

Acknowledgments

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Executive Summary





Executive Summary

This Vehicle Miles Traveled (VMT) Mitigation Bank Plan (Bank Plan) is the final, implementation-focused deliverable resulting from a two-year effort to develop a VMT Mitigation Program (Program) for projects on the State Highway System (SHS) in Los Angeles County. The primary goal of the VMT Mitigation Bank is to provide a streamlined and defensible approach to mitigating the induced travel impacts of projects on the SHS through the development and sale of mitigation credits to offset increases in VMT. The premise of the Program, and by extension the Bank Plan, is that Metro can mitigate the potential induced travel impacts of Metro Highway and ExpressLanes projects by investing in Metro projects and programs that reduce VMT by a commensurate amount. Metro could also invest in VMT-reducing projects and programs implemented by public agency partners.

The concept of a mitigation bank as a tool to mitigate California Environmental Quality Act (CEQA) impacts is not new. But, to date, such banks have primarily focused on wetlands, habitat, or other natural resource restoration. The application to transportation projects, while rich in academic literature, is novel. So, while Metro is not the first agency in California to conduct a VMT Mitigation Bank study, Metro is poised to be the first agency to successfully launch this innovative mitigation structure.

In contrast to project-by-project VMT mitigation, the Bank Plan includes a structured and streamlined approach to quantify VMT reduction, estimate implementation costs, and offer packages of VMT reduction “credits” for purchase and implementation by project applicants. This creates an efficient pathway to invest VMT mitigation dollars directly into actions that reduce VMT, provide increased access to low-cost mobility options, and reduce local exposure to negative impacts of VMT such as air pollution and noise. In short, the Bank Plan creates a pathway to invest VMT mitigation dollars directly into Metro VMT-reducing projects and programs or those of Metro’s public agency partners.

Stakeholder engagement was undertaken across a variety of forums: virtual community engagement meetings, Metro advisory bodies, and Policy Working Group meetings, which included Council of Government Executive Directors and/ or staff, transit operators, staff from local agencies, Caltrans

and the California Air Resources Board (CARB). Several focused meetings were also held with Caltrans and the Southern California Association of Governments (SCAG) on technical aspects of the program development. Engagement followed an iterative rubric: it focused first on the types of mitigations Metro should consider, then explored evaluation methodologies, and finally focused on how to design and implement a program that most effectively links and delivers mitigation measures.

For a mitigation to be considered eligible under this Program it must meet two eligibility criteria:

1. The mitigation must effectively reduce VMT. Mitigations that reduce greenhouse gases (GHG) alone are insufficient. Per CEQA, to mitigate induced travel, a mitigation must be effective at reducing VMT.
2. The VMT-reducing potential of a mitigation must be supported by substantial evidence. That means there must be an established evidentiary basis of the VMT-reducing potential of a given applied mitigation.

For the purpose of this study, Metro relied largely on the evidentiary basis provided by the California Air Pollution Control Officers Association (CAPCOA) 2021 Handbook, which is the most extensively documented compendium of VMT quantification methodologies based on peer-reviewed industry research available for California planning agencies to date. Finally, for this pilot, Metro focused on mitigations that were directly enforceable by Metro to ensure that mitigations are delivered. The pilot term is not temporal but will instead be based on the application of the tools to a minimum of one highway project and one ExpressLanes project.

A set of 15 Mitigation Actions were identified as suitable to be included in the Program based on the criteria of demonstrated effectiveness and enforceability by Metro, as well as additional criteria established through stakeholder engagement. These 15 actions were incorporated into the Metro VMT Mitigation Calculator, which is an Excel-based spreadsheet tool that estimates reductions in VMT resulting from the implementation of actions and is responsive to user-input parameters reflecting the specifics of the proposed

implementation.

From the full set of 15 actions, four Mitigation Actions were selected as pilot actions for the VMT Mitigation Bank:

- > Metro Bus Service Frequency Improvements
- > Metro Bus-Only Lanes
- > Metro Joint Development
- > Metrolink Service Expansion.

These four actions have been organized into implementation packages with associated VMT credit values, costs and “implementation packages”— or minimum units of purchase designed to ensure implementation of Mitigation Actions is possible with each purchase of VMT credits. Under this program framework, SHS project managers can purchase credits from the Bank to mitigate the VMT induced by their project without the need to conduct a lengthy VMT analysis for each discrete project. This streamlined process simplifies and standardizes VMT mitigation efforts, reduces redundancies of VMT mitigation analysis, and saves projects time and effort. This approach ensures mitigation dollars can be invested more expediently and in an incremental yet effective manner. By converting the mitigation actions into implementation packages, there is an assurance that with a single transaction (e.g. a credit purchase by a project sponsor of a project on the SHS) sufficient funding will be deposited in the Bank such that mitigation actions can be funded at a level that ensures implementation.



