- Support the community's diversity and provide and enhance amenities for local residents and families;
- Promote equitable housing models suitable for this community;
- Balance density with well-designed open spaces that promote equal access for children and seniors alike;
- Preserve and celebrate the eclectic, artistic character of the neighborhood through the incorporation of public art, opportunities for performances, and a vibrant street life;
- Provide adequate parking for the development's demand;
- Embrace the rich history of street vendor culture;
- Promote access to healthy food at affordable prices;
- Create usable and welcoming public open space.

Through the community engagement process, the Boyle Heights community vocalized their vision for the Site: a mixed-use development with a focus on a community-serving grocery store, which can include affordable housing as well as public open space, some flexible space for education and community activities, and an enhanced landscape and hardscape strategy that seamlessly connects

the project to its neighborhood. Metro has assessed the viability and fit of each of these program elements and given consideration to the Site's zoning regulations, community fit and vision, and the financial feasibility of the program.

Development Guidelines

The Guidelines for the Site (Attachment B) include an outline of specific uses as well as examples of densities and organization of uses. Specifically, the Guidelines recommend the following:

- Community-Serving Commercial Use

The community has expressed a strong desire for a grocery store to serve the local community. In particular they expressed a desire for fresh produce, affordability and provision of items that meet the needs of the local community. Metro assessed the fit of a grocery store at two project sites currently open to development: Mariachi Plaza and Chavez-Fickett. Through a preliminary financial feasibility study, a review of the current zoning code and an assessment of site access opportunities, Metro has determined that a grocery store is an appropriate program use for Chavez-Fickett on Parcel A. Approximately 20-25,000 square feet would be desirable but needs to be sized to allow for the attendant uses such as parking, loading and trash collection.

- Affordable Housing

At this Site, the guidelines encourage a minimum of 40 and up to 60 units of housing, with as many as are financially feasible in the low and very low restricted affordable categories. The units should have a range of 30-50% area median income. Ideally, varying sized units should be provided from studio units to three-bedroom units. In addition, the development is encouraged to accommodate a multi-generational community, from children through seniors. The affordable housing component could be part of a development with community-serving commercial uses as outlined above on Parcel A. Alternatively, the housing component can be independent from a development on Parcel A and can be located on Parcel B.

- Community Uses

A community room or 'flex' space of about 2,000 square feet would be desirable to serve community needs as well as the affordable housing development. An option is to include this space as part of an affordable housing project or independently on either Parcel A or B and made available to the public.

- Park Uses

Park and recreation uses are important to the community. The community has expressed a desire for a children's playground and/or, green space with shade. On Parcel B, the guidelines provide for an option to use the Site exclusively for open space/park/community gardens. In consultation with the City of Los Angeles Department of Recreation and Parks, an option may be available to create a public/private park in partnership with the City. The developer can enter into a joint use MOU with the Department of Recreation and Parks for the purpose of a shared maintenance agreement for the park. (Developers/proposers should research this option further).

DETERMINATION OF SAFETY IMPACT

Approval of the Development Guidelines will have no direct impact on safety. The eventual implementation of a joint development at the Site will offer opportunities to improve safety for transit

riders and the community at large through better pedestrian and bicycle connections.

FINANCIAL IMPACT

Funding for joint development activities related to the Guidelines and any subsequent development activity, including the RFP process, is included in the FY17 budget in Cost Center 2210 (Joint Development) under Project 401037 (Chavez Fickett). Since development of the properties is a multi-year process, the project manager will be responsible for budgeting any costs associated with joint development activities that will occur in future years. Disposition of the Site may provide a source for on-going transportation-supporting revenues to Metro.

Impact to Budget
The source of funds for joint development activities is local right-of-way lease revenues, which are eligible for bus/rail operating and capital expenses. Adoption of the Guidelines will not impact ongoing FY17 budgeted bus and rail operating and capital costs, or the Proposition A and C and TDA administration budget.

ALTERNATIVES CONSIDERED

The Board may choose not to adopt the Guidelines. This is not recommended because the Guidelines were developed with considerable stakeholder and community input and from the DRAC and BHNC. Pursuant to the Metro Joint Development Policy, approval of the Guidelines is necessary in order to move forward with the joint development process and the release of an RFP.

NEXT STEPS

If the Guidelines are approved by the Board, staff will issue an RFP for joint development of the Chavez Fickett Site. The RFP could be released in March 2017. If authorized to move forward, staff anticipates bringing recommendations for selection of a developer to the Board late summer 2017.

ATTACHMENTS

Attachment A - Site Map
Attachment B - Cesar E. Chavez and Fickett Avenue - Development Guidelines

Prepared by: Vivian Rescalvo, Senior Director, Countywide Planning & Development, (213) 922-2563
Jenna Hornstock, Deputy Executive Officer, Countywide Planning & Development, (213) 922-7437
Calvin Hollis, Senior Executive Officer, Countywide Planning & Development, (213) 922-7319

Reviewed by: Therese W. McMillan, Chief Planning Officer, (213) 922-7077

Phillip A. Washington
Chief Executive Officer

ATTACHMENT A

Site Map

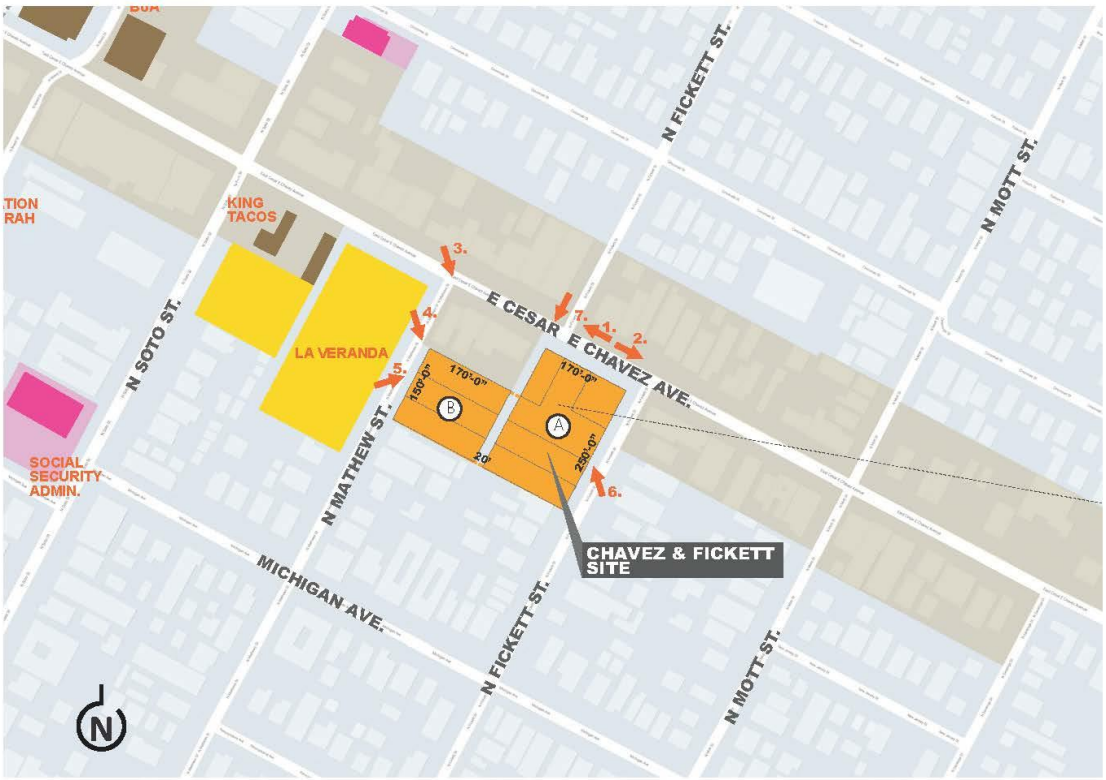


Figure 1: Chavez-Fickett Joint Development Site Map

1. Parcel A: Existing Parking lot (42,500 SF)
2. Parcel B: Existing lot (25,500 SF)

Los Angeles County
Metropolitan Transportation Authority

ATTACHMENT B

DRAFT

GUIDE FOR DEVELOPMENT: CHAVEZ & FICKETT

JANUARY 2017

Metro®

This page was intentionally left blank.

TABLE OF CONTENTS

This page was intentionally left blank.

1. OVERVIEW

HOW TO USE THIS GUIDE FOR DEVELOPMENT

The Los Angeles County Metropolitan Transportation Authority ("Metro") has prepared this Guide for Development ("Guide") to communicate community stakeholders' and Metro desires for the joint development of Metro-owned property ("Development") at Parcels A and B located along Cesar E. Chavez Avenue, between Mathews Street and Fickett Street, known collectively as "Chavez-Fickett". The Guide summarizes specific policies that apply to the project site and defines objectives that were developed from existing land use regulations and a public outreach process conducted from February to August 2016. These guidelines will be a basis for evaluating proposals.

It is organized as follows:

1. Overview
2. Vision for Development
3. Program Guidelines
4. Development Guidelines
5. Regulatory and Policy Framework
6. Transit Facility Requirements

This Guide will accompany the 2017 Request for Proposals ("RFP") for Development of Metro Owned Parcels at the Chavez-Fickett site. For reference purposes, Figure 1 provides a map of the Metro-owned parcels at the Chavez-Fickett site.

All applicable State, County and City of Los Angeles regulations and code requirements shall apply.

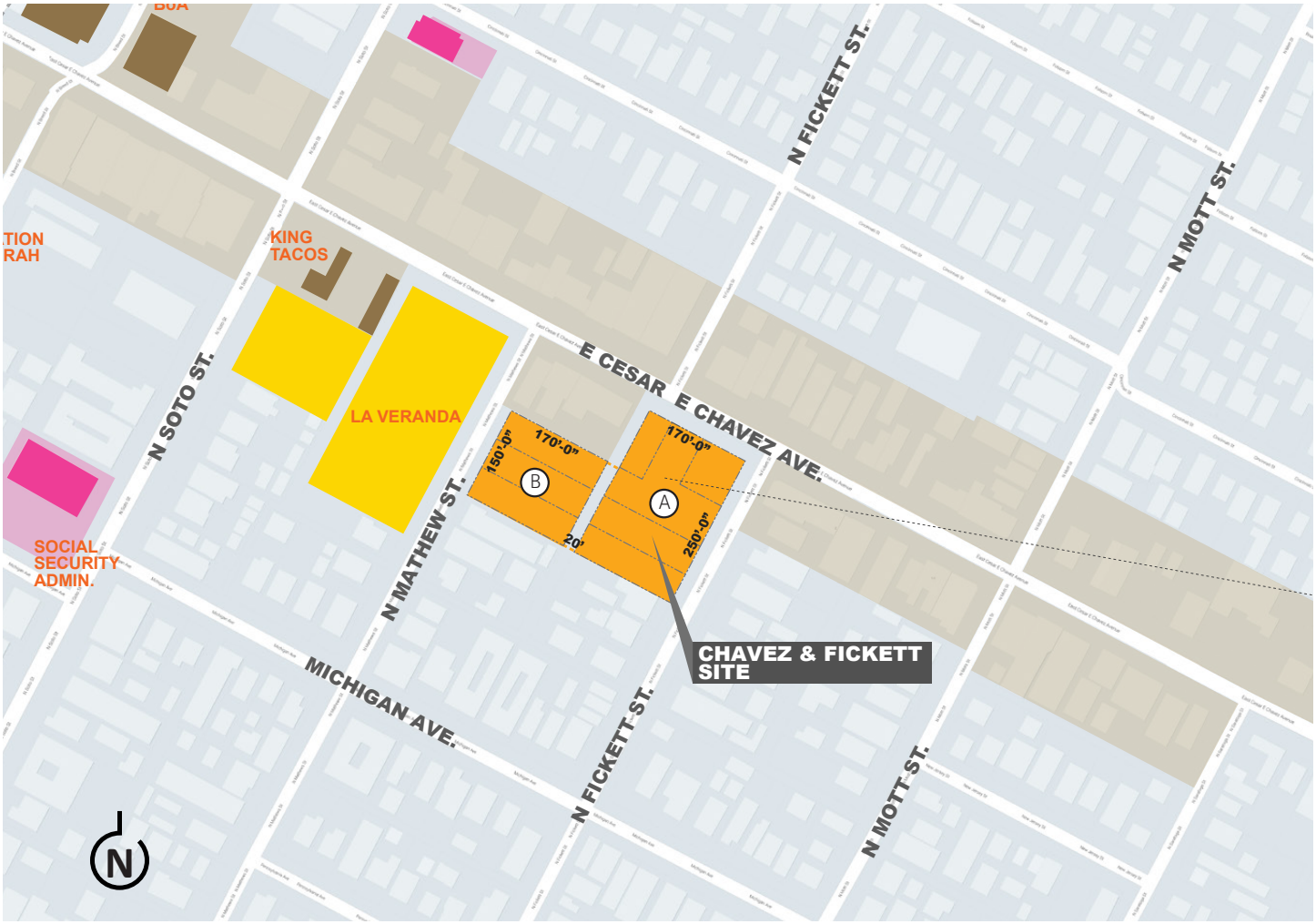


Figure 1: Chavez-Fickett Joint Development Site Map

1. Parcel A: Existing Parking lot (42,500 SF)
2. Parcel B: Existing lot (25,500 SF)

JOINT DEVELOPMENT PROCESS

The Metro Joint Development Process includes four stages: (1) initial community outreach; (2) developer solicitation and selection; (3) project refinement, including additional community outreach, Joint Development Agreement ("JDA") and Ground Lease ("GL") Negotiations; and (4) permitting and construction. The process at Chavez-Fickett began in February 2016. This Guide is the outcome of the first stage of the JD process.

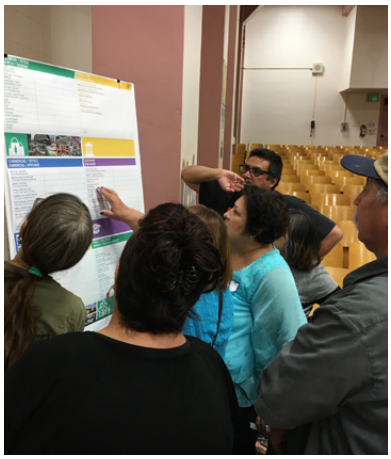
Community Outreach

Metro community outreach process consisted of various community workshops. There were two 2-hour community workshops, one on Saturday, April 16, 2016 and one on Wednesday, May 4, 2016, along with a culminating community workshop on Saturday, August 6, 2016. The first workshop was aimed at identifying community concerns and wants for varying program elements, and by polling members of the community for desired program types. The second workshop communicated the results of the poll and summarized community concerns heard at the previous workshop. Finally, Metro held a culminating workshop to present the community with the results of a preliminary feasibility assessment as well as program combinations for the Chavez-Fickett site.

There were approximately 40 participants at both community workshops, and nearly 60 participants in the culminating workshop. Comments were also taken online and accepted by the team via email and regular mail for those who were not able to make it to the meetings. A summary of the comments is included in the Appendix A. Metro presented four topics for discussion to participants in the initial outreach meetings to encourage discussion about the Development potential of the site.

> What are the goals of this community?
> What is working within the community?
> What is not working within the community?
> What do you want to see in the community?

Quotes gathered from the outreach process are included throughout this document.



In addition, Metro has formed the Boyle Heights Transit Oriented Development Design Review Advisory Committee ("DRAC") as a project design review committee to represent a broad group of stakeholders. The DRAC is expected to (a) advise Metro on design issues of importance to residents, businesses, institutions and stakeholder groups in the project area; (b) coordinate and act as liaison between businesses, residents, property owners and Metro; and (c) serve as the formal means through which community members are involved in the evaluation of the design for the project sites.

SITE DESCRIPTION

The Chavez-Fickett site is located along a historic commercial corridor dating back to the 1870s. Formerly known as Brooklyn Avenue, Cesar E. Chavez Avenue today is a major commercial corridor extending a half-mile east-west from Cummings Street to Mott Street. The project site, located along Cesar E. Chavez Avenue, between Mathews Street and Fickett Street, consists of two development parcels - Parcel A and Parcel B (see Figure 1, page 6), along with associated open and public space.

Parcel A is the larger parcel and is directly west of Fickett Street. It is a rectangular shaped parcel consisting of numerous adjacent lots with two different City zoning designations and a total of 42,500 square feet. The first set of lots, closest to Cesar E. Chavez Avenue are zoned C2-1-CUGU, and measure 150 feet deep by 170 feet wide. The lots immediately adjacent are zoned R3-1-CUGU, and measure 100 feet deep by 170 feet wide for a total of 17,000 square feet. Parcel B is east of Mathews Street and is separated from Parcel A by a service alley. Parcel B is rectangular in shape and consists of various lots zoned as R3-1-CUGU. The parcel measures 150 feet deep by 170 feet wide and totals 25,500 square feet.

Collectively, Parcels A and B comprise a total of 68,000 square feet of developable space. The project site is one of a series of Metro-owned properties located in Boyle Heights, but is a signature opportunity due to its prominent publically-oriented location.

As part of the City of Los Angeles's community plan update, the historic Brooklyn Corridor is slated to receive special zoning recognition in an effort to preserve the character of this long-standing neighborhood (refer to Regulatory and Policy Framework, Page 34). It is anticipated that the updated Boyle Heights Community Plan will be adopted in 2018.

2. VISION FOR DEVELOPMENT

THE CONTEXT AND VALUE OF BOYLE HEIGHTS

Just east of Downtown Los Angeles, Boyle Heights is a 6.5 square mile neighborhood bound by the Interstate Highway 10 to the north, Indiana Street to the east, Washington Boulevard to the south, and the Los Angeles River to the west. With great views of the Downtown L.A. skyline, Boyle Heights has experienced an increased amount of visibility and attention as recent developments have made efforts to capitalize on the neighborhood's central location. Boyle Heights is home to one of the largest Hispanic and Latino communities in the City of Los Angeles, characterized by a vibrant working class neighborhood, a long-standing Mexican-American heritage and opportunities for growth and community partnerships.

Today, a growing population of over 148,000 Angelenos call Boyle Heights home. This neighborhood predominantly consists of households made up of four or more people and has a median income of $34,493, which is 40% lower than L.A. County's $55,870. Additionally, renters in Boyle Heights outnumber home owners. Renters make up 73% of the population, and only 27% of residents own one of the 39,680 housing units available. Yet, the most pressing indicator of a need for housing is the fact that Boyle Heights sees an average vacancy rate of 3.6%, as compared to the County average of 4.1%. While the number of vehicles available per housing unit is lower than the County average, many local residents and business owners have identified a large demand for public parking to serve local businesses.

	Boyle Heights	Los Angeles County
POPULATION[1]	148,806	9,818,605
HOUSEHOLD		
Median household income	$34,493	$55,870[2]
Family households	78.8%	67.1%
Average household size	O 4.2 R 3.9	O 3.2 R 2.87
Household size		
1	16.7%	25.6%
2	17.1%	27.3%
3	16.6%	16.5%
4	49.6%	30.6%
Vehicles available per housing unit		
0	19.8%	9.8%
1	36.4%	35.1%
2	27.2%	35.1%
3+	16.5%	20%
HOUSING	39,680	3,462,075
Occupied	37,310	3,242,391
	O 10,083 R 27,227	O 1,503,915 R 1,738,476
	27.1% 72.9%	46.4% 53.6%
Vacant	2,370	219,684
Homeowner Vacancy Rate	2.0	1.4
Renter Vacancy Rate	3.6	4.1

O: Owner
R: Renter
Source: US Census Bureau, 2010-2014 American community Survey

[1] Population size is based on the aggregate data of the following zipcodes: 90023,90033,90063
[2] The California Department of Housing and Commmunity Development estimates the 4-person Area Median Income to be $64,800

U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates

HISTORIC BROOKLYN CORRIDOR

Boyle Heights' rich tapestry of cultural diversity has a long tradition of immigrant contributions. Since before the turn of the 20th century, Boyle Heights has been home to several migrant communities, including Jewish, Japanese, Islamic and Mexican immigrants. Originally served by the Red Car trolley system, Cesar E. Chavez Avenue has early 1900s tree-lined blocks of neighborhood-oriented shops, restaurants, and services, and is a major commercial corridor in the neighborhood. The Chavez-Fickett site is located along a historic commercial corridor dating back to the 1870s. Formerly known as Brooklyn Avenue, Cesar E. Chavez Avenue today is a major commercial corridor extending a half-mile east-west from Cummings Street to Mott Street. As part of the City of Los Angeles's community plan update, the historic Brooklyn Corridor is slated to receive special zoning recognition in an effort to preserve the character of this long-standing neighborhood (refer to Regulatory and Policy Framework, Page 34). Additionally, the City of Los Angeles has identified Cesar E. Chavez Avenue as part of its Great Streets initiative, promoting streets that are livable, accessible, and engaging public spaces for all people.

Future development should be informed by the long history of the corridor, and acknowledge both its physical and cultural implications, which may include but are not limited to the following: scale of development fronting historic corridor, architectural vernacular found in existing historic buildings, and recognition of diversity and inclusion of multicultural influences. A successful development on this site will find a harmony between the historic implications of the neighborhood and an ever-changing tapestry of multiple cultural influences.

Leo Jarzomb, *Brooklyn Theatre in Boyle Heights*

COMMUNITY FEEDBACK

Stakeholder feedback included several important recurring themes:

- > Provide access to healthy grocery options at reasonable prices;
- > Provide flexible spaces for art education and community partnerships;
- > Strive to keep local businesses in Boyle Heights;
- > Support the community's diversity and provide and enhance amenities for local residents and families;
- > Promote equitable housing models suitable for this community;
- > Balance density with well-designed open spaces that promote equal access for children and seniors alike;
- > Preserve and celebrate the eclectic, artistic character of the neighborhood through the incorporation of public art, opportunities for performances, and a vibrant street life;
- > Provide adequate parking for the development's demand;
- > Embrace the rich history of street vendor culture;
- > Promote access to healthy food at affordable prices;
- > Create usable and welcoming public open space.

"Place for kids and seniors to exercise with green walkways, signage and exercise equipment"

"Affordable and high quality food"

The community character must be carefully maintained while still fostering an active, welcoming public environment which celebrates the neighborhood's rich history.

TOP 'YES' ANSWERS
RESPUESTAS A FAVOR

Park / Playground / Community Garden
Park / Playground + Community Garden
Parque / Patio de recreo / Jardín comunitario
Parque / Patio de recreo + Jardín comunitario

Housing
Affrodable Housing (Rental) + Senior Housing
Viviendas
Viviendas asequibles (alquilables) + Viviendas para personas mayores

Grocery Store
Supermercado

Flexible Space
Espacios flexibles

Art & Music Classes
Clases de arte y música

THE VISION FOR THE SITE

Through the community engagement process, the Boyle Heights community vocalized their vision for the site: a mixed-use development with a focus on a community-serving grocery store, and affordable housing as well as public open space, some flexible space for education and community activities, and an enhanced landscape and hardscape strategy that seamlessly connects the project to its neighborhood. Metro has assessed the viability and fit of each of these program elements and given consideration to the site's zoning regulations, community fit and vision, and the financial feasibility of the program.

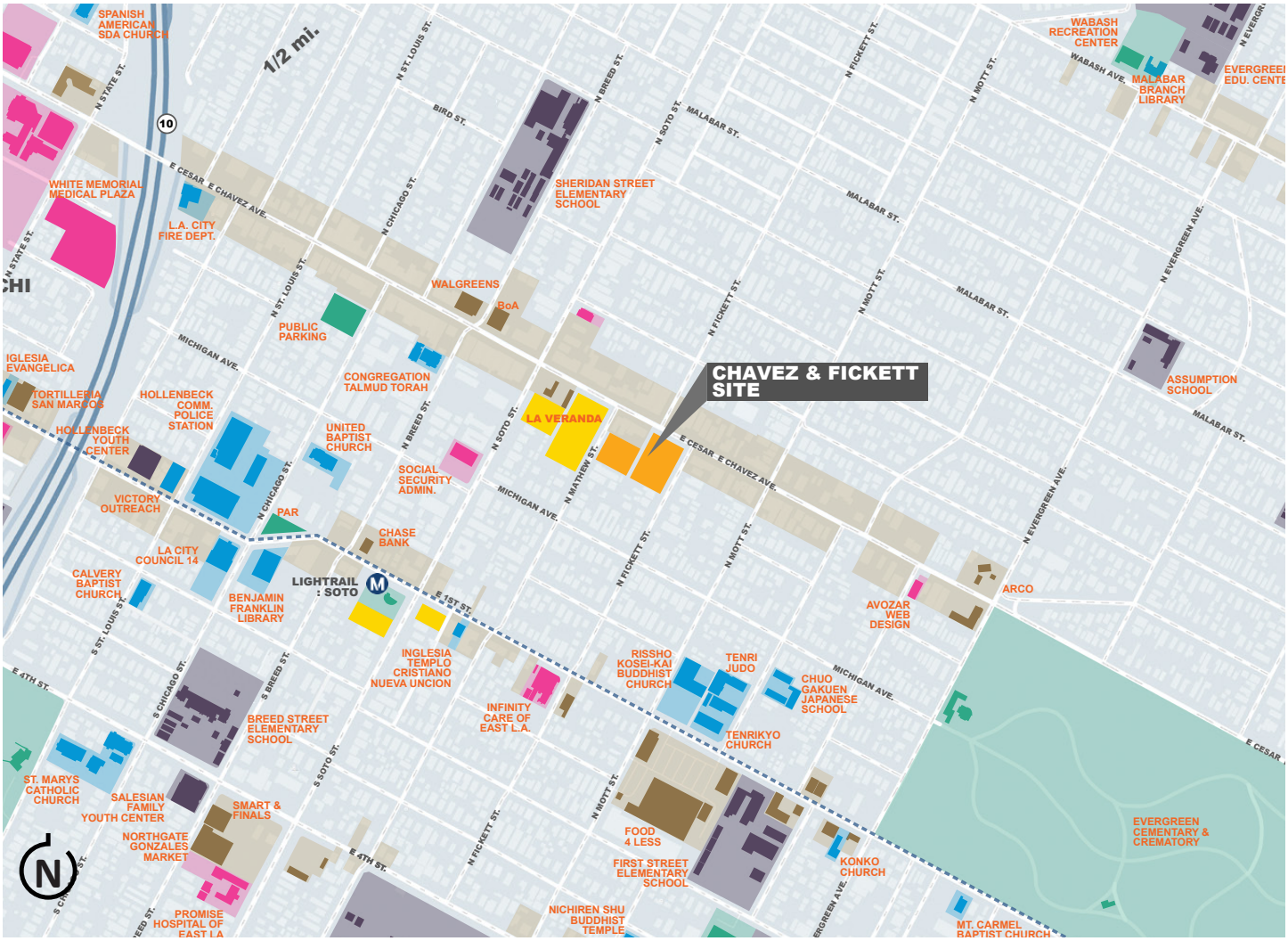
Regarding the community serving grocery store, there was strong support from the community to have this use at one of the Metro JD sites in Boyle Heights. Metro assessed the fit of a grocery store at two project sites currently open to development: Mariachi Plaza and Chavez-Fickett. Through a preliminary financial feasibility study, a review of the current zoning code, and an assessment of site access opportunities, Metro has determined that a grocery store is an appropriate programmatic use for Chavez-Fickett and is not including it in the development guidelines for the Mariachi Plaza site.