Introduction

This Report provides substantial evidence to support the creation of a VMT Mitigation Bank, including administration and structure, VMT crediting, monitoring and reporting.





Senate Bill 743, which was codified in Public Resources Code section 21099, required changes to the guidelines implementing CEQA regarding the analysis of transportation impacts (Cal. Code Regs., Title 14, Div. 6, Ch. 3, § 15000 et seq.). Per the adoption of the changes to the CEQA Guidelines, automobile delay, as measured by “level of service” and other similar metrics, generally no longer constitutes a significant environmental effect under CEQA (Pub. Resources Code, § 21099, subd. (b)(3)). Instead, projects are evaluated in terms of how much VMT they will induce. Mitigation of induced VMT attributable to highway capacity expansion projects on the SHS in Los Angeles County, in compliance with Caltrans’ CEQA determinations led Los Angeles County Metropolitan Transit Authority (Metro) to explore a more efficient and effective method for reducing VMT. CEQA requires mitigation of induced VMT

to the extent feasible, and mandates that mitigation actions be effective and enforceable¹. Metro’s Pilot VMT Mitigation Program (Program) offers a set of actions that are enforceable by Metro or a partner agency and designed with the local context in mind, and by extension are more likely to mitigate VMT.

Metro has spent the last 24 months working with Caltrans and other stakeholders to evaluate various VMT quantification tools, mitigation options, and program structures to assess the best fit for defensibly and consistently offering a mitigation approach to projects on the SHS. Through this collaborative effort, the following key decisions have helped shape the direction of this pilot Program.



Key Program Framework Decisions

A voluntary Program is preferable to the current approach of project-by-project mitigation, which requires each project to individually identify, analyze, negotiate and coordinate implementation of mitigation actions and does not guarantee any consistency in the analysis of VMT reduction.

A Bank Program is preferred over a Mitigation Exchange Program for maximum effectiveness and flexibility. This allows SHS projects to purchase credits that contribute to a larger mitigation project rather than requiring a SHS project to rely solely on VMT reduction strategies that would be feasible to implement on an ad-hoc basis.

Equity is an important agency-wide goal and was extensively considered during the development of the Program. The project team considered a number of ways to encourage and/or require investment into equity-serving Mitigation Actions through this Program. The selection of Mitigation Actions was an important first step to ensuring equitable outcomes from this Program. The priority Mitigation Actions themselves are equity focused and therefore incentives to invest in Metro's Equity Focus Communities (EFCs) are inherent in the Mitigation Bank Program.

The Service Area for the Mitigation Bank Program should cover the entire County. Within the County, Subregional Planning Areas (SPA) as defined in Metro's Long Range Transportation Plan (LRTP) will serve as a basis for further geographic connection between the SHS project and the various Mitigation Actions.

A 20-year horizon for Mitigation Actions has been established.

VMT Mitigation Bank Overview & Goals

This VMT Mitigation Bank Crediting Plan has been prepared for Metro. The purpose of this document is to govern the activities required to establish mitigation credits for induced VMT impacts resulting from highway capacity projects on the SHS in Los Angeles County that are determined to induce VMT.



The Goals of the Bank

- ***Provide a streamlined, effective and enforceable approach*** to mitigate VMT impacts from highway capacity projects on the SHS
- ***Develop and offer VMT mitigation credits*** to SHS projects
- ***Establish the credit values*** of mitigation projects and programs
- ***Identify procedures*** for the sale of credits, including debiting the credit table
- ***Establish oversight procedures*** to regularly evaluate the Program

The current approach of project-by-project mitigation requires each project to individually identify, analyze, negotiate and coordinate implementation of mitigation actions runs the risk of inconsistently analyzing how much VMT reduction can be achieved from mitigation action investments. The Banking model allows Metro to pre-plan mitigation efforts. In this structure, Metro can reduce project delays and risks associated with inconsistent VMT analysis, while ensuring that mitigation efforts are more aligned with Metro policy goals. The Mitigation Bank solution offers a menu of mitigation options to ensure a defensible and enforceable approach to VMT reduction.