Aerial Photo of Existing Conditions, 2016

Existing Alley Condition, 2016

Regina Zamarripa, 2016. *Las Fotos Project*

Stephanie Medina, 2016. *Las Fotos Project*



0 mi | 1/4 mi | 1/2 mi | 3/4 mi

MAP LEGEND/ DESCRIPTION

EDUCATION/*EDUCACIÓN*
- SATELLITE COLLEGE — *ESPACIO PARA COLEGIO SATÉLITE*
- MAGNET/ CHARTER SCHOOL — *ESCUELA AUTÓNOMA/MAGNET*
- CHILDCARE CENTER — *GUARDERIA*
- SENIOR DAY CARE — *CUIDADO PARA PERSONAS DE TERCERA EDAD*
- MUSEUM — *MUSEO*

RESIDENTIAL/*RESIDENCIAL*
- MULTI-FAMILY HOUSING — *VIVIENDAS A PRECIO DE MERCADO*
- AFFORDABLE HOUSING — *VIVIENDAS ASEQUIBLES*
- SENIOR HOUSING — *VIVIENDAS PARA PERSONAS DE TERCERA EDAD*
- ASSISTED LIVNG FACILITY — *FACILIDAD DE VIDA ASISTIDA*
- HOTEL/MOTEL — *HOTEL/ MOTEL*

PUBLIC-CIVIC/*ESPACIOS CÍVICOS*
- CITY/ COUNTY/ STATE AGENCIES — *AGENCIAS DE LA CIUDAD Y DEL CONDADO*
- SOCIAL SECURITY OFFICE — *OFICINA DE SEGURO SOCIAL*
- EMPLOYMENT/ TRAINING CENTER — *CENTRO DE CAPACITACIÓN Y APRENDIZAJE*
- COMMUNITY CENTER — *CENTRO COMUNITARIO*
- PUBLIC LIBRARY — *BIBLIOTECA PÚBLICA*
- NON-PROFITS — *CENTROS SIN FINES DE LUCRO*
- CITY COUNCIL/ SUPERVISOR OFFICE — *AYUNTAMIENTO*
- POLICE/FIRE STATION — *ESTACIÓN DE POLICÍA/ BOMBEROS*
- CHURCH

COMMERCIAL-OFFICE /*COMERCIO-OFICINAS*
- BUSINESS INCUBATORS — *INCUBADORA DE NEGOCIOS*
- MEDICAL PLAZA/ OFFICES — *PLAZA/ OFICINAS MEDICAS*
- MENTAL HEALTH OFFICES — *OFICINAS DE SALUD MENTAL*
- DENTAL OFFICES — *OFICINAS DENTAL*
- COMMERCIAL OFFICE — *OFICINAS COMERCIALES*
- PROFESSIONAL OFFICE — *OFICINAS PROFECIONALES*

PUBLIC OPEN SPACE /*ESPACIO PÚBLICO AL ABIERTO*
- PLAZA — *PLAZA*
- FARMERS MARKET — *MERCADOS AL AIRE LIBRE*
- WALKING PATHS — *SENDEROS PARA CAMINAR*
- FITNESS SPACES — *ESPACIOS PARA HACER EJERCICIO*
- COMMUNITY GARDEN — *JARDÍN COMUNITARIO*
- PUBLIC ART — *ARTE PÚBLICO*
- PLAYGROUND — *PARQUES Y PATIOS DE RECREO*
- STREET VENDOR HUB — *VENDEDORES DE COMIDA*
- FOOD TRUCK

COMMERCIAL-RETAIL /*COMERCIO-TIENDAS*
- GROCERY STORE — *SUPERMERCADO*
- DRUG STORE/ PHARMACY — *FARMACIA*
- RESTAURANT/ CAFE — *RESTAURANTE/ CAFÉ*
- HAIR/ NAIL SALON — *SALÓN DE BELLEZA*
- CLOTHING/ SHOE STORE — *TIENDA DE ROPA ZAPATOS*
- BANK — *BANCO*
- LAUNDRY — *LAVANDERIA*
- GYM — *GIMNASIO*

MARIACHI PLAZA /*MARIACHI PLAZA*

METRO SITE /*METRO DEL PROYECTO*

COMMERCIAL CORRIDOR /*CORREDOR COMERCIAL*

LIGHTRAIL & TRAIN /*TREN LIGERO &TREN*

FREEWAY /*AUTOPISTA*

3. PROGRAM & DEVELOPMENT GUIDELINES

In recognition of the unique qualities of Boyle Heights and the particular needs of the community, Metro looks to a successful project where the program, uses, and design guidelines set forth in this document will be implemented in a collaborative process with the community.

The purpose of Section 3, Program & Development Guidelines, is to give guidance to realize the vision of the community.

PRIMARY GOALS

There are three primary goals within the community vision for the Site:

1. Consider the Rich History of the Community.
As outlined in Section 2 (page 9) consideration should be given to the historical and commercial significance of this site to Boyle Heights' neighborhood and the Cesar E. Chavez corridor itself. The development should be sensitive to this history in general and to the community in particular. Another element is the social culture of the public realm, wherein the community comes together to shop, celebrate, and socialize.

2. Address Community Needs.
It is important to recognize that this community has been underserved in many ways and that the project seeks to begin to address those needs. This includes the need for a neighborhood serving grocery store with affordable, fresh food; affordable housing – including housing that is affordable at the lowest income levels; as well as community spaces to gather such as open spaces, parks, and community centers.

3. Ensure Existing Residents Benefit.
The community is concerned that new developments must be oriented towards the existing residents and that it not contribute to potential displacement in the corridor.

USES

For the Chavez-Fickett project site, the following uses and quantities should be considered as a guideline - the specific quantity, spatial organization and uses should be based upon the developer's assessment of the community outreach conclusions and its view of project feasibility. This program was developed out of a collaborative process with the community through a series of workshops.

Community-Serving Commercial

The community has expressed a strong desire for a grocery store to serve the local community. In particular they expressed a desire for fresh produce and items that meet the needs and affordability of the local community. This store footprint should be placed on the C2 zoned site, Parcel A. A store of approximately 20-25,000 square feet would be desirable but needs to be sized to allow for the attendant uses such as parking, loading, and trash. Priority will be given to proposals which include a local serving grocery store in its development.

Affordable Housing

Metro encourages a minimum of 40 and up to 60 units of housing. The permitted range for the units is 30-50% AMI; however, priority will be given to those projects with the as many low and very low restricted affordable units as are financially feasible. Ideally, varying sized units should be provided from studio units to three bedroom units. In addition, the development is encouraged to accommodate a multi-generational community, from children through seniors. The affordable housing component could be part of a development with community-serving commercial uses as outlined above on Parcel A. Alternatively, the housing component can be independent from a development on Parcel A and can be located on Parcel B.

Community Uses

A community room or 'flex' space of about 2,000 square feet would be desirable to serve community needs as well as for the affordable housing development. This space could be used in collaboration with local community organizations. An option is to include this space as part of an affordable housing project or independently on either Parcel A or B.

Park Uses

Park and recreation uses are important to the community. The community has expressed a desire for a children's playground and/or, green space with shade as is feasible. On Parcel B it is an option to use the site exclusively for open space/park/community gardens. In consultation with the City of Los Angeles Department of Recreation and Parks, an option may be available to create a public/private park in partnership with the City. The developer may be able to enter into a joint use MOU with the Department of Recreation and Parks for the purposes of a shared maintenance agreement for the park. Once selected, a developer should research this option further but proposers are encouraged to consider creative approaches to open space.

Parking

Parking as required by code is all that is required by Metro for this project.

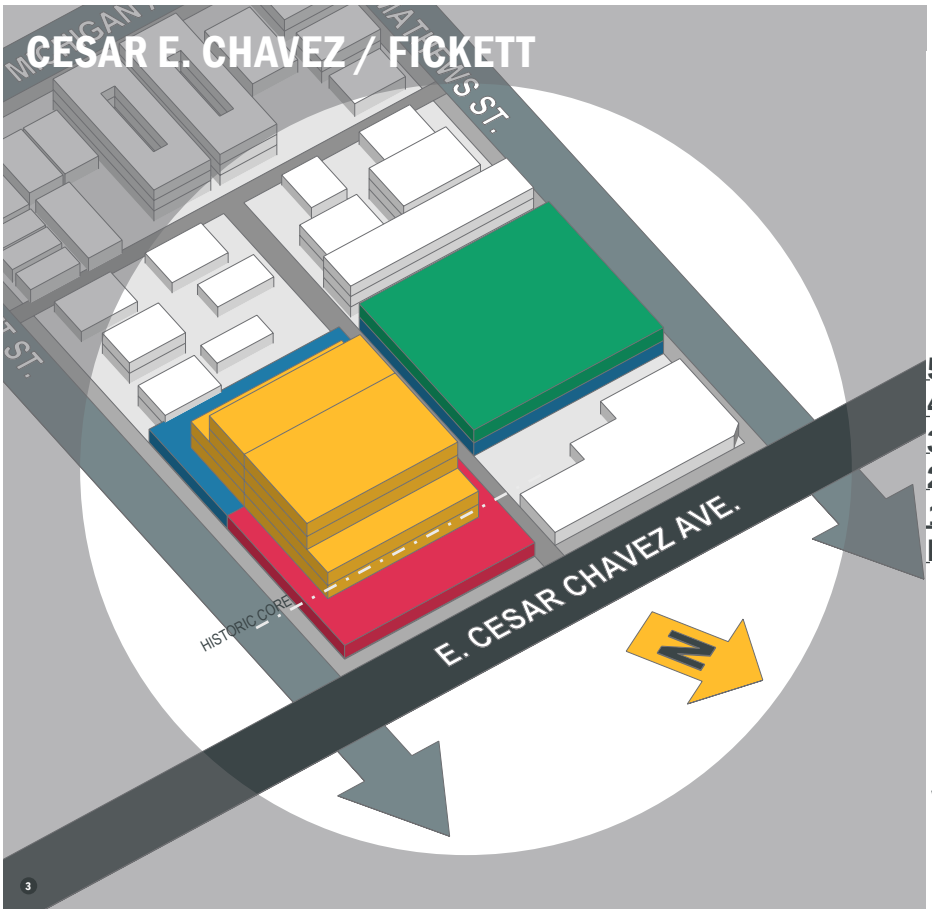
Public Art

At Chavez and Fickett, public art is an opportunity to introduce visual and physical enhancements to the project site. Public art would enhance the project quality and make people and transit users more aware of the cultural, historical, social and environmental surroundings of the community. The project should include an Art Plan for a permanent public art component. As the Joint Development project evolves, Metro will review the Art Plan in the schematic and final design stages to ensure that it is appropriate for the site, is of high quality, includes public accessibility, and contributes to the project as a whole. Public art can be incorporated in Parcel A, B, or both.

PROGRAM AND SITE DIAGRAMS

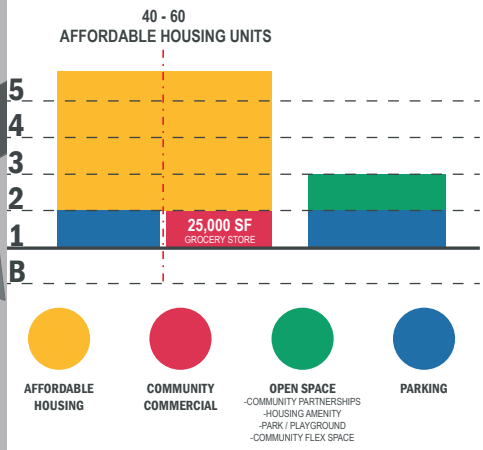
The four diagrams on the following page indicate potential program cases and organization on the site. They were developed in conjunction with the community through public meetings and take into consideration zoning and an initial financial feasibility study. These are only a few possibilities among many and the ultimate quantity and mix of uses should be proposed by the developer, taking into account the results of the community outreach program and project feasibility.

The four options assume that each of the uses outlined in "Uses" will be incorporated in the development of Parcels A and B. Creativity is encouraged in creating the site plan.

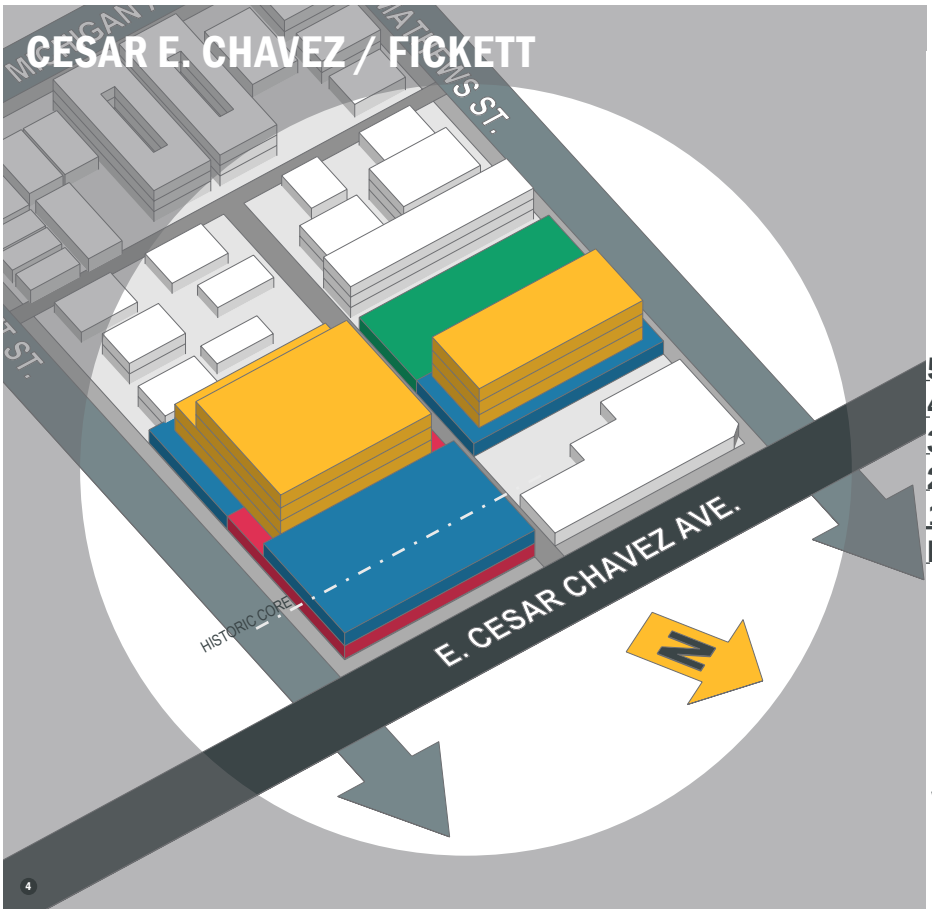


MIX 1

A	B
42,500 SF	25,500 SF
C2-1-CUGU: 25,500 SF R3-1-CUGU: 17,000 SF	R3-1-CUGU: 25,500 SF

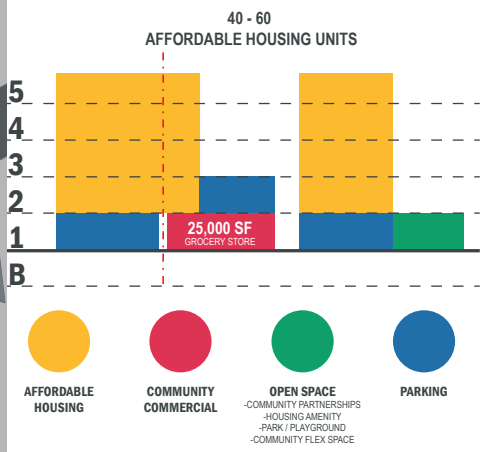


VERTICAL STACKING DIAGRAM

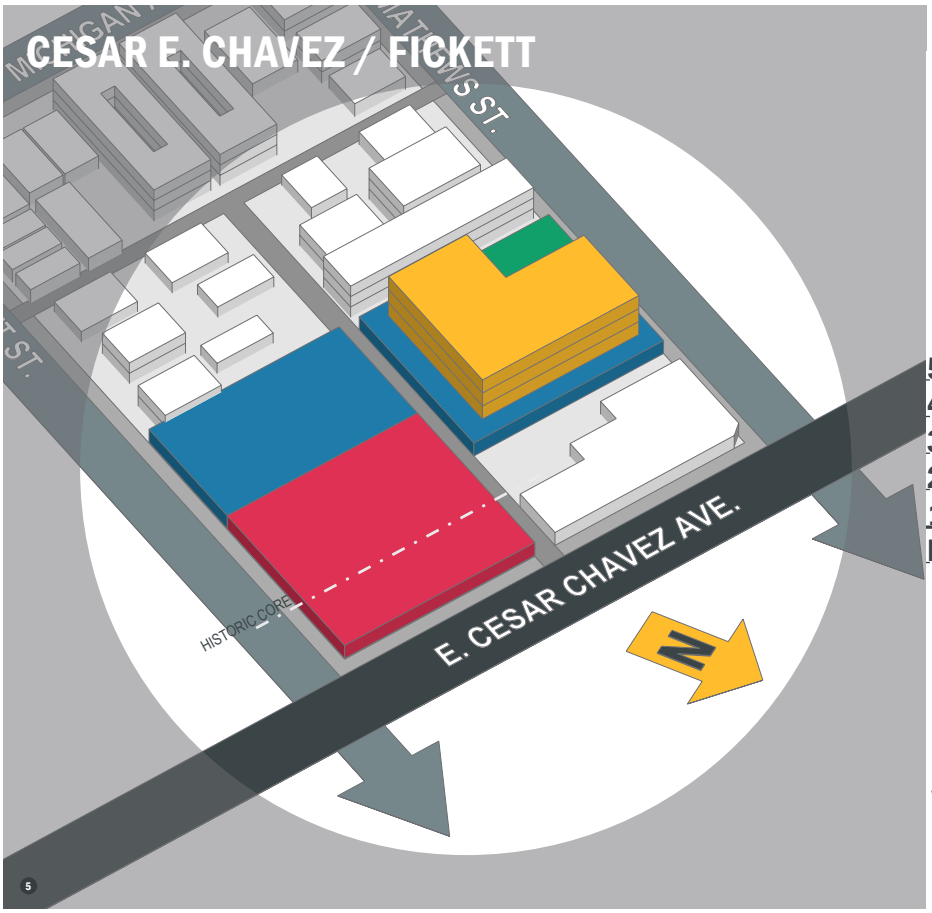


MIX 2

A	B
42,500 SF	25,500 SF
C2-1-CUGU: 25,500 SF R3-1-CUGU: 17,000 SF	R3-1-CUGU: 25,500 SF



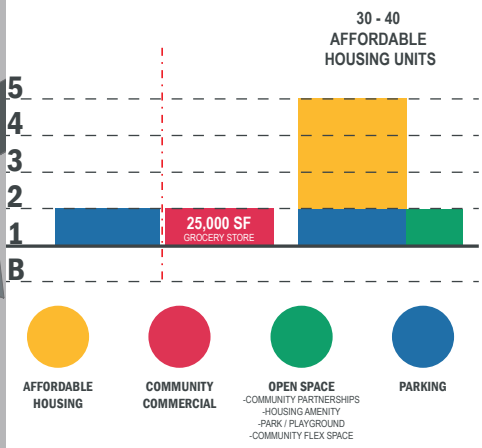
VERTICAL STACKING DIAGRAM



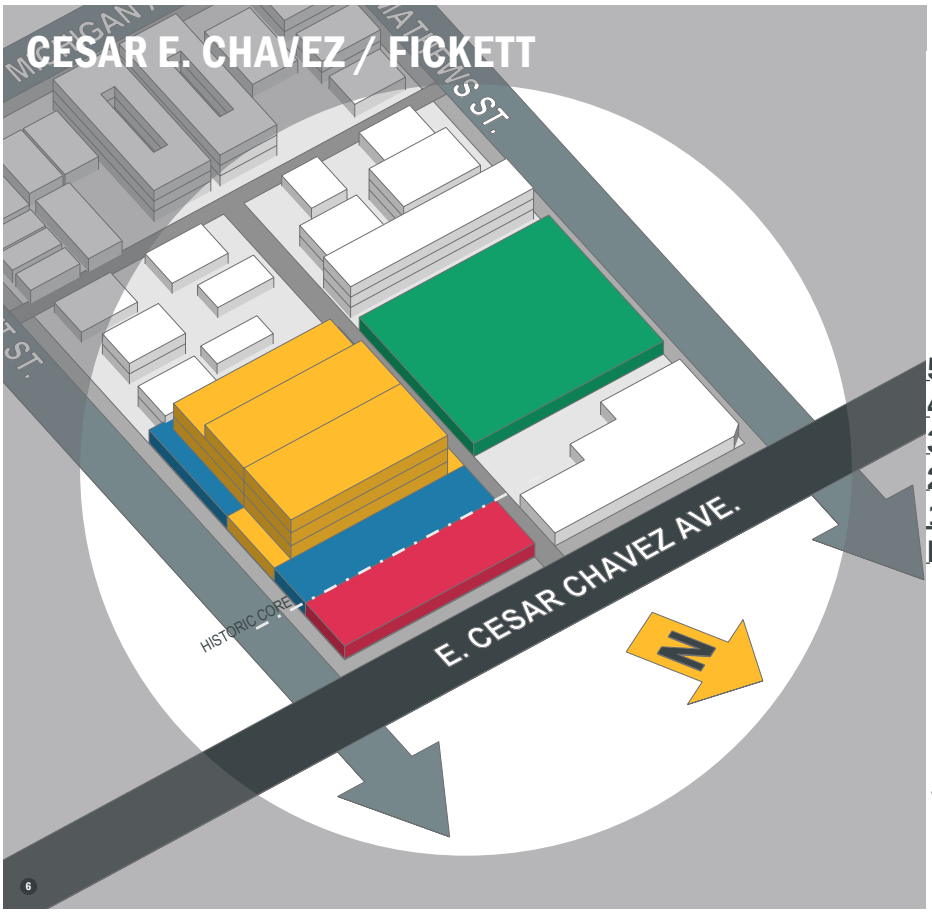
MIX 3

A
42,500 SF
C2-1-CUGU: 25,500 SF
R3-1-CUGU: 17,000 SF

B
25,500 SF
R3-1-CUGU: 25,500 SF



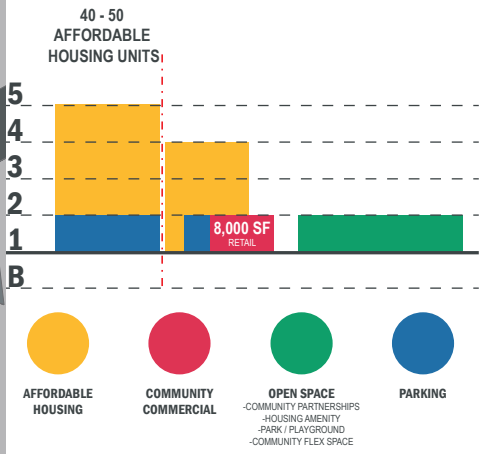
VERTICAL STACKING DIAGRAM



MIX 4

A
42,500 SF
C2-1-CUGU: 25,500 SF
R3-1-CUGU: 17,000 SF

B
25,500 SF
R3-1-CUGU: 25,500 SF



VERTICAL STACKING DIAGRAM

4. DEVELOPMENT GUIDELINES

INTRODUCTION

The purpose of these guidelines are to give Urban and Architectural Design direction. In addition to these guidelines, the project will need to comply with the City of Los Angeles' zoning as well as program guidelines outlined in Section 3.

As a general principle the guidelines are divided into three major categories: Urban Design, Open Space, and Architecture and Building Design. Urban Design looks to how the development sits in the community, how it responds to the surrounding public realm, and how it complements and enhances the neighborhood. Open space refers to the hardscape and landscaping in the public realm as well as within the project. Architecture and Building Design refers specifically to the design of the structures themselves. This section is about aesthetics, but more importantly about design principles such as articulation, composition, materials, and general quality. It should also be noted that certain guidelines pertain to more than one category; for example, scale impacts both urban design and the building design.

These guidelines are to give general direction and are not to be considered comprehensive. Thus, refinements, alternative ideas, or other suggestions that improve the overall quality of the project are welcome.

This page was intentionally left blank.

URBAN DESIGN

COMMUNITY COMPATIBILITY

> The overall intention of any project should be to create a built environment that enhances the community and adds value to the community in place. Activities, functions, and uses should be locally oriented and the project should focus upon serving local residents.
> Scale, massing, and style should be of the highest quality design and should be oriented towards 'fabric' buildings. Fabric buildings are generally compatible with the surrounding built environment and do not stand out as a uniquely styled 'iconic' structure would. A fabric building enhances the built environment without significantly changing it.
> The project scale should be compatible with neighboring properties and the streetscape environment in general.

PEDESTRIAN LEVEL EXPERIENCE

> The pedestrian level experience should create a dynamic and enjoyable environment that encourages pedestrian participation and generates interest.
> Primary building entrances, residential entries, storefronts, and other pedestrian enhancing activities should be oriented outwards towards the public realm, whether sidewalk or plaza.
> Service access for trash, loading, or other usage should be controlled and designed to minimize disruption of pedestrian travel.
> The sidewalks, plazas, open space, and crosswalks should be improved to enhance walking and rolling facilities that cater to a growing range of mobility devices. Surfaces should be smooth and free of obstacles.
> The environment should be well lit and have clear signage.

MASSING AND HEIGHT

> The community has expressed concerns regarding height but desire as much housing as is feasible. The regulations for the Brooklyn Historic Corridor, as part of the Community Plan update, limit height on street front parcels to two stories. Appropriate building step backs are encouraged.
> Height may vary within the development, but the expectation is that transitional heights will be between 1 and 5 stories, with a maximum of 5 stories on Parcel A and B.
> Heights may vary from the existing neighbors but should scale down immediately adjacent.
> Massing should not be monolithic and should be well articulated.

GROUND FLOOR USES

Community-Serving Grocery Store

> Community-serving grocery store and retail should include businesses with price points that serve middle- and lower-income levels as appropriate.
> Consideration should be given to community-preferred retail categories identified in the Appendix A.
> Support should be provided to retail tenants to allow and encourage façade signage, interiors and other tenant improvements that add to the unique and eclectic identity of the corridor.
> Local businesses are encouraged over nationally branded chains.

Community Uses

> Mixed-use buildings should combine public and private uses and encourage circulation among these uses to increase functionality and customer patronage.
> Public uses can be on ground floor, but should provide ease of access if located elsewhere.

Open Space Uses

> Open spaces that reside on ground level should be usable and well maintained.
> Inhabitable roofscapes that encourage interactions between building levels and plazas are welcomed.

Housing

> Entrances to individual as well as primary entrances to upper level units should be placed on Mathews Street and Fickett Street.

BUILDING FRONTAGES

> On Parcel A, the primary orientation should face Cesar E. Chavez Avenue. This is the frontage that should maximize pedestrian interaction. Uses such as a grocery store and community room, should be oriented to this avenue.
> Along Mathews Street, community and open space uses can be included as a continuum of the uses located on parcel A.
> Entry for residential uses can be placed on Fickett Street and/or Mathews Street.
> Service entries and uses and structured parking should be oriented to Fickett Street.
> Design in general should address the overall street and elevation composition.

> Entries both vehicular and pedestrian should be obvious and celebrated. In general entrances should face the street or corridor and be recognizable from a distance.

Pedestrian Entries

> Pedestrian entries should create a sense of place and connect the project to the public realm.
> Entries perform a valuable transition between the inside and out with the flow of public, to semipublic and to semi private spaces. This is particularly true for the residential portions of the project. In the semipublic space security is the primary concern. Those in this realm need to be there either as residents or legitimate visitors.
> This semi-public zone is often a lobby or entry hall. For single residential units, a garden or deck/porch performs this function.

Vehicular Entries

> Vehicular entries and building access should be designed to minimize distribution of pedestrian flow especially where it crosses a sidewalk.
> Service entries should be separate from parking entrances unless the service area is separated from parking within the project.
> Vehicular entries should be well signed.
> Security gates or barriers should be placed to allow for a minimum of a one car reservoir between gate and sidewalk.
> Parking structure entrances should be designed for natural surveillance and maximum visibility with views into the structure from adjacent public areas.

Service Areas

> Loading zones, trash enclosures, and other required building services should be placed so that they are not readily visible from the sidewalk and access does not unduly disrupt pedestrian walkways.
> Design convenient onsite facilities for occupants to recycle and compost.
> Trash should be within an enclosed storage area with covering.

This page was intentionally left blank.

OPEN SPACE

Public Open Space

> New development should respect the culture and community and in particular the contributions of this immigrant neighborhood.
> Open spaces in the Project Site shall provide seating, trash receptacles and drinking fountains and shade.
> Trees should be appropriately sized to provide reasonable shade and incorporated into open space, especially where seating is provided. Native landscaping that is drought tolerant and cooling is encouraged.
> Public spaces can incorporate water features that provide evaporative cooling.
> Design of public and private spaces shall support all modes of active transportation and remain accessible to individuals dependent on mobility support devices, from canes to wheeled push walkers and electric mobility scooters, accommodating all ages and abilities.
> Multi-benefit green infrastructure strategies such as green roofs, permeable pavement, landscaped bio retention areas and rainwater recycling should be considered.
> The landscape palette should include hardscape elements with a low solar reflectance index and drought tolerant plants.
> WaterSense labeled irrigation control systems (or similar), low-flow or drip heads, water-efficient scheduling practices and xeriscaping should be incorporated.

Park Area (Parcel A or B)

> The developer is encouraged to work with the City of Los Angeles Department of Parks and Recreation to create a public/private joint use public park on either Parcel A or B with a joint maintenance agreement.
> The minimum size for the open space shall be 6,000 SF. This open space can count toward 50% of the required tenant open space subject to approvals from the City of Los Angeles Planning Department.
> Any park shall be designed and built in accordance with the City of Los Angeles standards.
> Park design shall include significant vegetation, including trees and shade.
> The park shall be suitable for people of all ages.

Residential Tenant Open Space

- Tenant open space shall be provided according to HUD and City of Los Angeles standards within the secure boundaries of the housing project.
    - The following open space amenities are desirable:
    - Tot lot playground
    - Community garden facilities
    - BBQ station with tables and seating
    - Shade created through a combination of trees and shade structures
    - Exercise elements for tenants use
    - Seating
    - Vegetated green space
- The open space and amenities provided for the tenants should be secured to ensure that only the tenants and their guests have access for their use.

COMMUNITY CONNECTIVITY

Circulation

- Clearly signed and intuitive pathways that follow desired pedestrian routes should be provided. Efficient pathways that allow for strategic short-cuts are encouraged.
- Pedestrian pathways, building entrances, signage, fixtures, and furnishings should be provided.
- Access and open space should be provided for the retail/ commercial uses.
- Ground floor spaces should be designed to allow and encourage building uses to spill out into open spaces.

Safety and Security

- Safety and security is of paramount importance and can be assisted by appropriate design.
- Commonly accepted crime prevention through environmental design strategies shall be used whenever possible to provide a safe streetscape environment for all people that visit and use the development areas.
- Lighting should be provided throughout the site adequate to clearly see throughout the project sites. Dark corners should be avoided or lit.
- Entrances should have enhanced lighting.
- The project structures and particularly the housing project should be secured such that access is controlled.

- > Open line of sight should be considered in the design of open space.
- > Signage and wayfinding should be treated as a matter of security and requires clear, obvious and efficient paths of travel.

Landscape and Streetscape

- > Streets plantings, furnishing, paving, and other features on the sidewalk should provide a buffer between pedestrian and vehicular traffic.
- > The streetscape should include native landscaping that is drought tolerant and cooling.
- > Street trees should be selected for their shade qualities. Street trees should be low in maintenance and should comply with City of Los Angeles standards.
- > High-quality materials for pavement areas, seating, furniture, lighting, fences, and signage shall be utilized.
- > Street and park furniture is desirable and should include seating.

PUBLIC ART

Public art is an important component of a community's character and has the capacity to positively impact the spirit of local residents.

- > Art and cultural elements should be integrated into the development.
- > Art may be integrated into the architectural and functional aspects of the project site, or as a separate formal element of the site.
- > Pedestrian-scaled public art should be integrated into the streetscape and open spaces.
- > Art should be reflective of the community and a developer shall work with Metro Art to finalize concept.

This page was intentionally left blank.

ARCHITECTURE AND BUILDING DESIGN

FORM AND SPACE

Massing & Height

> Height should comply with the zoning and possibly with incentives for one additional story given to affordable housing projects. The current height zone allows 45 feet. Thus at a height of approximately 55 feet, five-story buildings would be possible.
> Massing should respect adjoining sites and the neighborhood. Massing should not be monolithic and should be well articulated.
> Massing can be enlivened by the juxtaposition of solidity with openness.

Scale & Proportion

> Scale and proportion, along with massing and height, exist in the context of the neighborhood and should be respectful of adjoining structures.
> Scale and proportion are also part of the basis of composition. Strategic use of proportion can enliven a composition, making the structure playful and interesting.

Symmetry & Rhythm

> Articulation, massing, and openings should be used to break up the massing of a building.
> Symmetry can be used, or purposely not used, for composition.
> Rhythm can be used to enliven larger masses and is useful for composition.

CONTEXT

Building Frontages

> For Parcel A, the primary frontage should be considered to be Cesar E. Chavez Avenue.
> If Parcel B is developed with housing, the development should treat Mathews Street as the prime frontage and respond to the manner in which Parcel A on Cesar E. Chavez Avenue is being developed.
> Buildings will be visible from all four sides and consequently all sides will need to be well designed to create 'four-sided' buildings.
> Each side will need to relate to the neighborhood context within which it sits. The four elevations need to integrate into one clearly defined design.
> The commercial/retail portions of the project should be transparent and open.

Design & Style

> There is no one defined design style; however, the design needs to be 'of its time' – that is, contemporary in nature. It also needs to be 'of its place' – that is, appropriate to the community.
> An imitative historicist design style is not encouraged.
> To the extent possible daylight should permeate all through the units. Larger than required minimum windows should be used. Consideration should be given to what views should be enhanced and what views should be hidden.
> Consideration should be given to privacy.
> Opportunity for natural ventilation and cross ventilation where viable, should be provided.
> Consideration should be given to controlling or mitigating noise, whether generated by neighborhood uses such as restaurants, bars or traffic, or by others within the building.

BUILDING MATERIALS

Quality & Durability

> Quality and durability are essential to the long-term success of the project and should be considered from the outset.
> Texture is usually expressed in the material quality of the surface and can be used to emphasize differences between masses and to add interest to surfaces.
> Consideration shall be given to strategies to prevent or mitigate graffiti.

SUSTAINABILITY

> New construction must meet sustainability criteria developed by the United States Green Building Council ("USGBC") for Leadership in Energy and Building Design ("LEED") at a minimum at the "Silver" level.
> Technologies, designs, and programs that promote environmental stewardship, reduce greenhouse gas emissions, and conserve or restore natural resources should be explored.
> Building massing, shade elements, and tree placement to decrease heat gain and to improve pedestrian thermal comfort should be utilized.
> Energy efficiency in designing the building envelope, mechanical systems, lighting systems, and lighting controls should be prioritized.
> Inclusion of renewable energy sources such as photovoltaic panels where possible should be considered.

- > Ultra low-flow toilets and urinals, low-flow and sensored sinks, low-flow showerheads, water-efficient dishwashers and washing machines, and other water saving strategies should be utilized.
- > Submeters for energy and water use in individual leasable spaces should be installed.
- > Proposed buildings materials should be evaluated for inclusion of recycled content and regional sourcing to reduce carbon footprint of new building.
- > Low or no VOC finish materials, operable windows, acoustically separated partition walls, and plenty of daylight for all regularly occupied indoor rooms should be incorporated.

PARKING

- > EV charging station(s) should be provided in both private and public parking areas.
- > Secure bicycle storage rooms and other amenities that encourage bicycling for building occupants and visitors, for example, a bicycle repair station, should be incorporated.
- > Bicycle parking shall be provided and shall include bike racks for public and general long term secure bicycle parking for residents.

5. REGULATORY AND POLICY FRAMEWORK

The Project Site is subject to a number of adopted regulatory policies, both from the City of Los Angeles and Metro. This section offers a brief overview; respondents are encouraged to comprehensively review the subject policies, plans, and documents.

CITY OF LOS ANGELES PLANNING - GENERAL PLAN

The City of Los Angeles General Plan Land Use Element
http://planning.lacity.org/cwd/framwk/contents.htm

Existing Community Plan:
http://planning.lacity.org/complan/central/PDF/bhtplanmap.pdf

Community Plan Update Status:
https://sites.google.com/site/boyleheightsncp/how-to-get-involved/draft-plan-status

New development at the Project Site must follow the General Plan. The Project Site falls within the Metropolitan Geographic Area of the Land Use Element of the General Plan and adheres to the Boyle Heights Community Plan, listed below. The City of Los Angeles is currently conducting a series of updates both to its General Plan and to various Community Plans. The Department is exploring options to increase the density of major transit nodes and commercial corridors in Boyle Heights while also providing various densities and parking incentives.

Metro will issue an addendum to this Guide for Development as soon as this information becomes available.

It is anticipated that the updated Boyle Heights Community Plan will be adopted by early 2018.

METRO JOINT DEVELOPMENT PROGRAM: POLICIES AND PROCESS

Joint Development Policies and Procedures
www.metro.net/projects/joint_dev_p

Updated in September 2015, this policy document outlines the objectives of the Joint Development program, describes the Joint Development Process, and details policies and requirements. Recent policy changes to note, and which are further detailed in the Section 5 of this document, include a goal that 35% of all housing developed on Metro-owned land (on a portfolio-wide basis) be affordable to households earning 60% of the Area Median Income or below, and that a robust community engagement process is expected for all Joint Development sites.

METRO COMPLETE STREETS POLICY

Complete Streets are streets that provide safe, comfortable, and convenient travel along and across streets through a comprehensive, integrated transportation network that serves all categories of users, including pedestrians, users and operators of public transit, bicyclists, persons with disabilities, seniors, children, motorists, users of green modes, and movers of commercial goods.

Metro Complete Streets Policy (adopted October 2014)
http://media.metro.net/projects_studies/sustainability/images/policy_completestreets_2014-10.pdf

METRO FIRST LAST MILE STRATEGIC PLAN

The Project Site is subject to Metro's First Last Mile Strategic Plan, which presents planning and design guidelines to improve the connections to the station and from origins and destinations within 3 miles of the station.

Metro First Last Mile Strategic Plan (adopted April 2014)
https://www.planning.org/awards/2015/pdf/FirstLastPlan.pdf

CITY OF LOS ANGELES – GREAT STREETS INITIATIVE, BICYCLE PLAN AND MOBILITY ELEMENT

Los Angeles Great Streets Initiative seeks to activate public spaces, provide economic revitalization, increase public safety, enhance local culture, and support great neighborhoods along 15 designated Los Angeles streets. Cesar E. Chavez Avenue in Boyle Heights is one of Los Angeles' most active commercial corridors. Great Streets seeks to strengthen the linkages between Cesar Chavez and the nearby Gold Line while improving the pedestrian and bicycle facilities in the area, proving residents better options for getting to and from the corridor.

Additionally, the City of Los Angeles is in the process of implementing the 2010 Bicycle Plan and the 2015 Mobility Element

The City of Los Angeles General Plan Transportation Element 2010 Bicycle Plan
http://planning.lacity.org/cwd/gnlpln/transelt/NewBikePlan/Txt/LA%20CITY%20BICYCLE%20PLAN.pdf

LA Great Streets
http://www.lamayor.org/greatstreets

CITY OF LOS ANGELES - PLAN FOR A HEALTHY LOS ANGELES

The Plan for a Healthy Los Angeles lays the foundation to create healthier communities for all Angelenos. As an Element of the General Plan, it provides high-level policy vision, along with measurable objectives and implementation programs, to elevate health as a priority for the City's future growth and development. Through a new focus on public health from the perspective of the built environment and City services, the City of Los Angeles will strive to achieve better health and social equity through its programs, policies, plans, budgeting, and community engagement.

The City of Los Angeles General Plan Health and Wellness Element Plan for a Healthy Los Angeles (March 2015)
http://healthyplan.la/wordpress/wp-content/uploads/2014/11/PlanforHealthyLA_Web-11.pdf

Community Corridors

Opportunities for new housing and small businesses

PROJECT OBJECTIVES

New residential development is focused along major corridors with access to transit and neighborhood amenities

Opportunities for a greater mix of housing, jobs, goods, and services

Evolution of the Sears Opportunity Site as a regional center with community benefits

PLAN FEATURES

Affordable Housing Incentives

- Transit Nodes:
  - 3 story base height
  - 4, 5, and 6 stories (height incentives) allowed for mixed-income and affordable housing developments
- Transit Corridors:
  - 2 stories base height
  - 3, 4, and 5 stories (height incentives) allowed for mixed-income and affordable housing developments

Corridor Development Standards

- Require active street frontages that welcome pedestrians
- Require buildings to scale down from corridors to residential neighborhoods

EIR Scoping Meeting 2016 © Boyle Heights Community Plan
Department of City Planning
Illustration Purposes-Not drawn to Scale

Boyle Heights Community Plan Update Draft, Community Corrdiors. 2016

6. TRANSIT CONNECTIVITY

Metro envisions a development that is physically and programmatically integrated with its bus, rail, bicycle, and parking facilities to the greatest extent feasible where applicable.

The requirements below set the parameters for transit connectivity and reflect feedback from Metro's Operations, Engineering & Construction, and Planning Departments. Adherence to these requirements is critical, and the selected development proposal will be reviewed by Metro technical staff for its compliance with these requirements throughout the design development process.

BUS

Bus Patron Amenities

Bus patron amenities such as benches, bus shelters, next bus displays, and map cases are required where applicable. Design of all such amenities must be coordinated with Metro's Countywide Planning and Operations teams. Do not restrict access during or after construction of any proposed site modifications.

BICYCLE

Bicycle Parking

Bicycle parking is required for non-transit development uses in compliance with the City of Los Angeles bicycle parking ordinance.

Bike Share

A Metro bike share program is underway and has rolled out a pilot program in downtown Los Angeles in 2016. Later phases of the bike share program may locate kiosks in Boyle Heights as part of their Downtown Los Angeles expansion or East LA Expansion area. The developer shall coordinate with Metro's Bike team to reserve space at the Development for bike share kiosks.

File #: 2016-0994, **File Type:** Budget **Agenda Number:** 15.

PLANNING AND PROGRAMMING COMMITTEE
FEBRUARY 15, 2017

SUBJECT: BIKE SHARE PROGRAM TAP STEP 3A INTEGRATION

ACTION: ESTABLISH LIFE OF PROJECT BUDGET FOR BIKE SHARE TAP STEP 3A INTEGRATION

RECOMMENDATION

ESTABLISH the Life of Project (LOP) budget for **Bike Share TAP Step 3A Integration** in the amount of $1.65 million

ISSUE

At the November 2015 meeting, the Metro Board authorized the phased Regional Bike Share Integration Strategy to create a seamless user experience with the TAP Program (Attachment A). Two steps of Bike Share TAP integration were completed in time for the launch of the Downtown Los Angeles Pilot Bike Share in July 2016.

At the November 2016 meeting, in order to complete Step 3 - Seamless User Integration, the Metro Board awarded a contract to Vertiba Inc. to enhance the current TAP Customer Relationship Management (CRM) system such that it may accommodate Bike Share account management (Attachment B). Also at the November 2016 meeting, the Metro Board adopted a strategy to implement Step 3A - Bike Share TAP account and payment integration through TAP CRM enhancements. Staff is in the process of finalizing a contract modification with Bicycle Transit Systems (BTS) to perform changes to the existing Bike Share system to support Bike Share TAP Step 3A Integration. Board authorization to establish a LOP is requested to support this effort.

DISCUSSION

Board approved Step 3A Integration includes interoperability between Bike Share and transit, allowing for integration with other systems like Metro Bike Hubs, parking, ride sharing and other multi -mobility services. To achieve this functionality, the existing TAP CRM known as TAPforce will be further developed to enable account management for services outside of the Metro transit system. This enhanced TAPforce system will store and process information that will enable payment and delivery of benefits through TAP across a variety of different systems and will be accessible to patrons through an enhanced website and call center communications. The existing account data, management and payment processing functions of Bike Share, currently within the TAP BTS CRM,

will be transferred to TAPforce. The existing Bike Share CRM will need to be modified to work in tandem with TAPforce, communicating in real time to allow system users to access bikes, manage their accounts, and provide for customer service access.

Together, the enhanced TAPforce and BTS systems will enable customers to seamlessly use Bike Share, transit, and other supporting transportation services for multimodal travel. Countywide Planning Department has worked closely with TAP Operations and consulted with the BTS technical team to develop integration strategies for Step 3A, which will result in the following functionality:

- Exchange of data for purse and account information. Account balance may be shared for multiple uses (i.e. Bike Share, parking, or other).
- Enable transfers and discounts between Metro transit, Bike Share and other bicycle services.
- Enable reciprocity between multiple bike share systems. Bike share vendors would still need to develop their own communications protocols with TAP for the exchange of real-time data.
- Request credentials other than a credit card (e.g., a driver's license) to potentially prepare for cash payments for Bike Share and other bike services in the future.

Staff continues to explore the option for cash payments for Bike Share.

The cities of Santa Monica, Long Beach, Beverly Hills and West Hollywood and their bike share vendors have also participated in planning to understand integration needs and abilities for Step 3. Though the TAPforce enhancements will be designed to accommodate integration with any bike share system, each system will be responsible for the cost of enhancing its respective bike share CRM to integrate with TAPforce. Business rules and transfer policies will need to be developed for any features involving reciprocity between agencies.

Findings

Based on the direction previously received from the Metro Board and detailed cost estimates from Vertiba Inc. and BTS, staff proposes adoption of a LOP in the amount of $1.65 million to support this capital project development. Board action in November 2016 authorized the award of a contract to Vertiba to perform TAP CRM enhancements, including those that allow Bike Share integration. This LOP will support both the Vertiba and BTS work to achieve Board-directed Bike Share TAP integration.

DETERMINATION OF SAFETY IMPACT

Implementing a Bike Share TAP integration strategy will not have any adverse safety impacts on Metro employees and patrons.

FINANCIAL IMPACT

Bike Share TAP Step 3A Integration costs are estimated to be up to $1.65 million over two fiscal years (Attachment C). The estimated development costs for FY17 are $700,000 and are included in the budget under Cost Center 4320. Since this is a multi-year project, the cost center managers, project manager and Chief Planning Officer will be responsible for budgeting the costs in future years, including any phase(s) the Board authorizes to be exercised.

Impact to Budget

The source of funds for the Step 3A Integration is Prop C 40% in FY17. This source is eligible for bus and rail operations. Should active transportation eligible funds be available as the project progresses, staff will replace the Prop C 40% with these other funds to alleviate the strain on operations eligible funds.

ALTERNATIVES CONSIDERED

The Board may choose not to establish a capital project and LOP for Bike Share TAP Integration. This choice is not recommended due to the increasing need for integration with new technologies and systems to support multimodal travel. If no LOP is established for this integration, Bike Share will not be able to achieve a seamless customer experience as directed by previous Metro Board actions.

NEXT STEPS

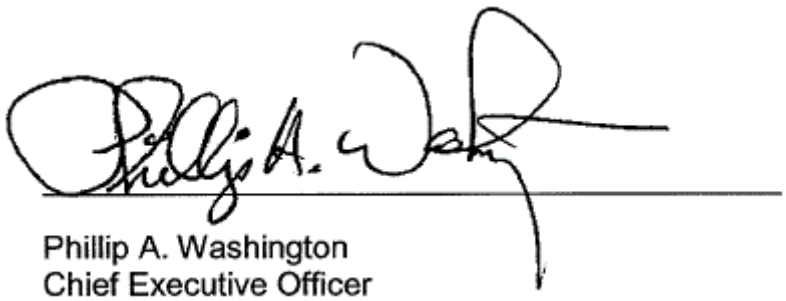
With Board approval to establish this LOP, staff will execute a contract modification with BTS and work with TAP on directing Vertiba Inc. to implement Step 3A. Staff will continue development of Step 3B for multimodal mobile ticketing and report back to the Board in the fall of 2017.

ATTACHMENTS

Attachment A - November 2015 Board Report
Attachment B - November 2016 Board Report
Attachment C - LOP Budget and Funding Plan
Attachment D - Presentation: Bike Share/Tap Integration Step 3

Prepared by: Julia Salinas, Transportation Planning Manager, (213) 922-7413
Laura Cornejo, Deputy Executive Officer, (213) 922-2885
Cal Hollis, Senior Executive Officer, (213) 922-7319

Reviewed by: Therese W. McMillan, Chief Planning Officer, (213) 922-7077



Phillip A. Washington
Chief Executive Officer

Metro

Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

Metro

Board Report

File #:2015-1436, **File Type:**Program Agenda Number:

PLANNING AND PROGRAMMING COMMITTEE
NOVEMBER 18, 2015

SUBJECT: METRO COUNTYWIDE BIKESHARE PROGRAM

ACTION: APPROVE A BIKESHARE FARE STRUCTURE AND AUTHORIZE INITIATION AND IMPLEMENTATION OF A PHASED REGIONAL BIKESHARE INTEGRATION STRATEGY.

RECOMMENDATION

A. APPROVE a fare structure for the Metro Countywide Bikeshare Program as proposed within the report.

B. AUTHORIZE the initiation and implementation of a phased Regional Bikeshare Integration Strategy including the following:

   1. Implement Step 1 and Step 2 in 2016.
   2. Continue to collaborate with TAP on an integration strategy for Step 3 and report back in Spring 2016.

ISSUE

At the June 2015 meeting, the Board awarded a two-year contract to Bicycle Transit Systems (BTS) for provision of the equipment, installation and operations of the Metro Countywide Bikeshare Phase 1 Pilot in downtown Los Angeles (DTLA Pilot). At the July 23, 2015 meeting, the Board approved Motion 22.1 (Attachment A), providing staff with direction on next steps for implementing the Countywide Bikeshare Program. Included within Motion 22.1 was direction to enable a “seamless user experience.” Staff has pursued TAP integration as one of the elements to creating a seamless experience between Metro Bikeshare, transit and potentially, other municipal bikeshare systems. Board approval and authorization are needed to proceed with the proposed Countywide Bikeshare Fare Structure and TAP integration strategy.

DISCUSSION

Fare Structure Development

Staff continues to meet with the bikeshare-ready cities identified in the Metro Countywide Implementation Plan - including the cities of Los Angeles, Pasadena, Huntington Park, Culver City and the County of Los Angeles - on a regular basis, either as a group or one-on-one in order to advance the launch and expansion of the Countywide Bikeshare system. We have worked with these bikeshare-ready cities to develop a fare structure that positions bikeshare as a Metro service

(one that extends the reach of transit) and addresses a variety of regional needs. In developing the proposed fare structure, we reviewed an array of fare structures from other systems nationwide (Attachment B). Santa Monica's adopted fare structure for Breeze bikeshare was considered as part of this survey; however, it did not meet all of our fare structure objectives as described below. Staff from Santa Monica has stated they are not prepared to modify their rate structure until they have a period of operating the system and evaluate the local results.

Fare Structure Objectives

In developing the Countywide Bikeshare Fare Structure, staff set forth several objectives that would influence and frame the proposed structure. In addition to developing a fare structure that would contribute to the financial sustainability of the system, we also sought a fare structure that would work for a regional system - that is, a fare structure that would be successful in the various communities throughout Los Angeles County with their unique socio-economic and demographic characteristics.

As part of that effort, we developed a fare structure that is modeled after a transit fare structure. By drawing on the existing transit fare model, Metro has the opportunity - as the leader of the Countywide Bikeshare program - to fully position bikeshare as a thoughtfully integrated element of transit over time. We sought a fare structure that intrinsically addresses equity. Recent studies (Attachment C) show that lowering the barrier to entry can in and of itself draw persons of lower income into trying bikeshare. While staff will continue to explore other opportunities to further address equity and the un-banked, establishing a low entry point to use bikeshare was identified as a key objective. Lastly, we sought a fare structure that was clear, easy to understand and customer friendly.

Fare Structure

The proposed fare structure includes 3 simple pass options: 1. a “Monthly” pass for $20 that includes unlimited 30 min trips, 2. a “Flex” pass for a $40 annual fee that includes a $1.75 charge per 30 min trip, and 3. a “Walk-Up” for $3.50 per 30 min trip. The “Monthly” pass will have an auto-renew option upon sign-up. The first two passes can only be purchased online (on a computer or mobile device) however; the walk-up can be purchased at the payment kiosk available at each bikeshare station. Each of these passes caters to the various types of bikeshare users - frequent user, occasional user and casual user. The fare recovery ratio for the Metro Countywide Bikeshare Program with the proposed fare is estimated to range between 60% and 80% depending on the typology of the city. The fare recovery ratios are based on the proposed pass pricing and applied to other comparable systems (Attachment D). In addition to being financially sustainable, the proposed fare structure had broad support among the bikeshare ready cities and fulfills the bikeshare objectives as described below:

Bikeshare as a Metro Service

- Fare pricing is based on a 30-minute trip equivalent to approximately a 3 mile ride which is the FTA bike-shed for transit.
- Fares look similar to transit or are based on a multiplier of existing transit fares.
    - For walk-up users, the price is 2x the price of a Metro bus/rail ride. This rate is low enough to encourage first-time users to try the system while remaining sustainable enough to foster an appropriate revenue stream. Based on the dynamics of other similar bikeshare systems, we expect a large percentage of walk-up users to be DTLA visitors or tourists who are not price-sensitive.

- For Monthly Pass holders, all rides within the 30-minute period are free. Overage charges are equivalent to a Metro bus/rail trip at $1.75 per every additional trip within 30 minutes.
- Flex Pass fares are equal to a Metro bus/rail trip ($1.75).
- Similar to transit fares, the proposed fare structure is built on payment per ride or per month.

Equity

- The three proposed pass options are flexible and streamlined to meet the diverse needs of communities that may need to serve user bases composed of local residents, tourists, or both. For instance, the overage charge rate does not escalate and thus supports users who may be traveling from greater distances to access a transit station or a final destination. (We may observe this in more suburban areas like South LA, East LA, San Gabriel Valley and San Fernando Valley cities and other areas of Los Angeles County.)
- We priced the walk-up rate to accommodate all users, including low-income riders. (Attachment D)
- The flex pass option is the most affordable option for occasional users. This pass will provide transit dependent users who are the most price-sensitive a low annual entry fee at $40. In the future, the $40 Flex pass fee could be subsidized to allow rides on bikeshare to cost the same as trips on Metro Transit ($1.75).

Customer Friendly/Easy to Understand

- The proposed fare structure includes three simple pass options. We limited the menu of options to improve customer understanding and make signing up easy.
- The overage charges are non-escalating to keep the structure user friendly.

Bikeshare Integration Strategy

The Metro Board provided direction through Motion 22.1 to create a “seamless user experience.” Staff has pursued TAP integration as one of element of creating a seamless experience between the Metro Countywide Bikeshare Program, transit, and other bikeshare systems. With two different bikeshare vendors in the County, physical integration between the two proprietary bikeshare systems can best be addressed through the co-location of stations. Software integration for step 3 may be addressed through web and mobile applications, and/or the TAP system. TAP in partnership with Countywide Planning, has worked with BTS’s technical team, and CycleHop and its contracted cities’ staff with of an integration strategies for step 3. Based on the work conducted thus far, staff proposes to implement the following phased approach to achieve countywide bikeshare integration.

Step 1- Bikeshare-enabled TAP card as Bikeshare ID
A uniquely branded TAP card will function as a Countywide Bikeshare ID to unlock bicycles at each station. Only Countywide Bikeshare TAP cards issued by BTS to pass holders will be recognized by the bikeshare system. Bikeshare fares are associated with the Bikeshare user’s account and not with the TAP card itself. The TAP cards will also be usable on the TAP bus

and rail system.
Estimated Implementation Schedule: DTLA launch next summer.

Step 2 - Existing TAP card as Bikeshare ID
All TAP cards will function as bikeshare passes to unlock a bicycle at a station. The TAP card number will need to be entered, either by the user or an app, at the time of purchase of a Bikeshare pass and validated by BTS for the Metro system. This step requires sharing of limited data between TAP and bikeshare vendor(s). Planning staff is working with TAP and Metro Information Technology Services staff to develop a data exchange tool for this task. Bikeshare fares are associated with the Bikeshare user's account and not with the TAP card itself.
Estimated Implementation Schedule: By the end of calendar year 2016.

Step 3 - Seamless User Integration
Create a seamless user experience where the account registration and/or payment for Metro transit services and multiple bikeshare vendors is linked. Staff anticipates that the development of a regional back-office and clearinghouse and/or the procurement of a third-party intermediary service provider will be required. Staff will continue to work collaboratively between departments to further refine the functions of this service and develop rough order of magnitude costs to inform a recommendation. However, it is anticipated that this clearinghouse and/or third-part intermediary should perform, at a minimum, the following functions and accommodate expansion of functions:

- Exchange of data for purse and account information.
- Enable transfers between Metro transit and bicycle services.
- Enable interoperability with other Countywide bicycle services such as Metro Bike Hubs.
- Enable interoperability between bikeshare vendors.
- Estimated implementation Schedule: Metro Bikeshare Phase 2 Expansion

DETERMINATION OF SAFETY IMPACT

Implementing a Metro Countywide Bikeshare fare structure and initiation and implementation of a phased TAP bikeshare integration strategy will not have any adverse safety impacts on Metro employees and patrons.