The Mitigation Bank solution offers a menu of mitigation options to ensure a defensible and enforceable approach to VMT reduction.



Legal & Administrative Framework





1008

EAST LA

Metrolink

1008

TRAIN

Legal Framework

The legal framework for a VMT Mitigation Bank relies on CEQA statutes and guidelines and, when relevant, the refinement of these statutes and guidelines through court cases. This Program was designed to meet the most up-to-date understanding of CEQA guidelines. Specifically, it was designed to be effective and enforceable.

Current legal expectations for developing, operating, and administering mitigation credit programs are defined by statutes, regulations, and past court decisions. As an example, the U.S. Army Corps of Engineers 2008 Mitigation Rule, published in the Code of Federal Regulations, lays out the framework for the national waters/wetlands Mitigation Bank program. The State of California passed Senate Bill 1148 (2012), which provides the legal foundation and regulatory framework for the State to participate in waters/wetlands mitigation banking. SB 1148 mirrors the documentation requirements of the federal 2008 rule. While a similar combination of federal and state laws does not yet exist for VMT mitigation programs, the proposed

program has relied upon analogous laws and regulations in its development.

Only mitigation actions backed by evidence of effectiveness were included in this Program. Section 5 of this report provides the research basis supporting the effectiveness of each mitigation action included in the Pilot Program.

Because the Program is voluntary, there may be enforceability concerns surrounding a mitigation action which does not accrue sufficient funds to move into the implementation phase. To address this problem, VMT credits can only be purchased in quantities associated with “implementation packages” which are designed to ensure that the amount of funding received by any one purchase is sufficient to implement a Mitigation Action from the Bank. Packaging VMT credits and standardizing the implementing agency ensures that the actions in the bank are enforceable as well as being effective.



Administrative Framework

This section establishes the administrative framework and key roles for implementing the Program. Following the adoption of this Report, additional details may be necessary to move the Program concept to implementation.

Bank Sponsor

Metro is the Bank Sponsor and will be responsible for the planning, management and operation of the Program, as well as administration of credits to ensure sufficient funds are accumulated to implement Mitigation Actions. As Mitigation Actions are funded, the corresponding VMT credits are subtracted from the Bank (“debited”) and assigned to the SHS project that purchased them (“credited”). Remaining available credits are updated accordingly. Metro will also be responsible for managing mitigation bank funds, which will require coordination with Mitigation Action implementers to align withdrawal and use of mitigation funds with geographic and equity goals of the Program.

Bank Service Areas

The Pilot Program will use the LA County boundary as the Bank Service Area. In other mitigation bank examples, Service Areas are based on other types of geographic boundaries. During the development of this Mitigation Bank, the project team deliberated the use of Metro’s Subregional Planning Areas as Service Areas, based on their diversity of context, anticipated use of the Mitigation Bank based on SHS projects in the pipeline, and availability of various Mitigation Actions. Figure 1 shows the Subregional Planning Areas with EFCs identified. To preserve maximum flexibility during this pilot phase, the County will serve as the Service Area and the Bank Sponsor will work with both SHS project teams and Mitigation Action implementers to align geographies of the VMT impacts and the implementation of the Mitigation Actions. This allows local sponsors to choose which Mitigation Action credits to purchase with maximum flexibility (and therefore maximum investment in Mitigation Actions) while retaining some influence over the location where the Mitigation Actions are implemented.

Staffing

It is estimated that one project manager, one senior level planner or accountant and one administrative assistant with approximately 50% allocation to the Program’s administration could maintain the Program. The duties of the Project Manager would include:

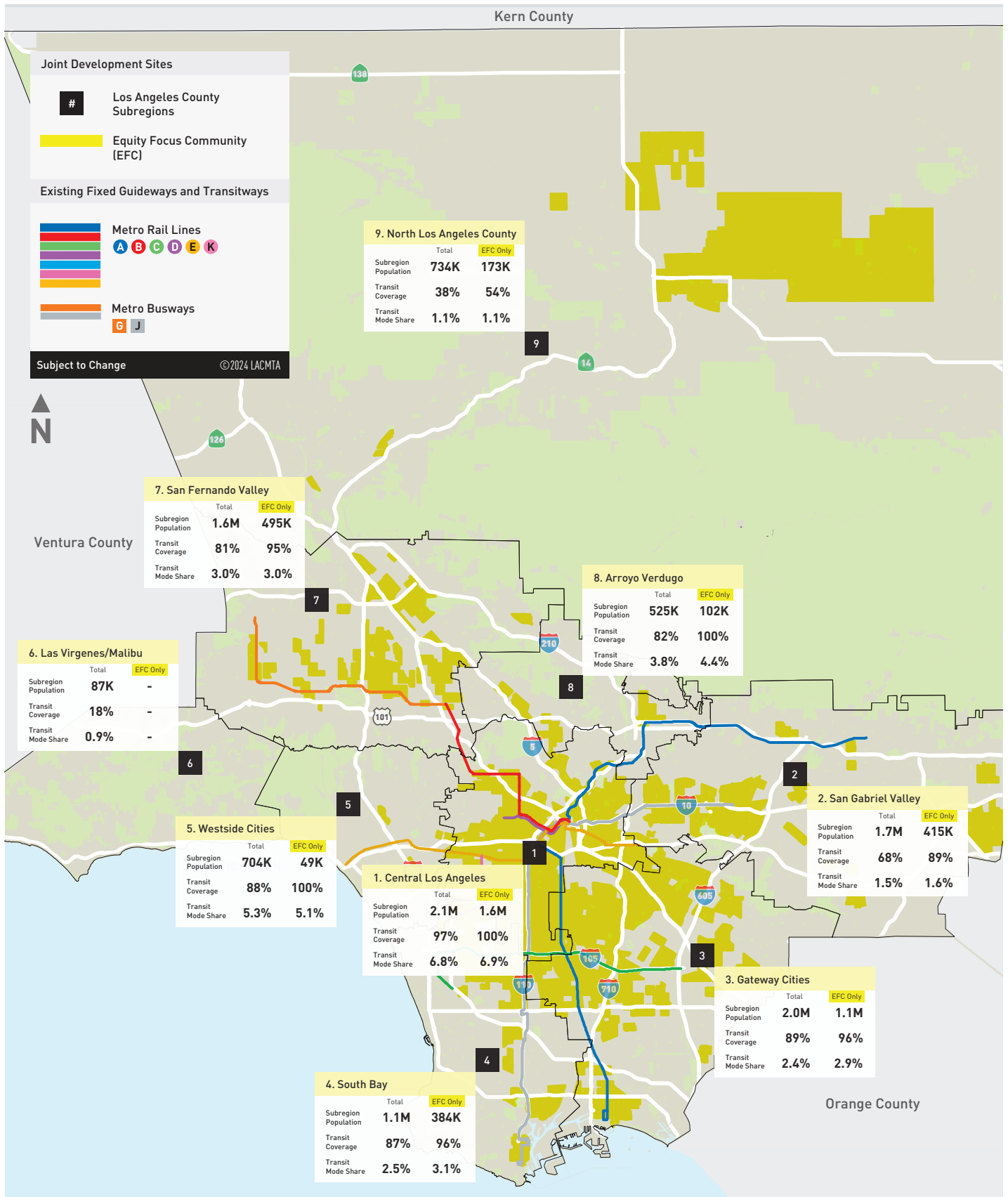
- > Maintaining the Mitigation Credit table (described further below) to ensure no “double-dipping” across multiple SHS projects or other projects attempting to claim VMT mitigation credit
- > Providing information to Metro staff on the program, including coordination with staff responsible for implementing Mitigation Actions
- > Preparing and presenting Annual Program Reports
- > Monitoring Mitigation Actions for consistency with the Program
- > Evaluating new Mitigation Actions

Estimated Costs For Administering The Program

Based on Metro salary and benefits information, the staffing described above is estimated to cost approximately \$404,000 per year to administer the VMT Mitigation Banking Plan (2024 dollars). This cost includes salaries and benefits. This cost will be included in the cost calculation for each Mitigation Action. Administrative costs are estimated at 15% plus a 15% contingency, which should cover the staffing costs. If needed, the Administrative percentage can be adjusted if needed based on actual staffing costs and other administrative costs.

Additionally, planning, outreach and infrastructure costs are identified as one-time costs and would also be included in the Mitigation Action cost. Staff and as-needed consulting costs to create necessary Metro programming infrastructure for cost controls, mitigation credit payments, reporting templates and communication to member agencies about the program shall also be included in the one-time cost.

Figure 1. Subregional Planning Areas



"TRANSIT COVERAGE" IS PERCENT OF HOUSEHOLDS WITHIN 1/4 MILE OF A TRANSIT STOP OR IN A METRO MICRO SERVICE

Monitoring & Reporting

The VMT Mitigation Bank Manager will monitor the timing of initiation of the Mitigation Actions as well as annual monitoring of the progress of each Mitigation Action. Development of performance metrics will be an initial responsibility of the Bank Manager.