FINANCIAL IMPACT

The FY16 budget includes $7.78M for this project in cost center 4320, Project 405301 - 05.01 (Bikeshare Program).

Since this is a multi-year project, the cost center manager and Chief Planning Officer will be responsible for budgeting the cost in future years, including any phase(s) the Board authorized to be exercised.

Impact to Budget

The sources of funds are toll revenue grant and other eligible and available local funds or general funds.

ALTERNATIVES CONSIDERED

The Board may choose not to approve a Metro Countywide Bikeshare fare structure or authorize the initiation and implementation of a multi-step TAP/Bikeshare integration strategy. This alternative is not recommended, as it is not in line with previous Board direction.

NEXT STEPS

Staff will return to the Board in Spring 2016 with an update on the following items:

Title Sponsor

We are working with our bikeshare contractor, BTS to solicit a title sponsor. As was reported to the Board in September 2015, we are on schedule to launch the DTLA Pilot and are proceeding with a black bicycle that will provide flexibility to add sponsor placement with decals on the body, skirt guard, and basket at a later time.

Cash Payments and Subsidized Reduced Fares

We are exploring options for in-person and/or cash payment for the “Monthly” and/or “Flex” passes. We also continue to explore opportunities for providing subsides to Metro Rider Relief and Reduced Fare Office participants, potentially utilizing JARC funds for the DTLA Pilot to “buy-down” subsidies as is done for transit.

Step 3: Seamless User Integration

We continue to evaluate options for Step 3 seamless user integration. We will return to the Board to request direction on the development of a clearinghouse and/ or the procurement of a third-party intermediary.

ATTACHMENTS

Attachment A - Metro Board Motion 22.1, July 2015
Attachment B - Bikeshare Fare Structure in Other Cities
Attachment C - Data Supporting Monthly Pass
Attachment D - Fare Recovery Estimates Comparison Chart

Prepared by: Avital Shavit, Transportation Planning Manager, (213) 922-7518
Laura Cornejo, Deputy Executive Officer, (213) 922-2885
Diego Cardoso, Executive Officer, (213) 922-3076
Cal Hollis, Managing Executive Officer, (213) 922-7319

Reviewed by: Martha Welborne, FAIA, Chief Planning Officer, (213) 922-7267

Metro

Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

Board Report

File #:2016-0851, **File Type:**Contract Agenda Number:42.

EXECUTIVE MANAGEMENT COMMITTEE
NOVEMBER 17, 2016

SUBJECT: TAP SYSTEM INNOVATIVE ENHANCEMENTS FOR SEAMLESS CONNECTIVITY WITH MULTI-MODAL MOBILITY PROGRAMS

ACTION: EXECUTE SOLE SOURCE CONTRACT WITH VERTIBA, INC.

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to negotiate and execute sole source Contract No. PS 6394500 to **Vertiba Inc., a Salesforce System Integrator, to enhance the TAP system in order to achieve maximum interoperability with regional systems and services including Bike Share, parking, ride-hailing companies, fare subsidy programs, electric vehicle car-sharing, gift card programs, mobility hubs, a mobile app** and more in an amount not-to-exceed $4,750,000.

ISSUE

Seamless TAP interoperability and growth potential for services such as Bike Share, parking, ride-hailing companies, fare subsidy programs, electric vehicle car-sharing, gift card programs, and mobility hubs is not possible unless the TAP system is modified to handle payment functions for outside accounts.

DISCUSSION

A motion by Vice Chair Garcetti and Directors Solis, Bonin and Najarian requested Technology & Transportation Investments to Improve Customer Service (Item #44; file ID2015-1783). This motion asked TAP to begin development of a next-generation system for “seamless customer payment of non-Metro services, including but not limited to Metrolink, taxicabs, ride-hailing companies, Bike Share, parking, etc.”

TAP has been working to follow this Motion’s direction by integrating with various systems. For example, two of three phases of TAP integration into the Metro Countywide Bike Share program are now complete. TAP cards are the exclusive pass media used on the Bike Share system and any one of millions of existing TAP cards may be linked to a Bike Share account to unlock bikes. Step three of Bike Share integration is dependent upon completing TAP payment integration. TAP is also working with parking services to enable a similar integration, which also must include TAP payment options.

To fully integrate TAP payment with these separate and unique systems, the current card-based TAP system needs to be modified to include regional account-based functions. In addition, gift card programs, ride-hailing companies, mobility hubs, electric vehicle car-sharing, Immediate Needs and Rider Relief Transportation Programs (low-income subsidy programs) and more have requested integration into TAP. In order to completely integrate TAP payment with these separate and unique systems, the current card-based TAP system needs to be modified to include regional account-based functions.

The enhanced system will store and process information that will enable payment and delivery of benefits through TAP across a variety of different systems and will be accessible to patrons through an enhanced website, a new mobile phone application and a traditional call center. Plans call for the enhanced architecture to also connect to additional, anticipated, future system services with limited cost and integration. The enhanced system includes plans to ensure low-income accessibility and ease of use for all customers. Customers will be able to use transit in addition to other supporting last -mile transportation services for seamless connectivity and multi-modal travel.

TAP and Outside Account Payment Integration

Software development is needed within the existing TAP architecture that will connect and integrate a TAP account with outside systems. From a customer perspective, this development would enable payment and access with the TAP account across multiple systems such as Bike Share, parking, gift card programs, ride-hailing companies, mobility hubs, electric vehicle car-sharing, low-income subsidy programs and more, while preserving the transit functionality of the TAP card. Access to all of these services would be made available through a regional TAP payment system where customers could link to their choice of a variety of individual multi-modal programs.

Benefits of the Enhanced System

According to the Board Motion, “technological sophistication is expected by today’s customers within all economic and demographic strata.” Innovative TAP integration with numerous multi-modal services will deliver a variety of benefits. For example, TAP integration with Rider Relief and Immediate Needs Transportation Programs means that these programs will be able to realize their full potential and discard outdated practices such as paper coupon redemption that require costly, labor-intensive printing, distribution, clearing, settling and burden on third-party retail sales outlets.

TAP integration with Bike Share, parking, gift card programs, ride-hailing companies, mobility hubs, electric vehicle car-sharing and more will enable these potential and established revenue-generators to enhance customer service, provide seamless commuter options and make transit more attractive to potential riders. By integrating mobility services together under a single account, TAP will remove barriers to system access and create opportunity for synergistic ridership growth across modes. Increasing riders on alternative transportation modes contributes to the Long Range Transportation

Plan's goals of reducing congestion and miles traveled by single-occupant vehicles, and increasing air quality while keeping the economy moving. A centralized repository of mobility service data will also allow staff to measure system performance across modes, a procedure previously impossible with isolated accounts.

DETERMINATION OF SAFETY IMPACT

Implementing the enhanced TAP System will not have any adverse safety impacts on Metro employees or patrons.

FINANCIAL IMPACT

Funds for development of the scope, including integration for RRTP and INTP are included in the FY17 budget under cost center 3020, in projects 207144 Regional Point of Sale Development and 210147 CRM Enhancements. Bike Share TAP Step Three integration costs are estimated at $1.2 Million over two fiscal years, of which $700,000 are designated for TAP integration. The estimated development costs for FY17 are included in the budget under cost center 4320, Project 405305. Since this is a multi-year project, the cost center managers and project managers will be responsible for budgeting the costs in future years. Additional costs for Bicycle Transit Systems will be addressed as part of Bike Share contract modification.

Impact to Budget

The source of funds for Bike Share is a mix of General Funds, local grant, and other eligible and available local funds. Local funds are eligible for bus and rail operating or capital expense; these funds may be reimbursed from future Bike Share sponsorship revenues, if any. The costs for remainder of the scope are funded with Prop C 40% and TDA Article 4. These sources are eligible for bus and rail capital or operations.

Justification of Sole Source

To accommodate regional payment functions and seamless connectivity, an account-based layer must be added onto the current TAP Customer Service System. Vertiba Inc. is the architect of the innovative, cloud-based, highly-customized Customer Service System for TAP. This complex and unique system holds TAP customer information for 26 TAP-enabled agencies, including Metro, Metrolink and Access Paratransit and integrates into eight TAP-related, Metro Departments (TAP Call Center, Reduced Fare, Call Sales, Corporate Programs, Business Programs, U-TAP, Back Office, and Customer Experience). In addition, Vertiba developed the custom code for the internal website, which provides customer information for all TAP departments and the Regional TAP Operators. They also developed the customer-facing *taptogo.net* site which is for the general public. Both the internal and customer-facing sites will be configured to integrate with a new mobile phone application. The

system built by Vertiba also integrates with Metro's Accounting department, the TAP card manufacturer, the third-party retail vendor network and the TAP fare equipment system. Due to the high level of customized development that has already been completed and integrated, and to keep costs as low as possible, staff recommends Vertiba to perform this complex integration. Vertiba is a highly qualified, Salesforce-certified firm that has over 100 5-star ratings on the Salesforce App Exchange.

ALTERNATIVES CONSIDERED

The Board may choose not to approve the implementation of expanded TAP account-based functions for integration with external programs. This choice is not recommended due to the increasing need for integration with new technologies and systems. If no account-based functionality is included, then the card-based TAP system will not be able to integrate with account-based systems such as Bike Share, parking, gift card programs, ride-hailing companies, mobility hubs, electric vehicle car-sharing, low-income subsidy programs and others. The Board may direct staff to competitively bid this effort, but this is not recommended because this would likely cost more due to the complexity of the system that is already in place and the amount of time necessary for the selected vendor to understand the customization and then to make the necessary modifications.

NEXT STEPS

Upon Board approval of this strategy, staff will negotiate, award and execute a contract to Vertiba, Inc. and will begin work in December, 2016.

ATTACHMENTS

Attachment A - Procurement Summary
Attachment B - DEOD Summary
Attachment C - Board Motion #44

Prepared by: Julia Salinas, Transportation Planning Manager, (213) 922-7413
Robin O'Hara, Deputy Executive Officer, (213) 922-2411
Laura Cornejo, Deputy Executive Officer, (213) 922-2885
Calvin E. Hollis, Managing Executive Officer, (213) 922-7319
David Sutton, Executive Officer, (213) 922-5633

Reviewed by: Debra Avila, Chief, Vendor/Contract Management Officer, (213) 418-3051
Nalini Ahuja, Chief Financial Officer (213) 922-3088

Phillip A. Washington
Chief Executive Officer

PROCUREMENT SUMMARY

TAP SYSTEM INNOVATIVE ENHANCEMENTS FOR SEAMLESS CONNECTIVITY WITH MULTI-MODAL MOBILITY PROGRAMS/PS 6394500

1.	**Contract Number**: PS 6394500	
2.	**Recommended Vendor**: Vertiba, LLC	
3.	**Type of Procurement (check one):** ☐ **IFB** ☐ **RFP** ☐ **RFP–A&E** ☒ **Non-Competitive** ☐ **Modification** ☐ **Task Order**	
4.	**Procurement Dates**:	
	A. Issued: October 20, 2016	
	B. Advertised/Publicized: N/A	
	C. Pre-Proposal Conference: N/A	
	D. Proposals Due: October 31, 2016	
	E. Pre-Qualification Completed: November 7, 2016	
	F. Conflict of Interest Form Submitted to Ethics: November 1, 2016	
	G. Protest Period End Date: N/A	
5.	**Solicitations Picked up/Downloaded**: 1	**Bids/Proposals Received**: 1
6.	**Contract Administrator**: Anush Beglaryan	**Telephone Number**: (213) 418-3047
7.	**Project Manager**: Robin O'Hara	**Telephone Number**: (213) 922-2411

A. Procurement Background

This Board Action is to approve single source Contract No. PS 6394500 issued to provide enhancements to the existing Customer Relationship Management (CRM) System for the regional TAP Smart Card Program. The existing Customer Relationship Management System is furnished by Vertiba, LLC.

The RFP was issued in accordance with Metro's Acquisition Policy and the contract type is a Firm Fixed Price. One amendment was issued during the solicitation phase of this RFP. Amendment No.1 issued on October 20, 2016, extended the proposal submittal due date.

B. Evaluation of Proposals

The Proposal Evaluation Team (PET) consisting of staff from TAP Program/Finance and Bike Share convened and conducted a comprehensive technical evaluation of the proposal received.

The proposal was evaluated based on the established evaluation criteria stated in the RFP, which are appropriate and consistent with criteria developed for other similar procurements.

During the week of October 31, 2016, the PET met and evaluated the proposal. The PET conducted fact finding and negotiations via telephone with Vertiba's Project Manager and key team members.

C. Cost/Price Analysis

The recommended price has been determined to be fair and reasonable based upon technical evaluation, cost analysis, fact finding, and negotiation. The independent cost estimate (ICE) did not account for the mobile application and gift card functions that are required in the scope of work. In addition, the hourly labor rates used in the ICE were lower than labor rates for Los Angeles County. As a result, the ICE is lower than the NTE amount.

	Proposer Name	Proposal Amount	Metro ICE	NTE Amount
1.	**Vertiba, LLC.**	**$4,850,000**	**$3,400,000**	**$4,750,000**

D. Background on Recommended Contractor

The recommended firm, Vertiba, LLC (Vertiba), headquartered in Boulder, Colorado with offices in Texas, California, Oregon, Arizona, North Carolina, and Utah, has been in business since 2010. Vertiba is a global leader in Salesforce platform implementations, technology and creativity. Vertiba has extensive experience implementing customer relationship management systems and solutions, all based on the Salesforce platform. Vertiba has gained national prominence for its innovative work on the Salesforce platform, and its ability to deliver outstanding results for its clients. Furthermore, Vertiba is a Gold-level Salesforce implementation partner with consultants throughout the United States and is ranked in the top 3 for customer satisfaction among all 700+ certified partners.

Vertiba has successfully completed similar projects for Bay Area Rapid Transit (BART) in the greater San Francisco area as well as for the State of California Department of Transportation (Caltrans). Vertiba has identified key personnel who will be working closely with staff to ensure successful implementation and completion of the project.

The existing Customer Relationship Management (CRM) System for the TAP Service Center was implemented by Vertiba. In 2015, Metro entered into an agreement with Vertiba to integrate Metro's unique TAP programs into the CRM.

DEOD SUMMARY

TAP SYSTEM INNOVATIVE ENHANCEMENTS FOR SEAMLESS CONNECTIVITY WITH MULTI-MODAL MOBILITY PROGRAMS/PS 6394500

A. Small Business Participation

The Diversity and Economic Opportunity Department (DEOD) did not recommend a Small Business Enterprise (SBE) goal for this sole source, non-competitive procurement, which involves software coding and proprietary architecture that precludes subcontracting opportunities. Vertiba, Inc. did not make an SBE commitment but indicated it will endeavor to include small business as the project evolves.

B. Living Wage and Service Contract Worker Retention Policy Applicability

The Living Wage and Service Contract Worker Retention Policy is not applicable to this contract.

C. Prevailing Wage Applicability

Prevailing wage is not applicable to this contract.

D. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this contract.

File #:2016-0086, **File Type:**Motion / Motion Response

Agenda Number:

REGULAR BOARD MEETING
January 28, 2016

Motion by:

MAYOR ERIC GARCETTI, SUPERVISOR HILDA SOLIS,
DIRECTOR MIKE BONIN & DIRECTOR ARA NAJARIAN

January 28, 2016

Item #44; File ID 2015-1783
Technology & Transportation Investments to Improve Customer Service

The quality of the customer experience is directly relevant to how attractive the MTA system is to potential riders, and more riders translates into the furthering of MTA's goals of easing congestion, cleaning our air and keeping our economy moving.

Technological sophistication is expected by today's customers within all economic and demographic strata.

A majority of people across all economic and demographic strata carry cellular and/or internet enabled devices on their person.

People want to be constantly connected to cellular and Internet service, especially when traveling.

Transportation information applications are among the most downloaded smart-phone programs.

Technology has the potential to improve customer service, "first-mile, last mile" connections by linking the transit system with car sharing, taxi, bike and other modes of transportation; provide real-time bus and train timetables; streamline transfers; and more.

As MTA proceeds with its unprecedented expansion of Los Angeles County's transportation network, it is essential that these investments are complemented by the best possible technology.

MOTION by Garcetti, Solis, Bonin, Najarian that the Board direct the CEO to:

A. Prioritize and accelerate the **full** installation of cellular and Wi-Fi infrastructure and service in MTA tunnels, underground stations, and provide a status report on the execution of agreements with cellular service providers, with the goal of a system with no "dead zones" for cellular and

internet users.

B. Begin the development of a next-generation Transit Access Pass ("TAP") for customer payment of non-MTA services, including but not limited to Metrolink, taxicabs, ride-hailing companies, bikeshare, parking garages, etc.

C. Identify existing transit applications that do not use real-time MTA data and explore the feasibility of sharing real-time data to enhance the user experience.

D. Work with transit technology companies to develop connectivity and demand-response systems that integrate with MTA's fixed-route transit lines to provide first-mile/last-mile connections in various modes.

E. Improve real-time arrival service information, including, but not limited to:

1. Set a goal of repairing faulty displays within 24 hours of failure

2. Ensure consistency between countdown clocks displays at each rail station

3. Create true real-time feeds of bus and rail arrival times rather than the current practice of information feeds at set intervals.

4. Work with Metrolink and Amtrak to install real-time arrival information at regional rail stations.

F. Work with county transit municipal operators to help improve bus speeds at key corridors where traffic signal priority technology exists.

G. Identify and utilize technology to better align arrivals and departures of different lines to streamline transfers.

H. Report back on all the above during the April 2016 MTA Board cycle.

LOP BUDGET AND FUNDING PLAN

	FY17	FY18	Capital Costs Total
Uses of funds			
Design and development	$ 700,000	$ 220,000	$ 920,000
Testing and debugging	$ -	$ 545,000	$ 545,000
Program management	$ 75,000	$ 110,000	$ 185,000
Total	**$ 775,000**	**$ 875,000**	**$ 1,650,000**
Sources of funds			
Prop C 40%*	$ 775,000	$ 875,000	$ 1,650,000
Total	**$ 775,000**	**$ 875,000**	**$ 1,650,000**

*May be funded with other Active Transportation-eligible funds in FY18

Los Angeles County
Metropolitan Transportation Authority

Planning & Programming

Bike Share/ TAP Integration
Step 3

Metro

Recommendations

- **Establish LOP budget for Bike Share/ TAP Integration Step 3A Integration in the amount of $1.65M**
  - **$900,000 to the TAP CRM upgrade**
    - **Part of $4.75M contract awarded by Metro Board Nov 2016**
  - **Up to $750,000 for Metro Bike Share software adaptation**

Metro

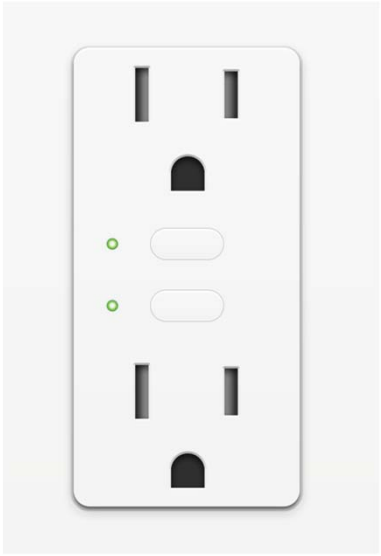
Project Objective

Create a seamless user experience across modes and services

- Exchange data and account information across modes
- Enable transfers and discounts between Metro transit, Bike Share, and other services
- Enable reciprocity between bike share systems
- Store and use credentials other than a credit card to serve low income, senior, and student customers

Metro

Project Objective



- Enhance the existing TAP Customer Relationship Management system (TAPforce)
  - This contract was awarded in November 2016
  - Create a regional multimodal transportation account management system in TAP
  - Build capability to accept information from other systems

Metro

Project Objective

Metro Bike Share

SHARE

- Build connections to TAP to exchange account and trip information
- Enables transfers and discounts between modes and services
- Enables reciprocity between bike share systems
- Enables low income, student, and senior pass types and rates

Other services

HUB

Metro

Next Steps

- Coordinate with TAP to implement TAP CRM upgrades
- Work with BTS to implement Metro Bike Share changes
- Work with 3rd party bike share and other services to integrate with TAP

Metro

Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

Metro

Board Report

File #: 2016-0995, **File Type:** Budget **Agenda Number:** 16.

FINANCE, BUDGET AND AUDIT COMMITTEE
PLANNING & PROGRAMMING COMMITTEE
FEBRUARY 15, 2017

SUBJECT: UNION STATION METRO BIKE HUB

ACTION: AUTHORIZE LIFE OF PROJECT BUDGET INCREASE

RECOMMENDATION

AUTHORIZE augmenting the life of project budget for **Union Station Metro Bike Hub** from $1.32 million to $2.47 million, to accommodate a more accessible and higher visibility bike hub facility for users and the community.

ISSUE

At the July 2014 meeting, the Board approved an ExpressLanes grant award to the Union Station Metro Bike Hub in the amount of $700,000 (Attachment A). At the May 2015 meeting, the Board approved the FY 2016 budget including a Life of Project (LOP) for the Union Station Metro Bike Hub of $1.32 million. This LOP assumed the project would be built within the Gateway parking garage. Subsequently the redesign of the P1 level to accommodate patron drop-off eliminated that location. A free standing facility was then designed.

A Request for Proposals (RFP) was released for the construction of the Union Station Metro Bike Hub to Small Business Enterprises (SBEs) in October 2016. Upon review and contractor selection, an amendment of $1.15 million is being requested for a total LOP of $2.47 million.

DISCUSSION

At the September 2010 meeting, the Board approved 10 directives to improve bicycle connections and use with Metro services (Attachment B). One of these directives is to incorporate robust bicycle facilities, such as bicycle parking, at high demand stations to facilitate first/last mile transit access by bike. To meet the bicycle parking needs at high demand stations, bike lockers are impractical given the amount of space that would be required. Metro Bike Hubs have been introduced as a preferred option to meet the growing demand for secure bike parking. The Union Station Metro Bike Hub is designed to accommodate up to 200 bicycles. Metro Bike Hubs are designed to provide additional services to patrons including (in high demand locations) part-time attended staff, repair and tune-up services, check-in bike parking, and retail items. Metro Bike Hubs also provide informational resources to support bike education, safety, transit, and car-free transportation options.

Initial discussions on the Union Station Metro Bike Hub located the facility in the East Portal on parking level P1 adjacent to the childcare drop-off area when the original LOP was established. This space has since been converted to ADA parking for Union Station. Consequently, an alternative location on the West Portal near the north breezeway was selected for higher visibility and accessibility by users. This new location is limited in space and is only able to accommodate up to 200 bicycles rather than the initially proposed 300 bicycles; the ExpressLanes grant has been reduced by $61,214 as a result.

Built in 1939, Union Station is on the National Register of Historic Places. Metro is charged with maintaining its historical integrity. As such, Metro Union Station management and its contractor, Morlin Asset Management (Morlin), was actively involved in the design of the Metro Bike Hub, ensuring that the facility is visually compatible, yet distinct, and that it does not disrupt views of the historic Union Station from the front of the building. Additionally, care was taken to design a facility that may be relocated to accommodate elements of the Union Station Master Plan as they come to fruition. A rendering of the Metro Bike Hub is provided in Attachment C.

In October 2016, an RFP was released by Morlin to SBEs for the construction of the Metro Bike Hub at Union Station. Proposals were due in November followed by interviews of the contractors. An evaluation of the proposing teams was completed to identify the most qualified candidate. Total construction costs are $2.24 million; this amount is exclusive of Metro labor match required by the ExpressLanes grant and the cost of environmentally clearing the project. The need to design a freestanding facility that is compatible with the historic station and a number of on-site conditions including utilities has resulted in the increased cost. To help offset the increased costs, Union Station has allocated $660,000 in tenant improvement (TI) funds to contribute toward the Metro Bike Hub facility. This capital project will be procured and managed in accordance with the Morlin contract consistent with Metro policies.

The Union Station Bike Hub will add to a network of other Metro Bike Hubs including El Monte, Hollywood/Vine, Culver City, and North Hollywood Metro Station hubs. Metro Bike Hub users have access to all locations to increase bike and transit trips and achieve first/last mile strategies. Key objectives of the program are to improve access to transit, encourage bicycle trips to Metro services, and maintain on-board transit vehicle capacity by providing secure bicycle parking at Metro stations. The facility will include secured-access and 24/7 bike parking built inside a structure with space-efficient, tiered bike racks, CCTV cameras, monitors with transit information and announcements, a bicycle repair stand and tools, air pump, and a retail/service area.

DETERMINATION OF SAFETY IMPACT

Authorization to amend the LOP of the Union Station Metro Bike Hub will not have any adverse safety impacts on Metro employees and patrons.

FINANCIAL IMPACT

The FY17 budget includes $1.19 million including $162K from the FY17 midyear budget adjustment for this project in Cost Center 4320, Project 210142 (Union Station Metro Bike Hub). Since this is a

multi-year project, the cost center manager and Chief Planning Officer will be responsible for budgeting the cost in future years, including budget for Project 204090 (Bicycle Access Improvements).

Impact to Budget

The sources of funds are toll revenue grant and Transportation Development Act (TDA) Article 4. Union Station has also allocated Tenant Improvement funds toward the overall project cost. Other eligible and available local funds or general funds may be used in FY18. A cash flow table is provided in Attachment D.

ALTERNATIVES CONSIDERED

The Board may choose not to amend the LOP for the Union Station Metro Bike Hub. This alternative is not recommended, as it is not in line with previous Board direction.

NEXT STEPS

Upon Board authorization, a Notice to Proceed will be issued to the selected SBE contractor to commence construction activities for the Union Station Metro Bike Hub. The facility is expected to open in fall 2017.

ATTACHMENTS

Attachment A - July 2014 Metro Board Action 36 ExpressLanes Grant Awards
Attachment B - September 2010 Metro EMAC Motion 10
Attachment C - Union Station Metro Bike Hub Rendering
Attachment D - Union Station Metro Bike Hub Cash Flow Table
Attachment E - Union Station Metro Bike Hub Presentation

Prepared by: Basilia Yim, Manager, Transportation Planning, (213) 922-4063
Laura Cornejo, DEO, Countywide Planning & Development, (213) 922-2885
Kenneth Pratt, Director Union Station, (213) 922-2849
Calvin E. Hollis, SEO, Countywide Planning & Development, (213) 922-7319

Reviewed by: Therese W. McMillan, Chief Planning Officer, (213) 922-7077

Phillip A. Washington
Chief Executive Officer

Los Angeles County
Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.
metro.n

36

Metro

REVISED
ADHOC CONGESTION REDUCTION COMMITTEE
JULY 16, 2014

SUBJECT: 2014 METRO EXPRESSLANES NET TOLL REVENUE REINVESTMENT EXPENDITURE PLAN

ACTION: APPROVE RECOMMENDATIONS

RECOMMENDATION

Approve the following actions for the 2014 Metro ExpressLanes Net Toll Revenue Reinvestment Grant Program, in the amount of $26,723,152:

A. Approve a total of $801,695 to be deposited into Reserve Accounts – $598,367 for the I-110 and $203,328 for the I-10;
B. Approve a total of $5,192,000 for continued Congestion Reduction Demonstration (CRD) Transit Service - $3,402,000 for the I-110 and $1,790,000 for the I-10;
C. Approve the I-110 Expenditure Plan including recommended projects and funding awards totaling $15,945,193 in Attachment A and amend the recommended projects into the Fiscal Year (FY) 2015-16 Los Angeles County Regional Transportation Improvement Program (Regional TIP);
D. Approve the I-10 Expenditure Plan including recommended projects and funding awards totaling $4,784,265 in Attachment B and amend the recommended projects into the Fiscal Year (FY) 2015-16 Regional TIP;
E. Amend the FY 15 budget to add the necessary revenues and expenses for the projects recommended for funding as well as the reserve funds and funding for the continuing CRD Transit Service;
F. Administer the grant awards and CRD Transit funding with the requirement that all funding recipients bear all responsibility for funding cost increases; and,
G. Authorize the Chief Executive Officer (CEO) or his designee to enter into funding agreement with grantees and CRD Transit service providers.

ISSUE

In October 2013 the Board approved the Guidelines for Net Toll Revenue Allocation (Attachment C) and in February 2014 the Board approved the application package, including the evaluation criteria, for the grant program (Attachment D). Grant applications were received on May 30, 2014. Staff received 35 applications totaling $123,405,007 in funding requests. Based on the technical evaluations, and in

consultation with the Corridor Advisory Committee (CAG) member Subcommittee, staff recommends funding for 22 projects totaling $20,729,458. Staff also recommends the formal allocation of the "off the top" priorities of the Reserve Fund and Set-Aside for Equity Considerations of the CRD Transit Service in the amount of $5,993,695.

DISCUSSION

State law requires the net toll revenues generated from the Metro ExpressLanes be re-invested in the corridor from which they were derived, pursuant to an approved expenditure plan. In October 2013 the Board approved the re-investment framework for the expenditure plan that includes the following:

1) Reinvestments in the transportation corridor provide a direct benefit to reducing congestion on the Metro ExpressLanes (I-10 and I-110);
2) 3-5% of the funds set aside and placed into a reserve account;
3) Set aside funds for the continuation of the CRD Transit Service to address social equity considerations; and,
4) Any remaining funds are allocated to the Grant Program comprised of three categories: Transit Improvements (TI), Active Transportation/System Connectivity (AT/SC), and Highway Improvements (HI).
5) Grant funds must be reinvested in projects/programs that provide direct mobility benefit to the 110 and 10 Express Lanes.

Per the approved guidelines, the baseline targets of 40% for Transit Improvements, 40% for Active Transportation/System Connectivity, and 20% for Highway Improvements are identified as goals, however the actual allocation of the funding will be based on the merits of the proposed projects and programs.

Funding Availability

The net funding available from toll revenues generated during the CRD federal demonstration period, which spans from November 2012 to February 2014, is as follows:

	CORRIDOR		
	I-110	I-10	TOTAL
Net Funds Available	$19,945,561	$6,777,592	$26,723,152
Reserve Funds (3%)	$598,367	$203,328	$801,695
CRD Transit Service	$3,402,000	$1,790,000	$5,192,000
Subtotal	$15,945,194	$4,784,264	$20,729,458
Transit System Improvements	$6,378,077	$1,913,706	$8,291,783
Active Transportation/ System Connectivity	$6,378,077	$1,913,706	$8,291,783
Highway System Improvements	$3,189,039	$956,853	$4,145,892

Reserve Funds
Per the adopted Guidelines, reserve funds are set aside to ensure monies are available to cover unexpected costs required for the operation of the ExpressLanes so that these expenses do not require the use of general funds. Staff is recommending a 3% set aside which is $598,367 for the I-110 and $203,328 for the I-10.

CRD Transit Service
The adopted Guidelines also approved the continuation of funding for the incremental CRD Transit Service provided during the demonstration period. This funding is provided through a direct allocation to the transit providers to subsidize the incremental operating costs of the CRD service. These transit enhancements are a benefit for low income commuters along the ExpressLane corridors and have proven to be one of the major success stories for the project. Transit Agencies that receive this direct allocation include: Foothill Transit, Torrance Transit, Gardena Municipal Bus Lines, and Metro's Silver Line service.

For FY15 Torrance Transit will not require an allocation of toll revenues as they still have remaining CRD grant funds to expend. Foothill Transit also has remaining CRD funds so they will only require a partial allocation of toll revenues. Therefore, the net allocation to subsidize CRD Transit operations is $5,192,000 in FY15 but will be greater in future years once all CRD funds have been expended.

Evaluation and Ranking of Net Toll Revenue Applications
In March 2014, staff distributed the application package to 152 eligible applicants including 88 cities, 61 transit agencies, the County of Los Angeles, Caltrans District 7 and Metro. Potential applicants were then invited to a workshop to review the application and evaluation process. The I-110 Workshop was held on March 25th at the Council District 8 Customer Service Center in South Los Angeles. The I-10 Workshop was held on March 27th at the Metro Service Council office in El Monte. At the request of the South Bay Cities Council of Governments (SBCCOG) another Workshop was held at the SBCCOG office in Torrance on April 3rd. Presentations on the Grant application package and process were provided in February 2014 to the Bus Operators Subcommittee (BOS) and in March 2014 to the Technical Advisory Committee (TAC), Streets and Freeways Subcommittee, General Managers and Local Transit Systems Subcommittee (LTSS).

Applications were received on May 30, 2014 and were reviewed for eligibility. All projects were deemed eligible based on the eligibility criteria approved by the Board in February 2014. Once it was determined that all projects submitted met the minimum requirements, they were then sorted by corridor and reviewed and scored by a technical team comprised of staff from Metro and Caltrans District 7. Projects were then ranked based on scores without consideration for location along the corridor or modal category.

Upon completion of the technical review, project applicants were invited to a meeting of the respective I-110 and I-10 Corridor Advisory Groups (CAG) Reinvestment

Subcommittees. The Subcommittees were formed from members of each CAG who volunteered to be on the review panel and represent the following agencies: Los Angeles World Airports (LAWA), SBCCOG, Safe Routes to School National Partnership, City of Carson, Community Health Councils, Los Angeles County Bicycle Coalition (LACBC), City of Los Angeles Housing Department, Los Angeles Neighborhood Initiative (LANI), San Gabriel Valley Economic Partnership, Fixing Angelenos Stuck in Traffic (FAST), Bike San Gabriel Valley, Cal State Los Angeles, Foothill Transit. The Subcommittee members were provided access to all project applications and staff provided them with the project rankings after the technical review. After hearing all of the presentations from the applicants, CAG members then indicated their own project rankings based on the following: Priority = Project is a priority for funding; Potential = Project has potential and could be funded, if funds are available; and, Not Recommended = Project is not recommended for funding. These rankings were then translated into scores: Priority = 85 points; Potential = 70 points; and, Not Recommended = 55 points.

Final overall scores were then averaged based on the technical review and CAG feedback and projects were then sorted into modal categories. An overall score of a 70 was considered the cutoff line for funding consideration. Any projects receiving an overall score of less than 70 were not recommended for funding. Funding recommendations were based on the score within the modal category and the amount of available funding with a consideration for geographic equity.

Staff received 35 applications totaling $123,405,007 in funding requests. Based on the technical evaluations, and in consultation with the Corridor Advisory Committee (CAG) Subcommittee members, staff recommends funding for 22 projects totaling $20,729,458. Project funding recommendations are reflected in Attachments A for the I-110 and B for the I-10.

DETERMINATION OF SAFETY IMPACT

The Board action will not have an impact on established safety standards and in many cases will improve safety in those locations where projects will be implemented.

FINANCIAL IMPACT

All recommended actions will be funded with toll revenues generated from the I-10 and I-110 ExpressLanes. No other funds will be required from LACMTA Congestion Reduction Department to manage and administer the grant program. No expenses for any of the projects recommended for funding, the CRD Transit Service or the Reserve Funds are included in the FY 15 budget. Funding for the grant awards, CRD Transit Service and Reserve Funds will need to be amended into the FY15 budget into cost center 2220 with $ 19,945,561 to project 307001 and $6,777,592 to project 307002. Since many of these projects are multi-year projects, the cost center manager will be responsible for budgeting project expenditures in future years.

IMPACT TO BUS AND RAIL OPERATING AND CAPITAL BUDGET

The funding of this action come from Toll Revenues generated from the Metro ExpressLanes operation. No other funds were considered for this activity because these funds are specifically required to be reinvested per State Law. This activity will not impact ongoing bus and rail operating costs.

ALTERNATIVES CONSIDERED

The Board may suggest alternative projects for funding through the 2014 Net Toll Revenue Reinvestment Grant Program. Projects added to the recommended list will result in other projects either moving off the funded list or projects receiving reduced levels of funding.

NEXT STEPS

With Board approval of the recommendations, we will develop and execute funding agreements with the applicants of the projects approved for funding through the grant as well as the transit agencies that will continue to provide the CRD incremental service. We will also amend the FY15 budget and program the funds into the Regional TIP.

ATTACHMENTS

A. I-110 Expenditure Plan
B. I-10 Expenditure Plan
C. Guidelines for Net Toll Revenue Allocation
D. Net Toll Revenues Grant Application & Eligibility Guidelines

Prepared by: Kathleen McCune, Director, 213-922-7241
Steven Mateer, Transportation Planner, 213-922-2504

Stephanie Wiggins
Executive Director, Vendor/Contract Management

Arthur T. Leahy
Chief Executive Officer

ATTACHMENT A REVISED

ExpressLanes Net Toll Revenue Reinvestment Grant Expenditure Plan (I-110)

	Project Information			Scoring Information			Funding		
Rank	Project Name	Lead Agency	Category	Technical Score	CAG Score	Overall Score	Requested Amount	Recommendation **	Project Type
1	ATSAC Infrastructure Communication Systems Enhancement along I-110 Freeway	City of Los Angeles	HI	72	68	70	$1,425,000	$1,425,000	Capital
2	South Bay Arterial Performance Measurement Project	County of Los Angeles	HI	66	74	70	$504,000	$504,000	Capital
3	ExpressLanes Corridors Incident Management Improvements Project	Caltrans	HI	75	64	70	$240,000	$240,000	Operating
4	I-110 HOT/Express Lanes Improvements *	Caltrans	HI	73	66	70	$4,495,000	$1,020,039	Capital
5	ExpressLanes Corridors Communication Systems Improvement Project	Caltrans	HI	65	64	65	$1,250,000	Not recommended	Operating
6	New Traffic Signals and Left-Turn Phasing in South Los Angeles	City of Los Angeles	HI	67	63	65	$1,500,000	Not recommended	Capital
7	Deploying a CCTV Video Processing System (VPS) to Convert Video Streams into Vehicle Counts and Vehicle Classification Counts	Caltrans	HI	67	61	64	$75,000	Not recommended	Capital/Operating
8	I-110 HOT/Express Lanes Directional Fly-Over Connector Off-Ramp	Caltrans	HI	55	63	59	$68,000,000	Not recommended	Capital
						Subtotal	**$77,489,000**	**$3,189,039**	
1	My Figueroa Project (Marketing and Safety)	City of Los Angeles	AT/SC	95	74	84	$150,000	$150,000	Operating
2	Bikeshare-Downtown Los Angeles Project	LACMTA	AT/SC	78	76	77	$3,792,892	$3,792,892	Capital
3	Dominguez Channel Bike & Pedestrian Path	City of Carson	AT/SC	75	74	75	$1,259,000	$1,259,000	Capital
4	Active Streets LA Budlong Avenue *	City of Los Angeles	AT/SC	77	70	74	$1,958,054	$1,176,185	Capital/Operating
5	West Carson Silver Line Station Access Improvements	County of Los Angeles	AT/SC	73	63	68	$762,000	Not recommended	Capital
6	Torrance Regional Park and Ride Transit Center Phase 2 (Multi-Level Parking Structure)	Torrance Transit	AT/SC	73	63	68	$10,000,000	Not recommended	Capital
7	New Class II Bicycle Lanes on 135th Street and Vermont Avenue	City of Gardena	AT/SC	64	64	64	$569,422	Not recommended	Capital
						Subtotal	**$18,491,368**	**$6,378,077**	
1	Line 1X-Expand Transit Bus Service on I-110 Freeway	City of Gardena	TI	87	79	83	$842,482	$842,482	Operating
2	Commuter Express Service Expansion to Alleviate Congestion on Harbor Freeway	City of Los Angeles	TI	80	79	80	$724,000	$724,000	Capital/Operating
3	Dodger Stadium Express-Harbor Gateway (DSE-HG)	LACMTA	TI	79	76	77	$1,292,604	$1,292,604	Operating
4	Torrance Transit Expansion of Line #1 and Line #4 HOTLane Service *	Torrance Transit	TI	78	74	76	$7,750,656	$2,235,991	Capital/Operating
5	Metrolink Enhanced Ticket Distribution Project **(I-110 Only)**	SCRRA	TI	85	64	75	$875,000	$875,000	Operating
6	Express-Lane CNG-Fueled MV-1 Program	Access Services	TI	76	64	70	$408,000	$408,000	Capital
7	Line 5-Increase Bus Service Frequency from 30 Minutes to 20 Minutes on Weekdays	City of Gardena	TI	72	64	68	$1,053,102	Not recommended	Operating
						Subtotal	**$ 12,945,844**	**$6,378,077**	
						TOTAL FUNDING	**$108,926,212**	**$15,945,193**	

LEGEND: HI = Highway Improvements; AT/SC = Active Transportation/System Connectivity; TI = Transit Improvements

* Contingent upon applicant confirming that project is still viable with partial funding

** Projects recommended for funding will be required to execute a Funding Agreement within sixty (60) days of receiving formal transmittal of the Funding Agreement boilerplate.

ATTACHMENT B REVISED

ExpressLanes Net Toll Revenue Reinvestment Grant Expenditure Plan (I-10)

Project Information				Scoring Information			Funding		
Rank	Project Name	Lead Agency	Category	Technical Score	CAG Score	Overall Score	Requested Amount	Recommendation **	Project Type
1	ExpressLanes Corridors Incident Management Improvements Project	Caltrans	HI	70	70	70	$240,000	$240,000	Operating
2	ATSAC Infrastructure Communication Systems Enhancement along I-10 Freeway	City of Los Angeles	HI	68	67	68	$950,000	Not recommended	Capital
3	ExpressLanes Corridors Communication Systems Improvement Project	Caltrans	HI	67	64	66	$1,250,000	Not recommended	Operating
4	Deploying a CCTV Video Processing System (VPS) to Convert Video Streams into Vehicle Counts and Vehicle Classification Counts	Caltrans	HI	67	64	65	$75,000	Not recommended	Capital/Operating
5	San Gabriel Valley Arterial Performance Measurement Project	County of Los Angeles	HI	61	64	63	$690,000	Not recommended	Capital
6	I-10 HOT/Express Lanes Improvements	Caltrans	HI	63	61	62	$2,650,000	Not recommended	Capital
						Subtotal	**$5,855,000**	**$240,000**	
1	Union Station Metro Bike Hub	LACMTA	AT/SC	89	79	84	$700,000	$700,000	Capital/Operating
2	Monterey Park Bike Corridor Project	City of Monterey Park	AT/SC	79	85	82	$331,800	$331,800	Capital
3	Frazier Street Pedestrian and Bicycle Safety Improvements	City of Baldwin Park	AT/SC	82	79	81	$895,288	$895,288	Capital
4	Santa Anita Avenue Active Transportation for El Monte Station and Downtown El Monte *	City of El Monte	AT/SC	81	76	79	$1,028,522	$633,782	Capital
~~6~~ 5	I-10 Active Commute, Healthy Communities Project	City of El Monte	AT/SC	76	79	78	$440,000	Pending available funding* ***	Operating
~~7~~ 6	Cesar Chavez Great Street	City of Los Angeles	AT/SC	73	82	77	$1,000,000	Pending available funding* ***	Capital
~~5~~ 7	Rosemead Park and Ride Lot Enhancements	City of Rosemead	AT/SC	76	76	76	$531,789	Pending available funding* ***	Capital/Operating
8	Ramona Boulevard Pedestrian Connection	City of Irwindale	AT/SC	59	58	59	$200,000	Not recommended	Capital
						Subtotal	**$5,127,399**	**$2,560,870.00**	
1	Metrolink Enhanced Ticket Distribution Project **(I-10 Only)**	SCRRA	TI	85	79	82	$875,000	$875,000	Operating
2	Baldwin Park Commuter Connector Express Line	City of Baldwin Park	TI	83	79	81	$700,395	$700,395	Capital/Operating
3	Express-Lane CNG-Fueled MV-1 Program	Access Services	TI	80	82	81	$408,000	$408,000	Capital
4	Flair Park Direct Express Bus Lane	City of El Monte	TI	64	73	69	$1,513,000	Not recommended	Capital/Operating
						Subtotal	**$3,496,395**	**$1,983,395**	
						TOTAL	**$14,478,794**	**$4,784,265**	

LEGEND: HI = Highway Improvements; AT/SC = Active Transportation/System Connectivity; TI = Transit Improvements

* Contingent upon applicant confirming that project is still viable with partial funding

** Projects recommended for funding will be required to execute a Funding Agreement within sixty (60) days of receiving formal transmittal of the Funding Agreement boilerplate.

***** Funding could be made available for these projects if other projects receiving partial funding are not able to be delivered, there are cost savings from other projects or funding deobligations.**

ATTACHMENT C

Congestion Reduction Demonstration Program
Adopted Net Toll Revenue Reinvestment Guidelines for the Pilot Period

The generation of net toll revenues from the Congestion Reduction Demonstration project offers a unique opportunity to advance the Long Range Transit Plan (LRTP) and Los Angeles County Metropolitan Transportation Authority's (LACMTA) goals for a more sustainable countywide transportation system.

The objective of the Program is to increase mobility and person throughput through a series of integrated strategies (transit operations, transportation demand management, transportation systems management, active transportation, and capital investments) in the I-10 and I-110 corridors. These combined strategies have been consistently shown to result in more reliable and stable outcomes and greater magnitude of positive change than a single strategy scenario. An expenditure plan that retains this focus on integrated strategies and multi-modalism would advance Metro's LRTP and sustainability goals as outlined in Metro's Countywide Sustainability Planning and Implementation Policy (CSPIP).

The guideline principles are summarized as follows:

1. Reinvestments in the transportation corridor provide a direct benefit to reducing congestion on the Metro ExpressLanes (I-10 and I-110);

2. Establish a reserve fund of 3-5%, consistent with the Board Approved Toll Policy to ensure financial sustainability of the Metro ExpressLanes;

3. Direct allocation of revenue to support the incremental transit service implemented to support the deployment of the Metro ExpressLanes. The incremental services include Metro Silver Line, Foothill Silver Streak, Foothill Route 699, Gardena Line 1, and Torrance Transit Line 4;

4. Net of set-asides identified in #2 & #3 above, establish allocation targets of 40% for Transit Uses, 40% for Active Transportation, and 20% for Highway Improvements to support sustainable transportation strategies; and

5. Leverage net toll revenues with other funding sources. Locally sponsored capital projects and operating programs are encouraged. The funding will be mutually determined by Metro and the lead agency, proportionate to the local and regional benefits of the project or program.

Note: Guidelines would be amended by the Board to address changed circumstances such as the ability to bond against the toll revenues or any subsequent policy changes adopted by the Board.

Sustainability

The LRTP and the CSPIP identify principles and priorities to be advanced through a broad range of activities across all modes. The principles/priorities include:

- Connect People and Places
  - Access – Better integrating land-use and transportation planning to reduce trip lengths and increase travel choices
  - Prosperity – Reduce transportation costs for residents and provide the mobility necessary to increase economic competitiveness
  - Green Modes – Promote clean mobility options to reduce criteria pollutants, greenhouse gas emissions, and dependence on foreign oil
- Create Community Value
  - Community Development – Design and build transportation facilities that promote infill development, build community identity, and support social and economic activity
  - Urban Greening – Enhance and restore natural systems to mitigate the impacts of transportation projects on communities and wildlife, and ecosystems
- Conserve Resources
  - Context Sensitivity – Build upon the unique strengths of Los Angeles County's communities through strategies that match local and regional context and support investment in existing communities
  - System Productivity – Increase the efficiency and ensure the long-term viability of the multimodal transportation system
  - Environmental Stewardship – Plan and support transportation improvements that minimize material and resource use through conservation, re-use, re-cycling, and re-purposing

Eligible Uses

The LRTP and CSPIP identify a number of key concepts which will help outline eligible uses to reduce congestion on the I-10 and I-110 corridors:

- Green Modes
  Green modes include active transportation, rideshare, and transit. Given that all three of these modes operate along the I-10 and I-110 corridors, this key concept would make expanded use of the above modes consistent with the Plan. Such projects include the addition of bicycle and pedestrian facilities, expanded park-n-ride facilities, expanded service span and/or increased levels of service.

- Bundling Strategies for Greatest Impact
  The Metro ExpressLanes, as designed, seeks to increase mobility and person throughput through a series of integrated strategies (transportation demand management, transportation systems management, and multimodal capital

investments) in specific corridors. This "bundling of strategies" as referred to in the CSPIP has been consistently shown to result in more reliable outcomes and greater magnitude of positive change than a single strategy scenario. An expenditure plan that retains this focus on integrated strategies and multi-modalism would exemplify guidance from the CSPIP. Projects that demonstrate the ability to further link or expand the use of existing facilities such as complete streets improvements and first mile/last mile improvements are recommended.

- Network Optimization
  One of the primary objectives of the ExpressLanes project is to better utilize existing capacity within a corridor by using dynamic pricing. This approach of network optimization through the use of data represents the future of transportation policy and planning. To that end, the Policy also identified the concept of network optimization as a key component of sustainability. Projects falling under this concept include complete streets, signal prioritization, real-time ride share matching, and other smart technology improvements.

- Act Regionally and Locally
  The I-10 and I-110 are two of the busiest corridors in Los Angeles County. Given the regional significance of these corridors, improvements to these facilities as well as additional services utilizing these corridors should emphasize the varying needs of the corridors as well as needs of adjacent communities. Projects which can improve the connection of the local communities to the regional network will be essential to improving the quality of life in those neighborhoods as well as maximizing the potential of the corridors. Projects falling under this concept include first mile/last mile improvements, expanded park-n-ride facilities, expanded service span and/or increased levels of service, and urban greening initiatives which reduce pollution and improve the quality of life for residents.

Based on the key concepts, three project categories are recommended for the allocation of net toll revenues (excluding set-asides):

1. Transit Uses (40% of funds)
   - Increased levels of service and/or increased service span
   - Fare subsidy programs
   - Purchase of new bus and commuter rail vehicles
   - Station enhancements and capacity improvements, including intelligent transportation system improvements
   - Metro transit corridor projects serving ExpressLane corridors

2. System Connectivity/Active Transportation (40% of Funds)
   - First mile/last mile connections to transit facilities, focusing on multimodal elements recommended as part of the First/Last Mile Strategic Plan

including investments that might support 3rd party mobility solutions (car-share, bike-share)
- Complete streets projects which emphasize multi-modalism
- Bicycle infrastructure including bicycle lanes and secured bicycle parking facilities
- Pedestrian enhancements including on/off-ramp safety improvements, street crossings, and ADA-compliance improvements
- Infrastructure and programs to support the use of electric vehicles.
- Bus station improvements including enhanced bus shelters, real-time arrival information, and other related improvements
- El Monte Bus Maintenance facility
- Rideshare/Vanpool programs
- Park-n-Ride facility improvements including restrooms, lighting, and security.
- Landscaping suited to the Southern California ecology. For example, vegetation that does not contribute to smog and requires little or no irrigation. Additionally, landscaping with a high carbon sequestration factor and/ or provides habitat to environmentally sensitive species is favorable.

3. Highway Improvements (20% of funds)
    - Intelligent transportation system improvements to manage demand
    - Deck rehabilitation and maintenance above the required Caltrans maintenance for the facility
    - On/off ramp improvements which reduce the incidents of bicycle and pedestrian collisions with vehicles
    - Expanded freeway service patrol
    - Graffiti removal and landscaping suited to the Southern California ecology. For example, vegetation that does not contribute to smog and requires little or no irrigation. Additionally, landscaping with a high carbon sequestration factor and/ or provides habitat to environmentally sensitive species is favorable
    - Subject to Metro Board approval, extension of the ExpressLane corridors

NOTE: Baseline targets of 40% for Transit Uses, 40% for System Connectivity/Active Transportation, and 20% for Highway Improvements are identified as goals, however the actual allocation of the funding will be based on the merits of the proposed projects and programs.

Project Evaluation Criteria

Implementation of Regional and Local Sustainability Plans and Policies

- The extent to which the project, program, or enhanced transit service supports the recommendations and goals for each transportation mode as stated in the LACMTA's adopted Long Range Transportation Plan and SCAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

- Extent to which the project, program, or enhanced transit service conforms to local plans to support the implementation of sustainable projects, including transit-oriented development and bicycle and pedestrian master plans

Matching Funds/Leveraging Funds

- Extent to which project, program, or enhanced transit service uses ExpressLanes funds to leverage additional local, state, and/or federal funds

Innovative Transportation Technology

- Extent to which the project, program, or enhanced transit service facilitates the adoption of zero and near-zero emission vehicles
- The degree to which the project, program, or enhanced transit service supports improved transportation systems management strategies

Sustainable Transportation

- Extent to which the project, program, or enhanced transit service increases mobility options to support car-free and/or one-car living
- Extent to which project, program, or enhanced transit service enhances transit coverage, frequency, and reliability within the corridor
- The project, program, or enhanced transit service's connectivity with and ability to complement nearby transit projects
- The degree to which the project, program, or enhanced transit service provides access to regional trip generators, regional activity centers, fixed guideway, and Metrolink, and improves access between jurisdictional or community plan area boundaries
- Extent to which project, program, or enhanced transit service gives priority to transit and active transportation modes
- Extent to which the project, program, or enhanced transit service increases the mode share of transit services operating within the corridor
- The degree to which the project, program, or enhanced transit service provides additional resources for transportation demand management strategies to reduce solo driving
- The degree to which the project, program, or enhanced transit service promote the Metro ExpressLanes.

Cost Effectiveness

- The project, program, or enhanced transit service's cost effectiveness in relationship to the total project cost
- The applicant's demonstrated commitment to covering life-cycle operational and maintenance expenses

Recommended Standard Project Requirements

- Project, program, or enhanced transit service must operate along or within three miles of either the I-110 Corridor (defined as Adams Boulevard to the north and the Harbor Gateway Transit Center to the south) or the I-10 Corridor (between

the Alameda Street on the West and the El Monte Transit Center to the east) or provide regionally significant improvements for the 110 or 10 Corridor.

- Project, program, or enhanced transit service must provide direct operational benefits to the operation of the ExpressLanes and/or transit service within the corridors.

- Project, program, or enhanced transit must incorporate, to the extent possible, utilize green design techniques that minimize the environmental impact of transportation projects and/or support local urban greening initiatives.

- Eligible applicants include public agencies that provide transportation facilities or services within Los Angeles County. These include cities, transit operators, the County of Los Angeles, Caltrans, and Metro. Transportation-related public joint powers authorities must be sponsored by one of the above public agencies. All applicants must be in compliance with Maintenance of Effort requirements.

- If applicant is seeking funding for transit operations or highway maintenance, the service/maintenance must either be new service/maintenance meeting a previously unmet need in the corridor or must increase service for existing lines in the corridor.

- Applicants must maintain their existing commitment of local, discretionary funds for street and highway maintenance, rehabilitation, reconstruction, and storm damage repair in order to remain eligible for Net Toll Revenue funds to be expended for streets and roads.

- Monies cannot be used to supplant, replace, or reduce the project sponsor's previously required match in Metro's Call for Projects.

- Applicants shall ensure that all Communication Materials contain the recognition of Metro's contribution to the project, program, or service. Sponsor shall ensure that at a minimum, all Communication Materials include the phrase "This project/program/service was partially funded by Metro ExpressLanes."

ATTACHMENT D

FISCAL YEAR 2014-15
CONGESTION REDUCTION
EXPRESSLANES NET TOLL REVENUE RE-INVESTMENT GRANT
PROJECT APPLICATION

PART 1
Project Information

SECTION A: Lead Agency			
Lead Agency		Date	
Address			
Contact Person		Phone	
Title			
Email Address			
If joint project, include partner agency information below			
Agency			
Contact Person			
Title			
Email Address			
Phone			

SECTION B: Project Category – check one (for more information see Project Eligibility Guidelines)	
	Transit Improvements
	System Connectivity/Active Transportation
	Highway Improvements

SECTION C: Proposed Project, Program or Enhanced Transit Service	
Project Name	
Project Location/Project Limits	
Agency Priority Ranking (if submitting more than 1 project)	
Project Description:	

SECTION D: Project Eligibility		
Project/Program operates along or within the 3 mile boundary of the corridor?	**YES**	**NO**
If NO, Project/Program is regionally significant and benefits the ExpressLanes corridors? **(Regional Significance is defined as those projects that are multi-jurisdictional, and/or are included in, or consistent with, the Metro LRTP, Metro Countywide Sustainability Policy and Implementation Plan, or other relevant sub-regional plan)**	**YES**	**NO**
Explain how your project is regionally significant:		

SECTION E: Project Milestone Schedule (For capital projects use CAPITAL PROJECTS schedule; for non-capital projects use NON-CAPITAL PROJECTS schedule)

CAPITAL PROJECTS			
Phase	**Start (Month/Year)**	**End (Month/Year)**	**Comments**
Feasibility Study			
Environmental Doc			
Design Plans, Specifications and Estimates (PS&E)			
Right of Way (ROW)			
Construction			

NON-CAPITAL PROJECTS			
Deliverables	**Start (Month/Year)**	**End (Month/Year)**	**Comments**

Please note that if this project is funded, this schedule will be added to the grant agreement and the grantee will be held to this schedule for the purposes of project oversight by Metro.

SECTION F: Project Funding

Deliverable/Phase	Requested Funds ($000's)	Local Agency Funds (Match) ($000's)	Local Agency In-Kind Funds (Match) ($000's)	Total ($000's)

SECTION G: Community Support

The council or governing board of the applicant must authorize this grant application. Please attach a copy of the resolution or meeting minutes documenting that action. Or, if the project is part of an approved Plan, please list all local, system, regional and state plans in which this project is included and attach a copy of the section in each plan that includes the project.

PART 2
Project Evaluation Criteria

SECTION 1: Sustainable Transportation (up to 20 points)

All projects will be scored based upon the extent the project, program or enhanced transit service supports the following goals within the I-10 or I-110 ExpressLanes corridors: Increases mobility options to support car-free and/or one-car living; enhances transit coverage, frequency, and reliability within the corridor; connects with and complements nearby transit projects; provides access to regional trip generators, regional activity centers, fixed guideway, and Metrolink services; improves access between jurisdictional or community plan area boundaries; gives priority to transit and active transportation modes; increases the mode share of transit services operating within the corridor; provides additional resources for transportation demand management strategies to reduce solo driving; and, promotes the Metro ExpressLanes.
Describe how your project, program or enhanced transit service meets one or more of the above goals. In your description please include one or more of the performance metrics included in Appendix A of this document. (attach additional pages if needed)

SECTION 2: Innovative Transportation Technology and System Management (up to 10 points)

One of the primary objectives of the ExpressLanes project is to better utilize existing capacity within the I-10 and I-110 corridors by employing an innovative operational approach called "dynamic pricing". This approach of transportation network optimization through the use of technology and operational efficiency strategies represents the future of transportation policy and planning.

To that end, the concept of network optimization is identified as a key component of sustainability. Projects will be scored based upon their ability to employ innovative technologies or system management tools to reduce emissions and/or optimize the capacity of the existing transportation system.

Describe the extent to which the project, program or enhanced transit service facilitates the adoption of innovative technology such as zero and near-zero emission vehicles, and/or utilizes innovative transportation system management or operational strategies. In your description please include one or more of the performance metrics included in Appendix A of this document. (attach additional pages if needed)

SECTION 3: Implementation of Regional and Local Sustainability Plans and Policies (up to 20 points)

Metro's Countywide Sustainability Policy and Implementation Plan (CSPIP) along with SCAG's Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) identify principles and priorities to be advanced through a broad range of activities across all modes. Applicants will be scored based upon the extent the project, program, or enhanced transit service supports the sustainability policies and programs identified in the CSPIP, RTP or SCS. Examples include: promoting the use of green modes; better management of travel demand such as carpooling, vanpooling or telecommuting; transit oriented development; and, programmatic initiatives such as education and outreach to encourage alternatives to driving alone; bike/pedestrian safety programs.

a) Describe how the project/program is consistent with Metro's CSPIP (up to 10 points). Reference the page number(s) of the Plan. (attach additional pages if needed)

b) Describe how the project/program is consistent with the goals and policies included in 2012 RTP/SCS (up to 10 points). Reference the page number(s) of the Plan. (attach additional pages if needed)

SECTION 4: Local Match (up to 10 points)

Total Estimated Project Cost $_____

Project Cost Estimates **– (Please attach an itemized cost estimate for all expenses based on an engineer's estimate or best information available if not a capital project. Be as accurate as possible to avoid future cost overruns.)**

Projects will be scored as follows:

10 points = 46% or more
9 points = 41 – 45%
8 points = 36 - 40%
7 points = 31 - 35%
6 Points = 26 - 30%
5 points = 21 - 25%
4 points = 16 – 20%
3 points = 11-15%
2 points = 6-10%
1 point = 1-5%

Total Project Cost	$
Funding Request	$
Local Match Amount - Cash	$
Local Match Amount – In-Kind	$
Local Match Percentage	_____ %

SECTION 5: Cost Effectiveness (up to 10 points)

Cost effectiveness will be based on the grant amount requested, the total project cost and the estimated useful life of the project (calculated in years). Estimated Useful Life of the Project is defined in the eligibility requirements.

The cost effectiveness total will be calculated as follows:

Total Cost of Project
_____ X Estimated Useful Life of the Project (number of years the improvements are expected to last before they have to be replaced)
Grant Amount Requested

Example:
Total Cost of Project - $1,000,000
Grant Amount Requested - $800,000 = 1.25

1.25 x 10 (est. useful life of project in years) = 12.5 (cost effectiveness score)

Points will be awarded based on the following cost effectiveness scores:

17 + = 10 points
13 – 16 = 8 points
9 – 12 = 6 points
5 – 8 = 4 points
1 – 4 = 2 points

SECTION 6: Safety (up to 15 points)

Scoring will be based on the applicant's ability to both quantitatively and qualitatively describe the safety benefits of the project/program.

a) Provide documented accident information or other data pertaining to your project/program that quantifies the safety benefits. Collision rate calculations from the Federal Highway Administration (FHWA) website http://safety.fhwa.dot.gov/hsip/resources/fhwasa09029/sec6.cfmcan be used for projects/programs that can apply this data.

b) Also provide a written description or explanation of the safety benefits of the proposed project/program.

SECTION 7: Project/Program Readiness (up to 15 points)

Based on the Project Milestone Schedule submitted in PART 1, Section E. For Capital Projects, points will be provided based on how much work has been done. Below is a general guide on how points may be applied:
15 points = Ready for construction (PA&ED, PS&E, R/W Certified)
12 points = PA&ED complete, project within 6 months of construction (e.g. 95% PS&E, R/W Cert within 6 months of construction)
9 points = PA&ED Complete, project within 12 months of construction (e.9. 50% PS&E, R/W Cert within 12 months)
6 points = PA&ED Complete, at 35% PS&E, and R/W initiated
3 points = PA&ED Complete

In a similar fashion, for Non-Capital projects, points will be applied based on how much work has been done and how quickly the project can be implemented.

Application Signature Page

If this application is selected for funding, the information contained in this application will become the foundation for the funding agreement with Metro.

I certify that I have reviewed the Eligibility Guidelines and that the information submitted in this application is true and correct and in accordance with the guidelines. If awarded a grant from Metro, I agree that I will adhere to the requirements and guidelines specified in this grant application.

Name: *(print name)*	Title:
Signature: _____ *(signature of authorized signatory for applicant)*	Date:

Required Documentation:

- □ Application Parts 1 & 2
- □ Application Signature Page
- □ Project Location and Map - project location and project limits, preferably 8.5" x 11"
- □ Statement of Work – provide a detailed Statement of Work (in MS Word format)
- □ Detailed Cost Estimate (in MS Excel format)
- □ Documentation of Community Support

Submit two (2) copies of each application (Parts 1&2) along with the required documentation and one (1) CD-R or DVD to MTA by mail to the following address:
LACMTA
One Gateway Plaza MS 99-25-1
Los Angeles, CA 90012
ATTN: KATHY MCCUNE
Or
Submit two (2) copies of each application (Parts 1 &2) along with the required documentation and one (1) CD-R or DVD to MTA in person at the following address:
LACMTA
One Gateway Plaza, 25th Floor
Los Angeles, CA 90012
ATTN: KATHY MCCUNE

Failure to include any of the required documents will result in a reduced score and potential ineligibility

APPENDIX A
Performance Metrics

Transit Improvements

- Increase in headways and/or service span
- Increase in number of trips
- Increase in farebox recovery ratio
- Increase in projected ridership
- Estimated improvement in on-time performance
- Vehicle speed improvement
- Boarding/Alighting time savings from station improvements
- Emission improvements or other efficiencies from new vehicles
- Increase in number of disadvantaged populations served based on Metro's Title VI and Environmental Justice Policy
- Percent of daily/peak period trips starting or ending within ½ mile radius of a transit station/stop
- Percent of population and employment within ½ mile radius of a transit station/stop
- Households within five miles of park-and-ride lots or major transit centers

Active Transportation/System Connectivity

- Increase in walk/bike trips to corridor stations
- Increase in corridor transit ridership
- Estimated reduction in collisions from improvements
- Percent of daily/peak period trips starting or ending within ½ mile radius of a transit station/stop
- Percent of population and employment within ½ mile of a transit station/stop
- Households within five miles of park-and-ride lots or major transit centers
- Bicycle mode share (bicycle trips divided by total trips)
- Pedestrian mode share (pedestrian trips divided by total trips)
- Increase in rideshare/vanpool participation within corridor

Highway Improvements

- Estimated LOS improvements
- Corridor speed improvement
- Volume-to-capacity
- Reduction in collisions
- Travel time savings
- Travel time reliability improvements
- Reduction in Vehicle Miles Traveled (VMT)

Fiscal Year 2014-15
Congestion Reduction
ExpressLanes Net Toll Revenue Re-Investment Grant
Project Eligibility Guidelines

I. Overview

The generation of net toll revenues from the Congestion Reduction Demonstration project offers a unique opportunity to advance the Long Range Transit Plan (LRTP) and Los Angeles County Metropolitan Transportation Authority's (LACMTA) goals for a more sustainable countywide transportation system.

The objective of the Program is to increase mobility and person throughput through a series of integrated strategies (transit operations, transportation demand management, transportation systems management, active transportation, and capital investments) in the I-10 and I-110 corridors. These combined strategies have been consistently shown to result in more reliable and stable outcomes and greater magnitude of positive change than a single strategy scenario. An expenditure plan that retains this focus on integrated strategies and multi-modalism would advance Metro's LRTP and sustainability goals as outlined in Metro's Countywide Sustainability Planning Policy (CSPP).

Projects and programs are recommended for three categories to promote the LRTP and sustainable transportation strategies as an integral enhancement to the Metro ExpressLanes. A category for Transit Use is recommended because operation of high frequency transit and feeder service as well as transit capital improvements have proven to be effective in creating mode shift and reducing congestion on the Metro ExpressLanes. A category for System Connectivity/Active Transportation is recommended to build upon the $1 million pedestrian and bicycle investments funded by the CRD grant and to improve system connectivity between transit and the state highway. The category also demonstrates Metro's commitment to advance sustainable community strategies since Metro currently does not have a discretionary fund source eligible to fund operations activity for Active Transportation. A category for highway improvements is recommended to build upon the $10 million highway improvements funded by the CRD grant.

II. Eligible Applicants

Eligible applicants include public agencies that provide transportation facilities or services within Los Angeles County. These include cities, transit operators, the County of Los Angeles, the State of California Department of Transportation, and the Los Angeles County Metropolitan Transportation Authority. Transportation-related public joint powers authorities must be sponsored by one of the above public agencies.

III. Eligible Projects

To be eligible for funds, the project, program, or enhanced transit service must operate along or within three miles of either the I-110 Corridor (defined as Adams Boulevard to the north and the Harbor Gateway Transit Center to the south) or the I-10 Corridor (between Alameda Street to the west and the El Monte Transit Center to the east) or provide regionally significant improvements for the 110 or 10 Corridor. It must also provide direct operational benefits to the operation of the ExpressLanes and/or transit service within the corridors. A project will also be eligible if it can be determined that is regionally significant. Regional significance is defined as those projects that are multi-jurisdictional, and/or are included in, or consistent with, the Metro LRTP, the Metro Countywide Sustainability Policy and Implementation Plan, or other relevant sub-regional plan.

IV. Project Selection Process

Locally sponsored capital projects and operating programs are encouraged. The funding will be mutually determined by Metro and the lead agency, proportionate to the local and regional benefits of the project or program.

Projects will be evaluated based on the following criteria:

a) Sustainable Transportation (maximum 20 points)

All projects will be scored based upon the extent the project, program or enhanced transit service supports the following goals within the I-10 or I-110 ExpressLanes corridors: Increases mobility options to support car-free and/or one-car living; enhances transit coverage, frequency, and reliability within the corridor; connects with and complements nearby transit projects; provides access to regional trip generators, regional activity centers, fixed-guideway, and Metrolink services; improves access between jurisdictional or community plan area boundaries; gives priority to transit and active transportation modes; increases the mode share of transit services operating within the corridor; provides additional resources for transportation demand management strategies to reduce solo driving; and, promotes the Metro ExpressLanes. One or more of the Performance Metrics from Appendix A will also need to be included in your discussion about the benefits of the project/program.

b) Innovative Transportation Technology and System Management (maximum 10 points)

One of the primary objectives of the ExpressLanes project is to better utilize existing capacity within the I-10 and I-110 corridors by employing an innovative operational approach called "dynamic pricing". This approach of transportation network optimization through the use of technology and operational efficiency strategies represents the future of transportation policy and planning.

To that end, the concept of network optimization is identified as a key component of sustainability. Projects will be scored based upon their ability to employ innovative technologies or system management tools to reduce emissions and/or optimize the capacity of the existing transportation system. One or more of the Performance Metrics from Appendix A will also need to be included in your discussion about the benefits of the project/program.

c) Implementation of Regional and Local Sustainability Plans and Policies (maximum 20 points)

Metro's Countywide Sustainability Policy and Implementation Plan (CSPIP) along with SCAG's Sustainable Communities Strategy (SCS) identify principles and priorities to be advanced through a broad range of activities across all modes. Applicants will be scored based upon the extent the project, program, or enhanced transit service supports the sustainability policies and programs identified in the CSPIP or SCS. Examples of strategies include: promoting the use of green modes; better management of travel demand such as carpooling, vanpooling or telecommuting; transit oriented development; and, programmatic initiatives such as education and outreach to encourage alternatives to driving alone; bike/pedestrian safety programs.

d) Local Match (maximum 10 points)

Projects will be scored based on the amount of Local Match provided. The Local Match can be cash or in-kind staff time or services. **Cash is defined as those funds under the control of the project applicant (e.g. Prop A and/or C and Measure R Local Return funds, Measure R Subregional Highway Operational Improvement funds, Gas Tax funds, local general funds, TDA funds, State Funds, etc.) Funds awarded through Metro's Call for Projects and the corresponding Local Match provided for a project in the Call for Projects do not qualify as Local Match.**

There is no requirement to provide a local match but projects will score higher in this category if a match is provided.

Projects will be scored as follows:
10 points = 46% or more
9 points = 41 – 45%
8 points = 36 - 40%
7 points = 31 - 35%
6 Points = 26 - 30%
5 points = 21 - 25%
4 points = 16 – 20%
3 points = 11-15%
2 points = 6-10%
1 point = 1-5%

e) Cost Effectiveness (maximum 10 points)

Cost effectiveness will be scored by using the total cost of the project, the funding amount requested and the Estimated Useful Life of the Project.

The Estimated Useful Life of the Project is defined as the number of years the capital improvement, bus purchase, transit service, program or study will last before it has to be replaced or changed.

The applicant will calculate the cost effectiveness score as follows:
Total Cost of Project - $1,000,000
Funding Amount Requested - $800,000 = 1.25

1.25 x 10 (est. useful life of project in years) = 12.5 (cost effectiveness score)

Points will be awarded based on the following cost effectiveness scores:
17 + = 10 points
13 – 16 = 8 points
9 – 12 = 6 points
5 – 8 = 4 points
1 – 4 = 2 points

f) Safety (maximum 15 points)

Scoring will be based on the applicant's ability to both quantitatively and qualitatively describe the safety benefits of the project/program. Applicants will need to include documented accident information or other data that quantifies the safety benefits along with a written description of the safety benefits of the proposed project/program.

g) Project/Program Readiness (maximum 15 points)

Projects will be scored based on how much prior work has been done on the project or program and how quickly the project/program will be implemented once it is approved. For Capital projects, scoring is a s follows:
15 points = Ready for construction (PA&ED, PS&E, R/W Certified)
12 points = PA&ED complete, project within 6 months of construction (e.g. 95% PS&E, R/W Cert within 6 months of construction)
9 points = PA&ED Complete, project within 12 months of construction (e.g. 50% PS&E, R/W Cert within 12 months)
6 points = PA&ED Complete, at 35% PS&E, and R/W initiated
3 points = PA&ED Complete

For Non-Capital projects, since deliverables are not as readily defined, points will be applied based on how much work has been done and how quickly the project can be implemented.

V. Funding Categories:

a) Transit Uses - eligible projects include:

- Increased levels of service or increased service span
- Fare subsidy programs
- Purchase of new bus or commuter rail vehicles
- Station enhancements and capacity improvements, including enhanced bus shelters, real-time arrival information, ticket vending machines (TVM)
- El Monte Bus Maintenance facility improvements
- Transit corridor projects serving ExpressLanes corridors

b) System Connectivity/Active Transportation – eligible projects include:

- First mile/last mile connections to transit facilities, focusing on multimodal elements recommended as part of the First/Last Mile Strategic Plan including investments that might support 3rd party mobility solutions (car-share, bike-share)
- Complete streets projects which emphasize multi-modalism
- Bicycle infrastructure including bicycle lanes and secured bicycle parking facilities
- Pedestrian enhancements including on/off-ramp safety improvements, street crossings, and ADA-compliance improvements
- Infrastructure and programs to support the use of electric vehicles.
- Bus station improvements including enhanced bus shelters, real-time arrival information, and other related improvements
- El Monte Bus Maintenance facility
- Rideshare/Vanpool programs
- Park-n-Ride facility improvements including restrooms, lighting, and security.
- Landscaping suited to the Southern California ecology. For example, vegetation that does not contribute to smog and requires little or no irrigation. Additionally, landscaping with a high carbon sequestration factor and/ or provides habitat to environmentally sensitive species is favorable.

c) Highway Improvements

- Intelligent transportation system improvements to manage demand
- Deck rehabilitation and maintenance above the required Caltrans maintenance for the facility
- On/off ramp improvements which reduce the incidents of bicycle and pedestrian collisions with vehicles
- Expanded freeway service patrol
- Graffiti removal and landscaping suited to the Southern California ecology. For example, vegetation that does not contribute to smog and requires little or no irrigation. Additionally, landscaping with a high carbon sequestration factor and/ or provides habitat to environmentally sensitive species is favorable
- Subject to Metro Board approval, extension of the ExpressLane corridors

To the extent possible, applicants must utilize green design techniques that minimize the environmental impact of transportation projects and/or support local urban greening initiatives.

If applicant is seeking funding for transit operations or highway maintenance, the service/maintenance must either be new service/maintenance meeting a previously unmet need in the corridor or must increase service for existing lines in the corridor.

VI. Funding Priorities

Baseline targets of 40% for Transit Uses, 40% for System Connectivity/Active Transportation, and 20% for Highway Improvements are identified as goals, however the actual allocation of the funding will be based on the merits of the proposed projects and programs.

VII. Eligible Costs

Eligible costs are development phase activities (including planning, feasibility analysis, revenue forecasting, environmental review, preliminary engineering and design work, and other preconstruction activities) and the costs of construction, reconstruction, rehabilitation, and acquisition of right-of-way, environmental mitigation, construction contingencies, acquisition of equipment, and operational improvements.

VIII. Non-Eligible Costs

Costs such as equipment, furniture, office leases or space cost allocations or similar costs, applicant staff overtime costs, mileage reimbursements, and use of pool cars.

IX. Other Conditions

- Applicants must maintain their existing commitment of local, discretionary funds for street and highway maintenance, rehabilitation, reconstruction, and storm damage repair in order to remain eligible for Net Toll Revenue funds to be expended for streets and roads.

- Grant funds received cannot be used to supplant, replace, or reduce the project sponsor's previously required match in Metro's Call for Projects.

- Applicants shall ensure that all Communication Materials contain the recognition of Metro's contribution to the project, program, or service. Sponsor shall ensure that at a minimum, all Communication Materials include the phrase "This project/program/service was partially funded by Metro ExpressLanes."

- PSR/PDS and PSRE – For projects that include a construction element, an approved Project Study Report/Project development Support (PSR/PDS) or Project Study Report Equivalent (PSRE) **is not required**.

- Project Funding Request Caps – there are no project funding request caps for any of the 3 categories.

- All project funding provided will be local funds. There are no federal or state dollars available through this program.

- Quarterly Progress /Expenditure Reports – All applicants that receive funding will be required to submit to Metro a Quarterly Progress/Expenditure Report based on this schedule:

Quarter Ending	Quarterly progress/Expenditure Report Due to Metro
March 31st	May 31st
June 30th	August 31st
September 30th	November 30th
December 31st	February 28th

- Audits – All grant program funding is subject to Metro audit. The findings of the audit are final.

X. Schedule

Board Approval of Application Package	February 27, 2014
Distribution of Application Package	March 12, 2014
Applicant Workshop	March 25, 27, 2014
Deadline for Grant Submissions	May 30, 2014
Presentation of Projects to CAGs	June 27, 30, 2014
Recommendation of Projects to Metro Board for Approval	July 24, 2014
Allocation of Funds to Grantees	September 30, 2014
Commence Monitoring/Evaluation of Grantee Project/Program	October 1, 2014

XI. General Administrative Conditions

a) Duration of Project

Project schedules must demonstrate that the project can be completed within 36 months of award.

Memorandum of Understanding (MOU) – Each awarded applicant must execute a memorandum of Understanding (MOU) with LACMTA which includes the statement of work, financial plan reflecting any local match provided (if applicable), schedule of

milestones and deliverables. The schedule and milestones must reflect the project will be completed within 36 months from the date of award.

b) Grant Agreement Lapsing Policy

Grantee must demonstrate timely use of the Funds by:
(i) Executing a Grant Agreement within sixty (60) days of receiving formal transmittal of the Grant Agreement boilerplate;
(ii) Meeting the Project milestones due dates as stated in the Statement of Work;
(iii) Timely submittal of the Quarterly Progress/Expenditure Reports; and
(iv) Expending the Funds granted within forty two (42) months from the date funds are available.

If the Grantee fails to meet any of the above conditions, the Project may be considered lapsed and may be submitted to the Board for deobligation. **Expenses that are not invoiced within sixty (60) days after the lapsing date are not eligible for reimbursement.**

In the event that the timely use of the Funds is not demonstrated, the Project will be reevaluated as part of the annual Net Toll Re-investment Grant Deobligation process and the Funds may be deobligated and reprogrammed to another project by the Board.

Administrative extensions may be granted under the following conditions:
(i) Project delay due to an unforeseen and extraordinary circumstance beyond the control of the project sponsor (legal challenge, act of God, etc.). Inadequate staffing shall not be considered a basis for administrative extensions.
(ii) Project delay due to an action that results in a change in scope or schedule that is mutually agreed upon by Metro and the project sponsor prior to the extension request.
(iii) Project fails to meet completion milestone; however, public action on the proposed regulatory change(s) has been scheduled and noticed to occur within 60 days of the scheduled completion milestone.

Appeals to any recommended deobligation will be heard by a Metro appeals panel.
If Grantee does not complete an element of the Project, as described in the Statement of Work, due to all or a portion of the Funds lapsing, the entire Project may be subject to deobligation at Metro's sole discretion.

In the event that all the Funds are reprogrammed, the Project shall automatically terminate.

EMAC10

Motion by Mayor Antonio R. Villaraigosa

Enhanced MTA Bicycle Policies & Programs

Executive Management and Audit Committee

September 16, 2010

MTA customers have a right to enjoy bicycling as a viable mode of transportation.

According to MTA's Bike to Work Week Pledge, 4,500 people or less than one percent bicycled to work in Los Angeles County in 2010.

MTA continues to encourage bicycling to work and other destinations by expanding bicycle access on MTA's transit system.

MTA is also in the process of finalizing new bicycle facility standards for all new Transit Oriented Development projects.

As MTA's transit system continues to grow, the facilities that link cyclists and pedestrians to transit must also continue to expand to improve regional connectivity.

CONTINUED

I THEREFORE MOVE that the MTA Board direct the CEO to do the following and report back no later than the December 2010 Board cycle:

Funding

1. Recommend increased bicycle funding in the 2011 Call for Projects (tentative goal increasing modal category from 7% to 15%, subject to future MTA Board approval)

Current Transit System

2. Develop a phased plan for the installation of triple bicycle racks on all MTA buses (estimated cost $1.6 million)

3. Develop a cost estimate, implementation schedule, and possible funding sources for retrofitting MTA trains for bikes

4. Propose a Revised Customer Code of Conduct and develop a “How to Ride Metro” document that helps customers with bicycles and other large belongings, including luggage, strollers and rolling briefcases, safely board and ride MTA’s system during peak hours

5. Identify the feasibility and cost of adding bicycle racks to the back or top of MTA vanpool vehicles

6. Provide an estimated cost and potential funding source to install improved bicycle/stroller/luggage wayfinding signage at all rail and bus stations

CONTINUED

Current Transit System (continued)

7. Incorporate bicycle mode messages in all marketing materials and campaigns and provide an update on the status of MTA's Bicycle Safety Advertising Campaign on buses

8. Work with the Los Angeles Sheriff's Department Transit Security Bureau to summarize crimes on MTA property affecting bicycles and bike facilities and recommend appropriate measures to improve bicycle security

Future Transit Projects

9. Include in all future transit station designs stair channels or ramps so that bicyclists can wheel their bikes safely up and down staircases

10. Incorporate robust bicycle facilities in all transit project designs (e.g. increase bicycle parking at high demand stations, adjacent bike lanes or bike paths, i.e. Expo and Orange Line) to facilitate first mile/last mile transit access by bike

# # #

Attachment C

Union Station Metro Bike Hub Rendering

Union Station Metro Bike Hub Cash Flow

Funds	FY17	FY18	Total
Net Toll Revenue Reinvestment Funds	$ 632,405.87	$ 6,379.73	$ 638,785.60
TDA Article 4 / Local Return / Measure M (Match)	$ 456,608.13	$ 4,606.27	$ 461,214.40
Labor	$ 100,000.00	$ 120,000.00	$ 220,000.00
Amended LOP		$ 1,150,000.00	$ 1,150,000.00
	$ 1,189,014.00	**$ 1,280,986.00**	**$ 2,470,000.00**

Union Station
Metro Bike Hub

Recommendation

- Authorize increase in life of project budget for Union Station Metro Bike Hub from $1.32 million to $2.47 million, an increase of $1.15 million

Metro

Metro Bike Hub Program

- Provides secure bike parking at key Metro stations
- Reduces the need for patrons to bring bikes onto buses & trains
- Open to members 24/7
- Staffed part time
- Services include tune ups, flat fixes, repairs & retail items
- Provide resources to support bike education, safety, and transit
- Current location at El Monte Station
- Future Locations at Hollywood/Vine, Culver City and Union Station

Union Station Metro Bike Hub

- Original LOP established locating the Metro Bike Hub in the East Portal on parking level P1; this area has since been converted to ADA parking
- Newly identified location is outside the historic station near the north breezeway
- Design must preserve integrity of historic Union Station
- Estimated costs exceed the current LOP due to the project being freestanding and due to the need for site costs

Next Steps

- Notice to Proceed issued to selected SBE contractor
- Construction commences March 2017
- Anticipated opening Fall 2017

Metro

File #: 2017-0007, **File Type:** Project **Agenda Number:** 17.

PLANNING AND PROGRAMMING COMMITTEE
FEBRUARY 15, 2017

SUBJECT: NORTH HOLLYWOOD JOINT DEVELOPMENT

ACTION: AUTHORIZE EXTENSION OF EXISTING SHORT TERM EXCLUSIVE NEGOTIATION AND PLANNING AGREEMENT FOR 90 DAYS

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to extend the existing nine-month Short Term Exclusive Negotiation Agreement and Planning Document (Short Term ENA) with Trammell Crow Company and Greenland USA (together, Developer) for an additional 90 days, to **conduct community outreach and refine the project scope for a mixed-use real estate development (Project)** on the Metro-owned property at the North Hollywood Red Line Station (Site).

ISSUE

On June 24, 2016, Metro and the Developer entered into a 6-month Short Term ENA. Both parties executed a 3-month extension of the Short Term ENA on December 24, 2016. During this 9-month term, the Developer used good faith efforts to carry out its obligations and substantially performed pursuant to the requirements of the agreement. However, additional time is needed for Metro and the Developer to 1) confirm feasibility of transit infrastructure requirements for project shaping; 2) ensure that the proposed development does not physically preclude relevant transit projects funded by the approval of Measure M; and 3) conduct further public outreach to share the results of these feasibility studies and site programming and gather feedback. Staff recommends extending the existing Short Term ENA for an additional 90 days to allow for further advancement and refinement of the Project site plan, development phasing and financial feasibility and to conduct community outreach before seeking authority to execute a standard term ENA.

DISCUSSION

The North Hollywood Station is a regional, multi-modal transportation hub that includes the termini of the Metro Red and Orange Lines, two bus layover facilities, and a Metro park-and-ride lot. The Site is comprised of four parcels, one easterly and three westerly of Lankershim Boulevard, with potential transit connections available via underground access panels. The Site has arterial and freeway access and extensive public transportation access. Attachment A includes a map of the Metro properties for joint development and their approximate acreages. In total, the Site comprises 15.6 acres situated at the heart of North Hollywood Arts District, and as such presents a compelling

opportunity for Metro to achieve the objectives of the updated Joint Development Policy approved by the Board in February 2016. The Site is also part of Metro's Transit Oriented Communities (TOC) Demonstration Program.

The Short Term ENA has provided Metro and the Developer time to evaluate financing opportunities in greater depth and to make refinements to the project site plan for integration with the evolving transit infrastructure requirements surrounding the Site. Staff is seeking an extension of the Short Term ENA in order to allow time for Developer to complete that work and gather feedback from community stakeholders regarding the site plan before entering into a standard term ENA.

By the end of the Short-Term ENA period (as extended pursuant to the authority requested herein), Developer will submit the following deliverables to Metro:

- **Project Site Plan** that shows the extent of public infrastructure to be constructed by the project (including replacement parking), the location and development program for each building to be constructed under the Project, and circulation throughout the site, including proposed driveway locations, bike facilities, and pedestrian flows;
- **A Phasing Plan** that sets out the sequencing of the development blocks and clearly describes the interim steps required to ensure safe and acceptable level of service at the Metro station; and,
- **A Financing Plan** that identifies sources of project funding, including private debt and equity, public financing tools, and grant sources and presents a detailed strategy for securing these sources and ensuring that the transit infrastructure can be constructed.

Additional community engagement will be part of the extended Short Term ENA period. Once these deliverables are completed to the satisfaction of Metro staff, Metro staff will prepare a standard term ENA for the Board's consideration. Under the standard term ENA, Metro staff and Developer will continue community outreach to finalize the project site plan and work in collaboration to complete environmental review and secure project entitlements. Once these steps are complete and the project is ready for final permitting and construction, Metro will bring a Joint Development Agreement and long-term Ground Lease to the Board for its consideration. The Joint Development Agreement and Ground Lease establish the terms for construction and operation of the development.

DETERMINATION OF SAFETY IMPACT

Approval of this item will have no impact on safety. Within this Short Term ENA period, Metro's operations staff will review and comment on the proposed development to ensure that the station, portal and public areas on Metro's property are maintained at the highest levels of safety.

FINANCIAL IMPACT

Funding for joint development activities related to the ENA and the proposed project is included in the FY17 budget in Cost Center 2210, Project 401011.

Impact to Budget

Metro project planning activities and related costs will be funded from local right-of-way lease revenues and any deposits secured from the Developer, as appropriate. Local right-of-way lease revenues are eligible for bus/rail operating and capital expenses. Execution of the Short Term ENA will not impact ongoing bus and rail operating and capital budget, Proposition A and C and TDA administration budget or Measure R administration budget.

ALTERNATIVES CONSIDERED

The Board may choose not to proceed with the recommended action and may direct staff to (a) enter into a standard term ENA, (b) continue communications regarding refinement of the project with the Developer outside of an ENA or (c) prepare and release a new RFP. Staff does not recommend proceeding with these alternatives because the recommended action will ensure additional input from the community and other public sector stakeholders and appropriately builds upon the significant community input and procurement process that has transpired thus far. A new RFP process would delay the development of the Site and Metro may fail to take advantage of currently favorable conditions in the real estate market. Further, if the outcome of the discussion during the Short Term ENA process does not create a project proposal suitable to the community or the Board, other options could still be considered.

NEXT STEPS

Upon approval of the recommended action, the extension of the Short Term ENA will be executed, and Joint Development staff and the Developer will continue negotiations in parallel with community, internal and external outreach to inform stakeholders about the refinements to the development proposal. If successful, staff will return to the Board for the authority to execute a full term ENA that includes the project scope as refined through this process.

ATTACHMENTS

Attachment A - Site Plan - North Hollywood Joint Development Site

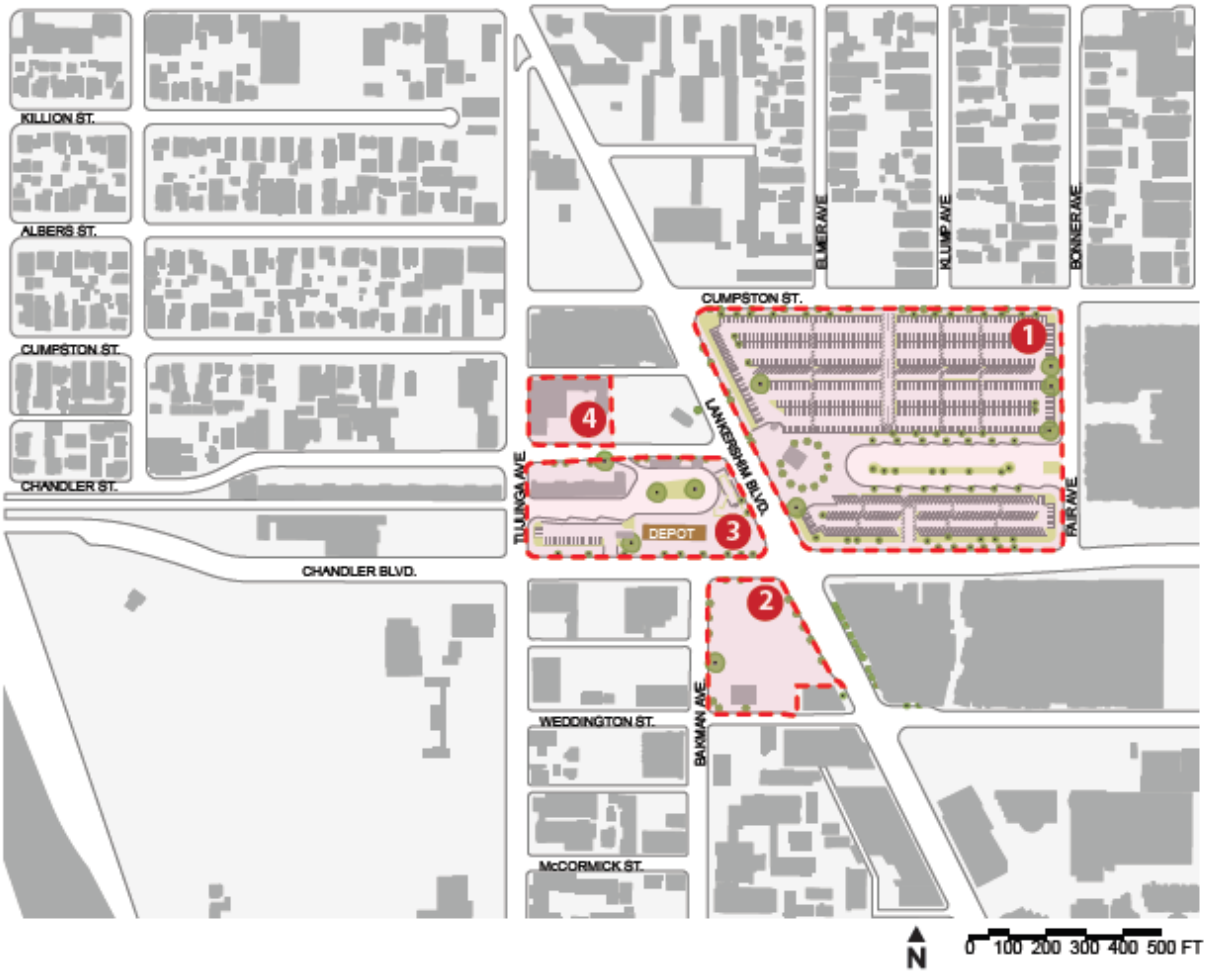
Prepared by: Wells Lawson, Senior Director, Countywide Planning & Development, (213) 922-7217
Cal Hollis, Senior Executive Officer, Countywide Planning & Development, (213) 922-7319

Reviewed by: Therese W. McMillan, Chief Planning Officer, (213) 922-7077

Phillip A. Washington
Chief Executive Officer

ATTACHMENT A

Site Plan - North Hollywood Joint Development Site



1. Station | Parking | Bus Layover Area (10.5 Acres)
2. Weddington Property (1.8 Acres)
3. Metro Orange Line Terminus (2.6 Acres) Excludes Historic Train Depot
4. Currently Short-term Leased to Costume Shop And Plumbing Supply Store (.66 Acres)

Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

File #: 2016-0958, **File Type:** Contract **Agenda Number:** 35.

REVISED
FINANCE, BUDGET AND AUDIT COMMITTEE
PLANNING AND PROGRAMMING COMMITTEE
FEBRUARY 15, 2017

SUBJECT: LINK UNION STATION (LINK US) PROJECT

ACTION: APPROVE RECOMMENDATIONS

RECOMMENDATION

CONSIDER:

A. APPROVING the recommended Alternative 1 with six Regional Rail run-through tracks and four High Speed Rail run-through tracks (also referred to as "6+4 Run Through Tracks" Alternative) to be carried forward in the **California Environmental Quality Act (CEQA) Draft Environmental Impact Report (EIR) and National Environmental Policy Act (NEPA) Draft Environment Impact Statement (EIS)** and continue to evaluate Alternatives 2, 3 and 4 as reasonable alternatives in the Draft EIR/EIS;

B. AUTHORIZING the Chief Executive Officer (CEO) to execute Modification No. 4 to Contract No. PS2415-3172, with HDR Engineering, Inc., for Link Union Station (Link US) to provide environmental and preliminary engineering services for the expansion of Link US to connect the Link US project with Patsaouras Transit Plaza to the east and the historic Union Station to the west, increasing the total contract value by $13,761,273, from $48,279,357 to a not to exceed amount of $62,040,630;

C. AUTHORIZING the CEO to increase Contract Modification Authority (CMA) in the amount of $1,376,127, increasing the total CMA amount from $2,980,588 to $4,356,715;

D. AUTHORIZING the Chief Executive Officer to execute a funding agreement with California High-Speed Rail Authority (CHSRA) in the amount of $3,726,102 for project development work related to Contract Modification No. 4; and

E. APPROVING an amendment to increase the FY17 fiscal year budget in the amount of $9,200,000 for the LINK US Project in Cost Center 2145.

ISSUE

Staff is seeking approval from the Board on the recommended “6+4 Run Through Tracks” Alternative to be carried forward in the Draft EIR/EIS, while continuing to evaluate three other reasonable alternatives in the document.

Contract Modification No. 3, approved by the Board in March 2016, included the LA Union Station Master Plan (USMP) passenger concourse and assumed that the Program-level EIR of the USMP would be prepared concurrently with the Project-level Link US EIR/EIS, and the connections to the Patsaouras Transit Plaza and the historic Union Station would be evaluated by the USMP team.

Early November 2016, Metro Planning staff provided an update to the Board on the LA USMP and a summary of implementation efforts to date. Staff also recommended changes to the approach to redevelopment of LAUS based on new information and direction. In particular, Metro Planning staff recommended not continuing with a Program-level clearance for the USMP, but instead to pursue a Project-level clearance for only the LAUS forecourt improvements identified by the USMP.

As a result, the Link US project-level EIR/EIS will need to be expanded to include additional improvements and study areas for connections from the new expanded passenger concourse to Patsaouras Transit Plaza and the historic Union Station, previously included in the LA USMP Program-level EIR/EIS. In addition, Metro Regional Rail staff recommends advancing the design of the proposed rail structure over US 101 to 100% level to reduce the risk of cost overruns in later phases of the project. Attachment D compares the study areas included in Contract Modification No. 3 and additional study areas proposed in Contract Modification No. 4.

DISCUSSION

Background

In April 2014, the Board authorized staff to execute Contact No. PS2415-3172 to HDR Engineering, Inc. for the Link Union Station Project, formerly known as Southern California Regional Interconnector Project (SCRIP). In October 2015, the Board approved the expansion of SCRIP to include the Los Angeles Union Station (LAUS) Master Plan passenger concourse and accommodate a HSR system in LAUS. In March 2016, the Board approved Contract Modification No. 3 to Contract No. PS2415-3172 for SCRIP with HDR Engineering, Inc. to provide environmental and preliminary engineering services for the expansion of SCRIP to include the LAUS Master Plan passenger concourse and accommodate high-speed rail (HSR).

Project Description

LAUS is one of the largest transportation hubs in Southern California with Metro Rail (Red Line, Purple Line and Gold Line), Metro Bus (Rapid, Local and Limited, Express and Silver) including other municipal bus providers (Flyaway, Foothill Transit, Santa Clarita, etc.) and the largest railroad passenger terminal in Western United States with Amtrak and Metrolink. Currently, there are approximately 110,000 passengers traveling through LAUS each weekday. Metro anticipates continued increases in population will nearly double the demand on existing and planned modes of transportation utilizing LAUS, including the completion of the Metro Crenshaw/LAX, Regional Connector, Gold Line Phase 2B, West Santa Ana Branch, and Purple Line Extensions Sections 1, 2

and 3 by 2040 will result in over 220,000 passenger traveling through LAUS each weekday. Significant upgrades in passenger circulation and capacity at LAUS would be required to accommodate the anticipated growth in transit ridership. In addition, the existing throat, rail yard and passenger concourse (a 28-foot-wide passageway) also significantly constrain Metro's ability to accommodate future increase in commuter rail service (including Metrolink, Amtrak Pacific Surfliner and long distance trains) and future HSR service.

Link Union Station (Link US) project would transform Los Angeles Union Station (LAUS) into a world-class transit station and change LAUS from a "stub-end tracks station" to a "run-through tracks station." Link US would result in increased operational capacity for Metrolink and Amtrak rail service from Control Point (CP) Chavez to the north (near North Main Street) to CP Olympic to the south (near the Interstate 10/State Route 60/US-101 interchange), and increased capacity for passengers within the new expanded multi-modal passenger concourse. Link US would enhance local and regional connectivity by optimizing the connections among all modes of transportation at LAUS including bus, light rail, subway, commuter rail and active transportation. These benefits will be grouped by modes throughout the design document to maximize eligible fund sources contributing to the design and to capture related data for the improvements.

As the focal point of commuter rail travel in Southern California, LAUS serves an average 170 passenger trains each weekday, consisting of 142 Metrolink commuter trains and 28 Amtrak Pacific Surfliner and long distance trains. LAUS is the main stop on the Amtrak Pacific Surfliner, which is the second busiest Amtrak intercity service nationwide.

Major rail and passenger improvements include:

- Throat and Elevated Rail Yard - New track and subgrade improvements would increase the elevation of the tracks leading to LAUS known as the "throat" and an elevated rail yard including seven new passenger platforms and canopies, accommodating Metro Gold Line, Metrolink, Amtrak Pacific Surfliner and long-distance service, and potentially California High-Speed Rail (HSR) service and West Santa Ana Transit Corridor.
- Run-Through Tracks - Up to ten run-through tracks would be constructed with a new viaduct structure over US-101 that extends run-through tracks for Metrolink and Amtrak (referred to thereafter as Regional Rail) and potentially HSR services south along the west bank of the Los Angeles River, and a separate viaduct structure for a loop track turning north to Keller Yard for Regional Rail trains.
- New Multi-Modal Passenger Concourse - The new passenger concourse would enhance Americans with Disabilities Act (ADA) accessibility at LAUS and include new vertical circulation elements (stairs, escalators, and elevators) for passengers between the elevated platforms (including the Gold Line, Regional Rail and HSR platforms) and the new passenger concourse under the rail yard. The passenger concourse would contain up to 600,000 square feet (passenger circulation and waiting areas, passenger support functions and retail amenities, and building functional support areas), including up to 100,000 square feet of transit -serving retail amenities, to meet the demands of a multi-modal world class transit station.

Other transit improvements include:

- U.S. 101 Freeway Improvements - Several existing non-standard design features (including

curve radius, sight distance, lane and shoulder widths, and deceleration distance) on northbound U.S. 101, northbound off-ramp to Alameda Street, and southbound on and off-ramps to and from Commercial Street would be eliminated or improved. The modifications to U.S. 101 would be needed to accommodate the proposed run-through track viaduct and the associated bridge columns.

- Local/Arterial Roadway Improvements - Center Street would be widened and upgraded to include bike lanes between U.S. 101 and Ducommun Street in accordance with the Connect US Action Plan. Commercial Street would be widened and upgraded between Garey Street and Center Street to meet City of Los Angeles street classification standards.
- Active Transportation Improvements - Active transportation connections from LAUS to the Los Angeles River and the surrounding neighborhoods via the proposed run-through tracks viaduct structure are being evaluated and could be potentially accommodated.

Community Outreach

In June 2016, the environmental process for the Link US Project began with a public scoping meeting during the Notice of Intent (NOI) and Notice of Preparation (NOP) comment periods. Metro staff and project team conducted outreach to key community groups, agencies, elected officials and stakeholders. A comprehensive public outreach plan was developed and implemented, resulting in over 40 project briefings to stakeholders to date. A Community Update Meeting was held on November 15, 2016 to provide an update on the project, present the four build alternatives carried forward in the Draft EIR/EIS, and obtain feedback from members of the public. The most common feedback received is summarized below:

- Minimize traffic impacts during construction;
- Lack of funding for construction may result in delay of project completion;
- Make job opportunities available to local communities;
- Minimize noise impacts during construction (temporary) and after project completion (permanent);
- Avoid disproportionate impacts to disadvantaged communities;
- Incorporate art and aesthetics early in the design of the project;
- Historic and cultural characteristics of the study area should be preserved.

Staff has taken all public feedback into consideration in the recommendation on the proposed alternative to be carried forward in the Draft EIR/EIS.

Alternatives Analysis

A total of 74 alternatives were developed to meet the project goals and objectives. A two-step alternative screening process, course-level and fine-level screening, was implemented to advance four alternatives of the total 74 into the EIR/EIS analysis. All four alternatives included the following elements:

- A new expanded passenger concourse that will include new vertical circulation elements (stairs, escalators, and elevators) and up to 600,000 square feet (passenger circulation and waiting areas, passenger support functions and retail amenities, and building functional support areas) including up to 100,000 square feet of transit serving retail amenities to meet

the demands of a multi-modal transit station;
- Run-through tracks extending from an elevated rail yard with a new viaduct or viaducts over US 101 to accommodate the new expanded passenger concourse and vertical clearance requirements over the El Monte Busway and US 101;
- Incorporation of a loop track;

Three of the four alternatives include potential accommodation for the planned HSR system within the limits of the Project. Below is a more detailed description of the four build alternatives to be carried forward in the Draft EIR/EIS:

Alternative 1: Six Regional Rail run-through tracks and four HSR run-through tracks (Combined)

Alternative 1 includes six Regional Rail run-through tracks and four HSR run-through tracks extending south of LAUS over US-101. The new expanded passenger concourse will include HSR-related elements and the throat will be reconstructed. Other improvements include the permanent realignment of the Gold Line north of LAUS. In addition, portions of Commercial Street and Center Street, and the intersection of Center Street at Commercial Street, will be lowered to accommodate the proposed viaduct, an elevated rail bridge, that supports the run-through tracks over Commercial Street. Alternative 1 has the largest environmental study limits compared to the other three alternatives.

Alternative 2: Six Regional Rail run-through tracks and two HSR run-through tracks (Combined)

Alternative 2 includes six Regional Rail run-through tracks and two HSR run-through tracks extending south of LAUS. Alternative 2 includes similar improvements as Alternative 1 at the throat and rail yard, new passenger concourse, and Commercial Street and Center Street. The key differences between Alternatives 1 and 2 are related to the distribution of platforms at the rail yard (Regional Rail and HSR) and the number of run-through tracks proposed to extend south of LAUS.

Alternative 3: Six Regional Rail run-through tracks and four HSR run-through tracks (Phased)

Alternative 3 also includes six Regional Rail run-through tracks and four HSR run-through tracks extending south of LAUS, but Alternative 3 would involve the implementation of a phased construction approach to accommodate HSR-related infrastructure. As part of Alternative 3, the physical area for the planned HSR system and related infrastructure is accommodated within the maximum limits of construction; however, HSR-related infrastructure would not be constructed by Metro concurrent with Link US Regional Rail infrastructure. The tracks and platforms constructed would be limited to the Regional Rail infrastructure, but the maximum limits of construction would include the subsequent modification and extension of the two dedicated HSR platforms and four tracks as required for the planned HSR system.

Alternative 4: Six Regional Rail run-through tracks and no HSR run-through tracks

Alternative 4 assumes HSR's Burbank to Los Angeles and Los Angeles to Anaheim project sections

do not utilize LAUS. Alternative 4 includes six Regional Rail run-through tracks extending south of LAUS over US-101. The new expanded passenger concourse would not include HSR related elements and the throat would not be realigned and reconstructed. Similar improvements at Commercial Street and Center Street would also be included to accommodate the proposed viaduct.

A numeric evaluation score was assigned to each alternative to compare the performance of each. Alternative 1 received the highest score and therefore was considered the highest performing alternative. Alternatives 2 and 3 were also amongst the highest ranked alternatives with at least six regional rail run-through tracks. Alternative 4 is being recommended for further evaluation as part of the EIS/EIR process in the event that HSR does not elect to utilize LAUS as a station location. This potential circumstance is possible and therefore this alternative is considered to be reasonable.

All stakeholder agencies (e.g., Metrolink, California High Speed Rail Authority (CHSRA), Caltrans, Amtrak, City of Los Angeles), interested agencies, and members of the public (including the Chinatown, Boyle Heights, Lincoln Heights, Arts District, Little Tokyo neighborhoods) were invited to provide feedback on the four EIR/EIS Build Alternatives. A community meeting was also held on November 15, 2016 to present the four EIR/EIS Build Alternatives to obtain feedback.

Attachment E provides a graphical representation of each of the four build alternatives.

Third Party and Other Anticipated Costs

Third party costs for Link US were not included in previous Board actions. As the preliminary engineering and environmental work is underway, third party costs have been identified and determined to be necessary.

Southern California Regional Rail Authority (SCRRA) requested funding to cover efforts in attendance at meetings, reviewing and commenting on technical reports, environmental studies, conceptual and preliminary design drawings to ensure compliance with SCRRA standards and specification, providing data and inputs for rail modeling including SCRRA's operational and maintenance requirements, providing flagging services for access to the right-of-way, and providing support for community outreach activities, etc. Additional third party costs have been identified from Caltrans, the City of Los Angeles Bureau of Engineering (BOE), Department of Transportation (DOT), Department of Water and Power (DWP), and other agencies and utility companies. This additional third party cost is in amount of $3 million and will cover the entire preliminary engineering and environmental certification phase of the Link US Project.

Other anticipated costs of up to $1 million include additional real estate and legal support, sampling, testing and disposal of soils from subsurface geotechnical, utility and environmental investigations to support the preliminary engineering and environmental studies.

Funding

Staff is currently negotiating with CHSRA for their share of the design and construction costs for the Link US project. Staff anticipates returning to the Board with a full funding agreement by June 2017. With the Board's approval of the recommended actions, it will enable staff to complete the environmental clearance and preliminary engineering studies enabling the project to be "shovel

ready" for federal and state grants. Staff is also seeking public private partnership opportunities.

DETERMINATION OF SAFETY IMPACT

The project is being designed in accordance with Metrolink and Metro standards, federal requirements, and state requirements and will be compliant with the Americans with Disabilities Act. There are no pedestrian crossings of the proposed tracks so no safety impacts are expected.

FINANCIAL IMPACT

The total project cost to complete the Preliminary Engineering and Environmental Certification phase of the Link US project is $70,398,000, as follows (refer to Attachment F- Sources and Uses):

Preliminary Engineering and Environmental Certification	$ ~~66,397,347~~ 66,397,345 (including Contract Modification Authority amount of $4,356,715)
Third Party Costs	$ 3,000,000
Other Anticipated Costs	$ 1,000,000
TOTAL PROJECT COST:	$ ~~70,397,347~~ 70,397,345 (round to $70,398,000)

A total of $37.7 million has been programmed and approved to-date, consisting of $19 million of Measure R 3% funds programmed in prior board actions, and $18.7 million committed by the CHSRA, up to $15 million for project development work related to the previously approved Contract Modification No. 3 and up to $3.7 million for project development work related to Contract Modification No. 4.

Staff is utilizing the work of the consultant to identify each mode of transit affected by the expansion and capacity improvements of an improved Los Angeles Union Station in order to identify additional or alternative funding sources including all eligible Federal, State or other Local funding. An additional $32.7 million in funding will be required in order to complete the environmental and design phase of this project.

The cash flow for the Link US Project is anticipated to be as follows:

Project	Expenditure from prior years	FY 17	FY 18	FY 19	TOTAL
Link Union Station	$14,793,000	$18,500,000	$27,500,000	$9,605,000	$70,398,000

The amount of $9.3 million for these services is included in the FY17 budget for cost center 2415 Regional Rail under SCRIP 460089. For the fiscal year to-date, the project has incurred $6.4 million in expenditures and pending invoices are in an amount of $2.8 million. Staff is requesting to amend the FY 17 budget an additional $9.2 million to cover pending invoices and other anticipated costs through the end of the FY 17. Since this is a multi-year project, the Chief Program Management Officer, Program Management and Senior Executive Officer, Program Management/Regional Rail will

be accountable for budgeting the costs in future years.

Impact to Budget

The source of funds for the requested amendment consist of previously approved and programmed Measure R3% funds and CHSRA funds discussed above. Measure R 3% Metrolink Commuter Rail Capital Improvements and CHSRA funds are not eligible for Metro bus/rail operating or capital budget expenses.

ALTERNATIVES CONSIDERED

An alternative could be not to execute Contract Modification No. 4 and third party agreements and not advance the Link US Project. However, this will not increase the commuter and intercity rail capacity at LAUS causing significant delays and operational challenges.

The Board could elect to proceed with the Link US Project without expanding the project limits to connect the proposed passenger concourse with the Patsoauras Transit Plaza and the historic Union Station. The expansion of the passenger concourse and rail yard will likely create bottlenecks in pedestrian circulation at the existing passageway to the historic station and the east portal, which could also lead to potential safety concerns during peak periods and emergency situations. In addition, this would not provide for opportunities for transit optimization and future commercial developments at LAUS.

NEXT STEPS

With this Board approval, staff will begin preliminary engineering of the recommended alternative and continue to develop the draft EIR/S. Staff anticipates returning to the Board for a full funding agreement with CHSRA by June 2017. Staff anticipates public circulation of the draft EIR/S document in Summer 2017. In addition, staff will execute Modification No. 4 with HDR Engineering, Inc.

ATTACHMENTS

Attachment A - Procurement Summary
Attachment B - Contract Modification/Change Order Log
Attachment C - DEOD Summary
Attachment D - Comparison between Contract Modifications #3 and #4 Study Areas
Attachment E - EIR/EIS Build Alternatives
Attachment F - Sources and Uses

Prepared by:

Vincent Chio, P.E., Senior Engineer, Program Management, (213) 922-7597
Jeanet Owens, P.E., Senior Executive Officer, Program Management, (213) 922-6877

Reviewed by:

Richard Clarke, Chief Program Management Officer, (213) 922-7557

Debra Avila, Chief Vendor/Contract Management Officer, (213) 418-3051

Nalini Ahuja, Chief Financial Officer, (213)922-3088

Phillip A. Washington
Chief Executive Officer

PROCUREMENT SUMMARY

LINK UNION STATION (LINK US) PROJECT
PS2415-3172

1.	**Contract Number**: PS2415-3172			
2.	**Contractor**: HDR Engineering, Inc.			
3.	**Mod. Work Description**: Environmental and preliminary engineering services for the expansion of Link US to connect the Link US project with Patsaouras Transit Plaza to the east and the historic Union Station to the west.			
4.	**Contract Work Description**: Professional environmental and engineering services for Link US			
5.	**The following data is current as of**: 02/07/17			
6.	**Contract Completion Status**		**Financial Status**	
	Contract Awarded:	08/21/14	**Contract Award Amount:**	$29,805,884
	Notice to Proceed (NTP):	04/25/14 (Limited NTP) 08/21/14 (Full NTP)	**Total of Modifications Approved:**	$18,473,473
	Original Complete Date:	08/21/20	**Pending Modifications (including this action):**	Not-To-Exceed $13,761,273
	Current Est. Complete Date:	02/28/19	**Current Contract Value (with this action):**	$62,040,630
7.	**Contract Administrator**: Lily Lopez		**Telephone Number**: (213) 922-4639	
8.	**Project Manager**: Jeanet Owens		**Telephone Number**: (213) 922-6877	

A. Procurement Background

This Board Action is to approve Contract Modification No. 4 issued in support of Link US for environmental and preliminary engineering services for the expansion of Link US to connect the Link US project with Patsaouras Transit Plaza to the east and the historic Union Station to the west. Contract Modification No. 3 deleted Phase 2, Plans, Specifications and Estimates, and Phase 3, Bid and Construction Support, and changed the completion date from August 21, 2020 to August 21, 2018. This Contract Modification extends the period of performance from August 21, 2018 through February 28, 2019.

This Contract Modification was processed in accordance with Metro's Acquisition Policy and maintains a cost plus fixed fee contract structure. All other terms and conditions remain unchanged.

On April 24, 2014, the Board authorized staff to negotiate and execute a four-year, with two, one-year options, Contract No. PS2415-3172 with HDR Engineering, Inc. for the Link Union Station Project, formerly known as Southern California Regional Interconnector Project (SCRIP).

A total of three modifications have been issued to date. Refer to Attachment B – Contract Modification/Change Order Log.

B. Cost Analysis

The recommended not-to-exceed amount has been determined to be fair and reasonable based upon an independent cost estimate, cost analysis, technical evaluation, and fact finding. All direct labor rates and fee remain unchanged from the original contract.

The reduction in efforts associated with coordination with the LA Union Station Master Plan Program Environmental Impact Report and the efficiency in the Contractor's team approach with the design of the US 101 viaduct structure are the primary factors for the difference between the ICE and the not-to-exceed amount.

Proposal Amount	Metro ICE	Not-To-Exceed Amount
$13,761,273	$13,799,625	$13,761,273

CONTRACT MODIFICATION/CHANGE ORDER LOG

LINK UNION STATION (LINK US) PROJECT/PS2415-3172

Mod. No.	Description	Status (approved or pending)	Date	$ Amount
1	No cost administrative changes.	Approved	09/04/14	$0
2	Additional requirement to include the Los Angeles Union Station (LAUS) Master Plan concourse engineering study.	Approved	09/18/14	$831,520
3	Authorize the revised Scope of Work to include LAUS Master Plan passenger concourse and accommodate HSR. Adjustments to Phase 1; and deletion of Phases 2 and 3	Approved	04/12/16	$17,641,953
4	Environmental and preliminary engineering services for the expansion of Link US to connect the Link US project with Patsaouras Transit Plaza to the east and the historic Union Station to the west.	**Pending**	**Pending**	**$**13,761,273
	Modification Total:			**$32,234,746**
	Original Contract:	**08/21/14**		**$29,805,884**
	Total:			**$62,040,630**

DEOD SUMMARY

Link Union Station (LINK US) Project / PS-2415-3172

A. Small Business Participation

In accordance with Federal Railroad Administration (FRA) and American Recovery and Reinvestment Act (ARRA) funds through the California High Speed Rail Authority (CHSRA), Metro incorporated CHSRA's Small Business (SB) Program.

HDR, Inc. made an overall SB goal commitment of 28.61%, which is inclusive of a 14.92% DBE, 3.04% DVBE, 9.45% SBE, and a 1.20% SB Microbusiness. HDR confirmed that the project is 53% complete. Current overall SB participation is 23.54%, which is inclusive of an 11.10% DBE, 1.83% DVBE, 9.84% SBE, and 0.77% SB Microbusiness, representing a shortfall of 5.07% in the DBE, DVBE, and SB Microbusiness commitments.

For this pending contract modification, HDR listed five additional firms, inclusive of a 10.11% DBE, 1.17% DVBE, 13.89% SBE, and 0.95% SB Microbusiness, which will bring DBE participation to 26.11%. To date, HDR's team is made up of 40 subconsultants, including 11 DBEs, 17 SBEs, 8 DVBEs and 4 SB Microbusinesses. HDR confirmed that they will meet their overall SB commitment throughout the life of the contract.

SMALL BUSINESS COMMITMENT	28.61%	SMALL BUSINESS PARTICIPATION	23.54%

	DBE/DVBE/SBE/SB (Micro) Subcontractors	% Commitment	% Participation
1.	Atwell Consulting Group (DBE)	0.33%	0.19%
2.	BA Inc. (DBE)	0.79%	1.81%
3.	Earth Mechanics (DBE)	1.74%	0.53%
4.	MBI Media (DBE)	1.14%	2.58%
5.	Pacific Railway Enterprises (DBE)	4.91%	0.37%
6.	PacRim Engineering (DBE)	0.48%	0.63%
7.	Rail Surveyors & Engineers (DBE)	4.88%	3.68%
8.	V & A Inc. (DBE)	0.65%	0.94%
9.	Resource Sciences/Planning (DBE)	added	0.23%
10.	The Alliance Group (DBE)	added	0.01%
11.	T.A. Group (DBE)	added	0.13%
	Sub Total DBE*	**14.92%**	**11.10%**

12.	Abacus/Rubicon Engineering (DVBE)	0.33%	0.00%
13.	Cal Vada Surveying (DVBE)	0.34%	0.20%
14.	The REM Engineering (DVBE)	1.76%	0.04%
15.	Schwab Engineering (DVBE)	0.24%	0.63%
16.	Value Management Institute (DVBE)	0.25%	0.00%
17.	Aurora Industrial Hygiene (DVBE)	0.12%	0.00%
18.	ZMAssociates Environmental (DVBE)	added	0.47%
19.	OhanaVets, Inc. (DVBE)	added	0.49%
	Sub Total DVBE*	**3.04%**	**1.83%**
20.	WKE, Inc. (SBE)	8.01%	2.00%
21.	FPL & Associates (SBE)	1.13%	0.50%
22.	Blair, Church & Flynn (SBE)	0.31%	0.14%
23.	GPA Consulting (SBE)	added	0.81%
24.	Paleo Solutions (SBE)	added	0.09%
25.	Thomas Frawley Consulting (SBE)	added	0.00%
26.	S&K Engineers (SBE)	added	0.28%
27.	W2 Designs, Inc. (SBE)	added	0.50%
28.	IDC Consulting Engineers (SBE)	added	0.22%
29.	D'Leon Consulting (SBE)	added	0.45%
30.	Aguilar Associates (SBE)	added	0.83%
31.	Guida Surveying (SBE)	added	1.20%
32.	Penco Engineering (SBE)	added	1.36%
33.	C2PM (SBE)	added	1.10%
34.	VCA Engineers (SBE)	added	0.36%
35.	Fariba Nation Consulting (SBE)	added	0.00%
36.	Lentini Design & Marketing (SBE)	added	0.00%
	Sub Total SBE*	**9.45%**	**9.84%**
37.	AirX Utility Surveyors (SB Micro)	0.13%	0.23%
38.	Jacobus & Yuang, Inc. (SB Micro)	0.30%	0.35%
39.	Morcos Group (SB Micro)	0.48%	0.02%
40.	Acoustic Strategies Inc.	0.29%	0.17%
	Sub Total SB Micro*	**1.20%**	**0.77%**
	TOTAL	**28.61%**	**23.54%**

** Defined as Small Business under the CHSRA SB Program*

B. Living Wage and Service Contract Worker Retention Policy Applicability

The Living Wage and Service Contract Worker Retention Policy is not applicable to this modification.

C. Prevailing Wage Applicability

Prevailing Wage requirements are applicable to this project. DEOD will continue to monitor contractors' compliance with the State of California Department of Industrial

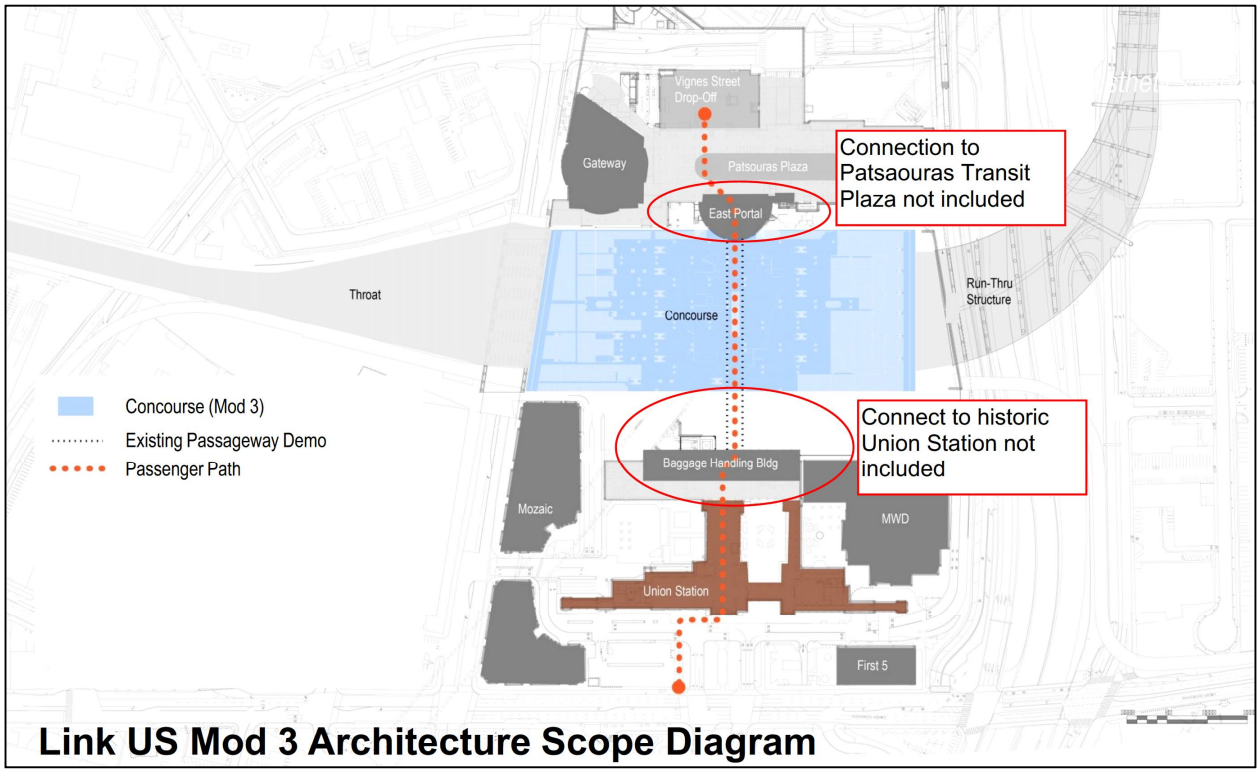
Relations (DIR), California Labor Code, and, if federally funded, the U S Department of Labor (DOL) Davis Bacon and Related Acts (DBRA).Trades that may be covered include: surveying, potholing, field, soils and materials testing, building construction inspection, construction management and other support trades.

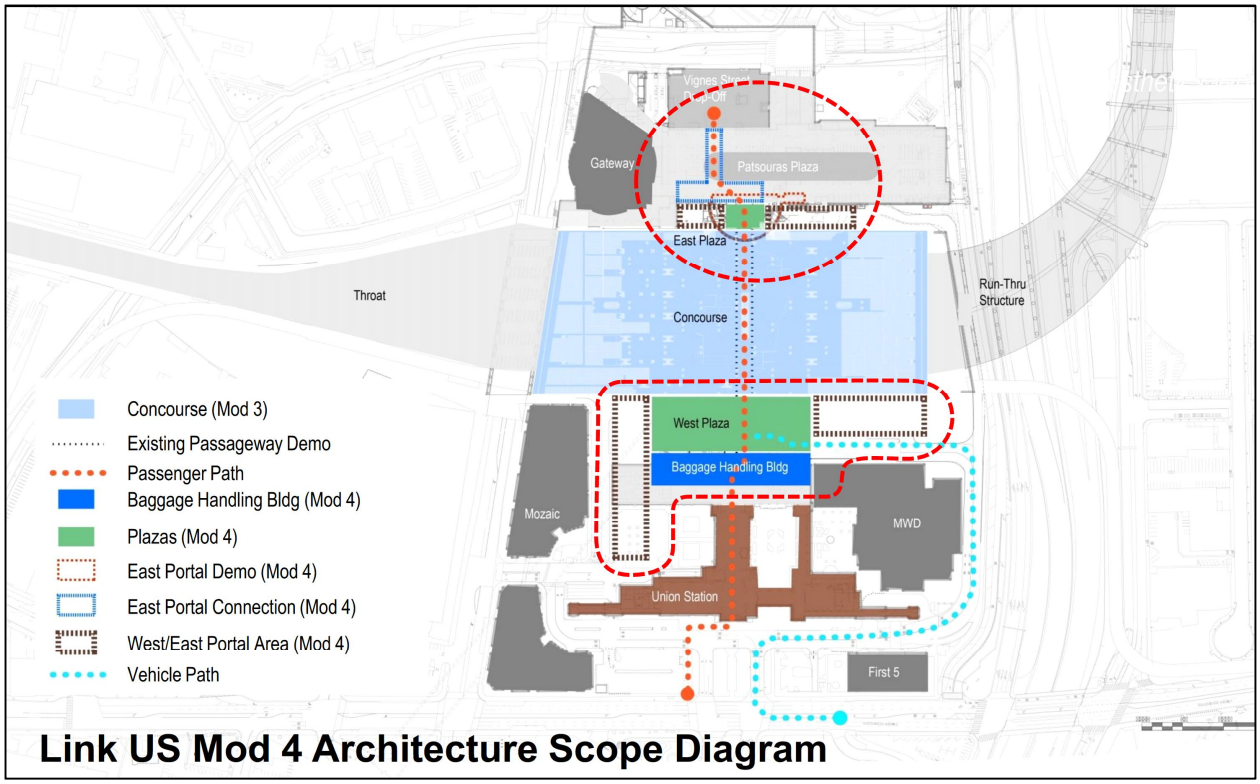
D. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this contract.

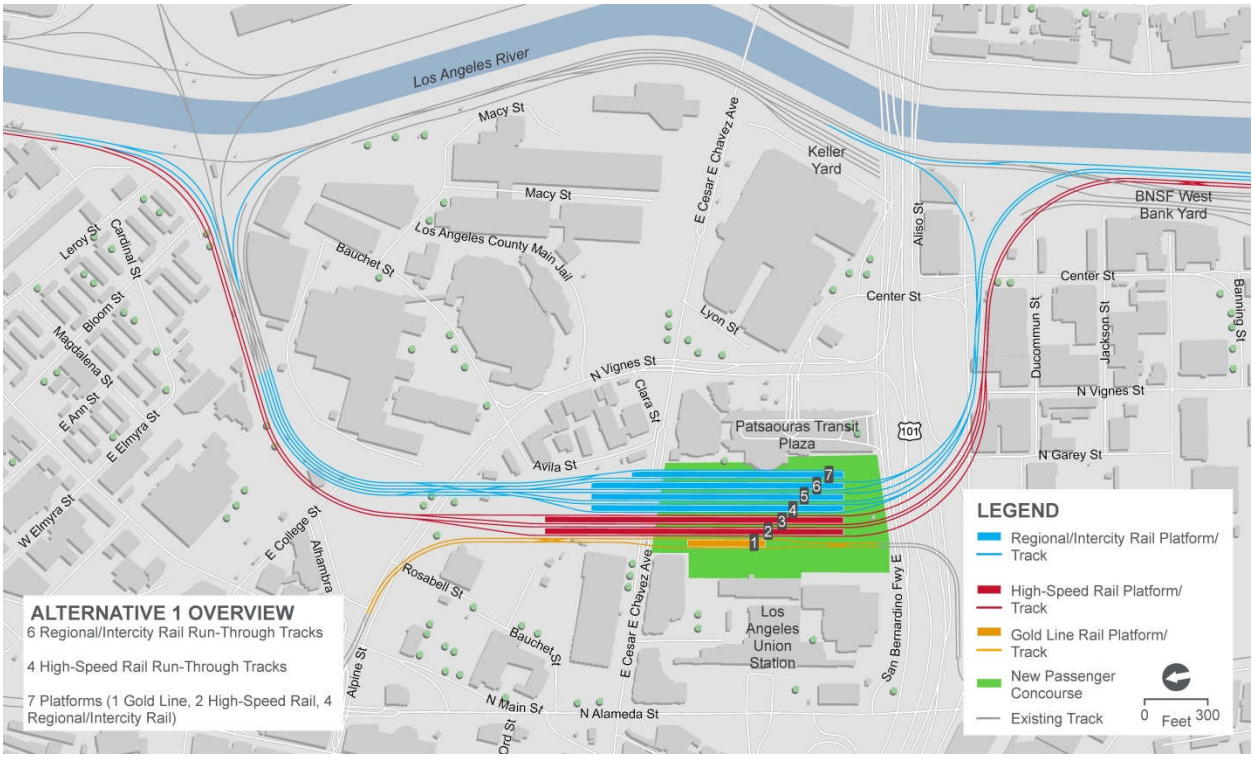
ATTACHMENT D

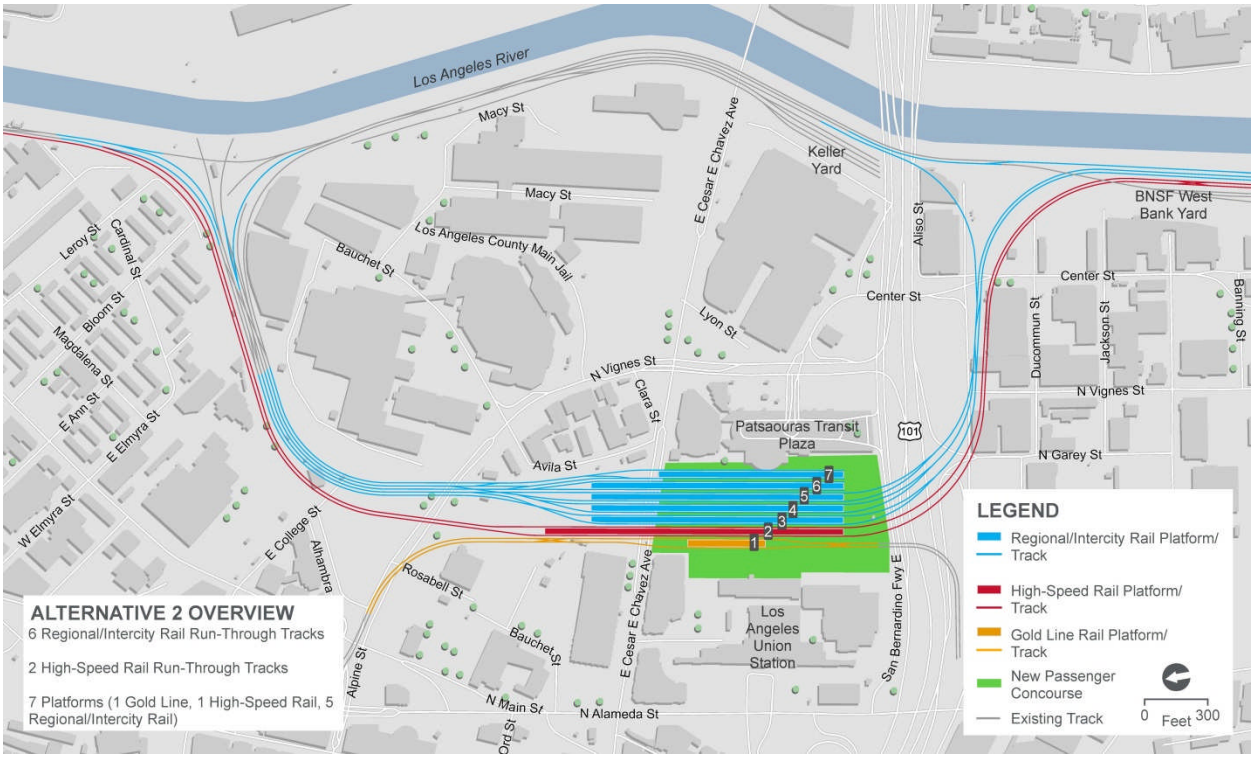
Comparison between Contract Modifications No. 3 and No. 4 Study Areas



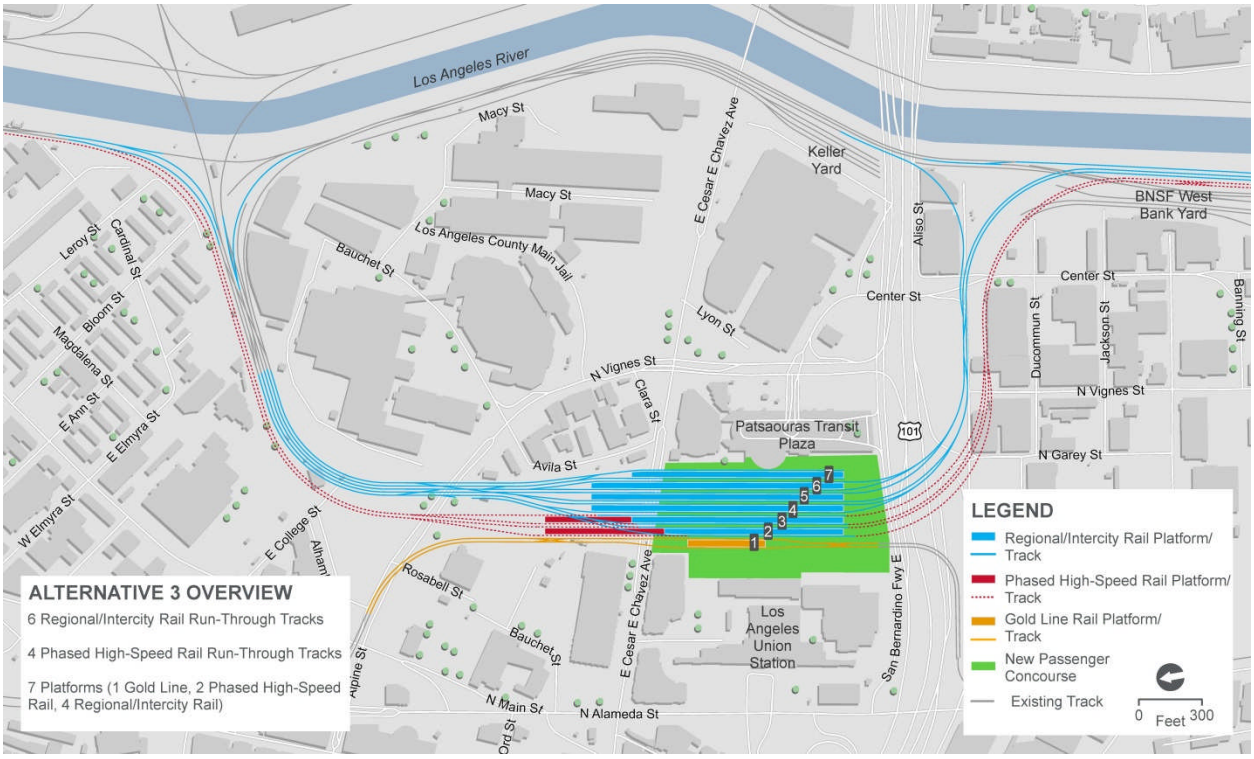


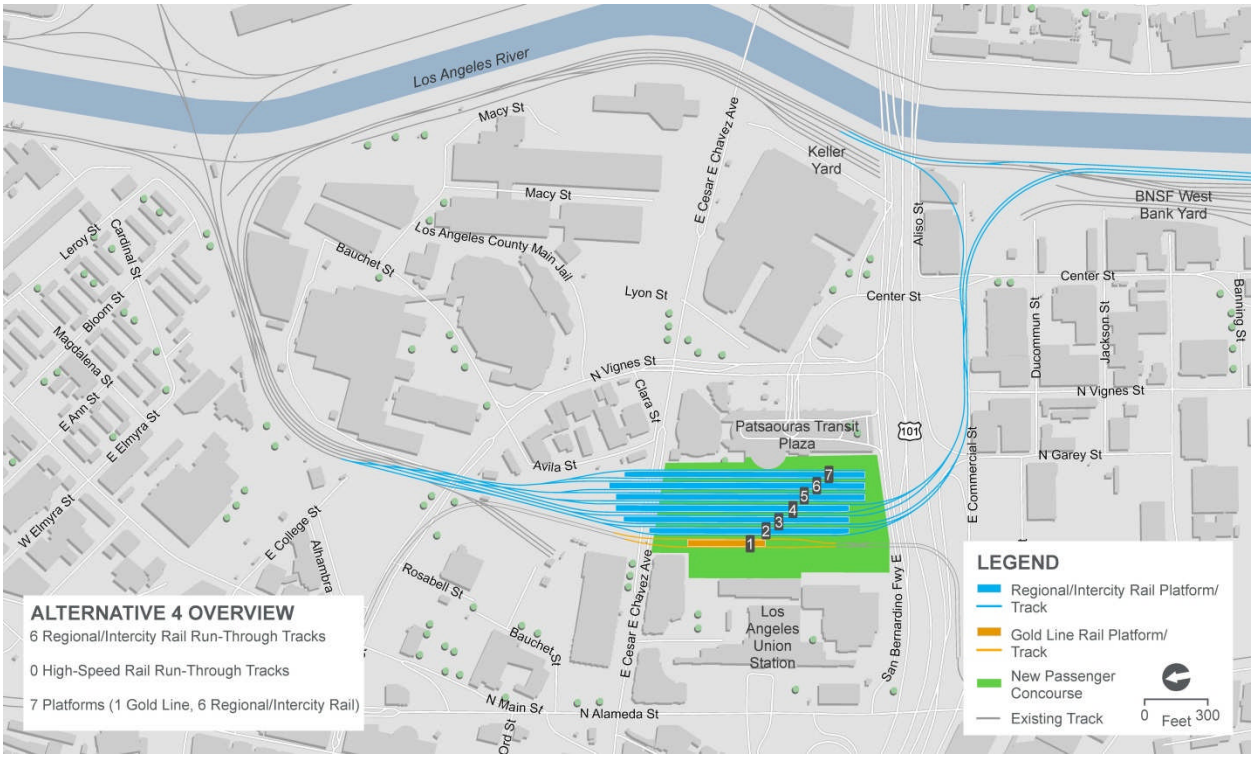
ATTACHMENT E





ATTACHMENT E





LINK US SOURCES AND USE OF FUNDS FOR ENVIRONMENTAL AND PRELIMINARY ENGINEERING

SOURCE OF FUNDS		PRIOR YEARS	FY17	FY18	FY19
MEASURE R 3%	$ 43,698	$ 14,793	$ 9,300	$ 10,000	$ 9,605
METRO OTHER FUNDING	$ 8,000			$ 8,000	
CHSRA ($15M + $3.7M)	$ 18,700		$ 9,200	$ 9,500	
	$ 70,398	$ 14,793	$ 18,500	$ 27,500	$ 9,605

USE OF FUNDS		PRIOR YEARS	FY17	FY18	FY19
HDR CONTRACT - Preliminary Enigeering and Environmental	$ 66,398	$ 14,643	$ 17,450	$ 26,000	$ 8,305
THIRD PARTY COSTS	$ 3,000	$ 100	$ 900	$ 1,000	$ 1,000
OTHER COSTS	$ 1,000	$ 50	$ 150	$ 500	$ 300
	$ 70,398	$ 14,793	$ 18,500	$ 27,500	$ 9,605