Program data will be collected to support the development of an Annual Report that can include the following topics:

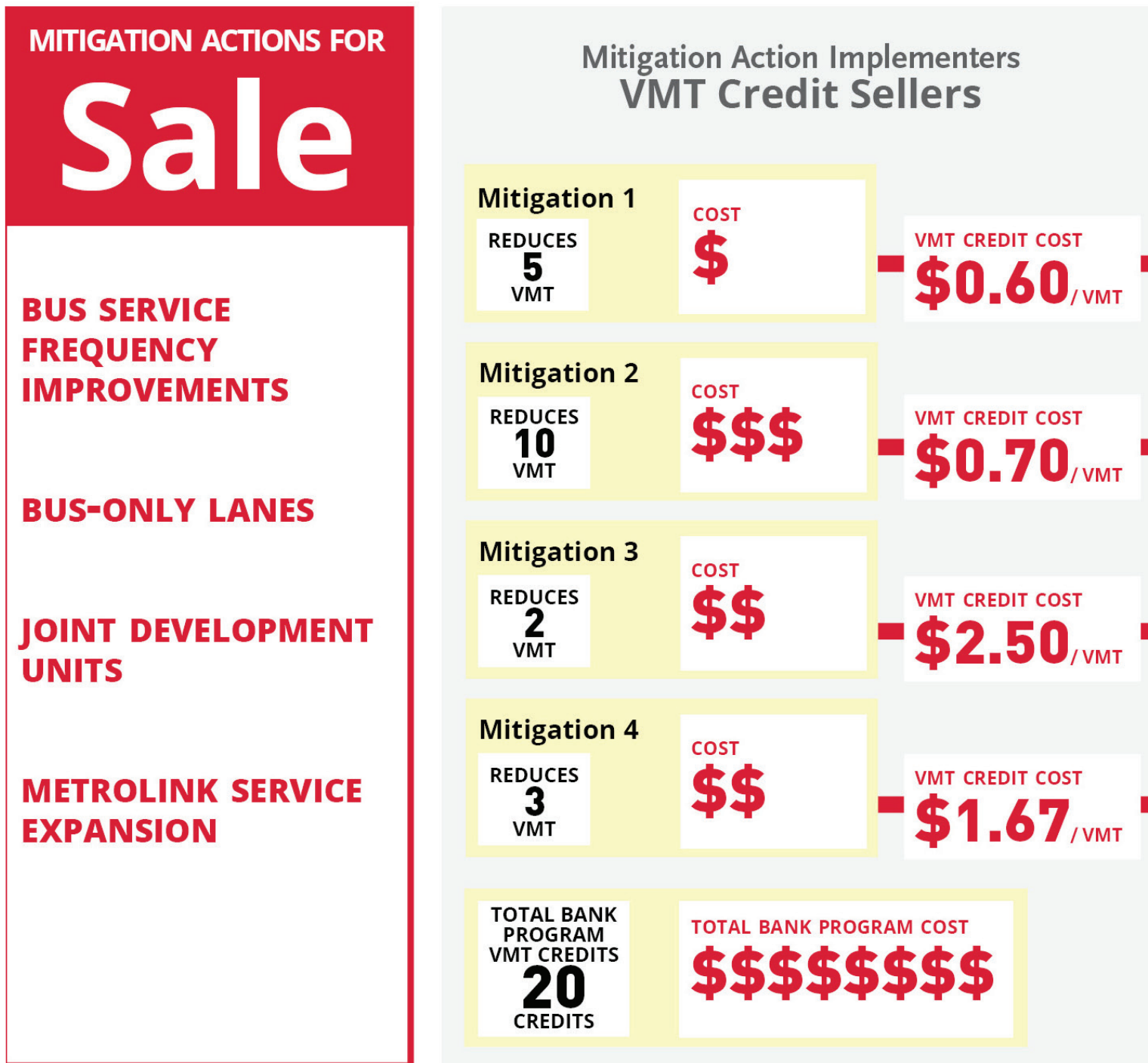
1. Current Mitigation Crediting Table
2. Cash on hand for each Mitigation Action
3. Status of each Mitigation Action
4. Projection of credits to be funded in the upcoming fiscal year
5. Reporting on Performance Standards for each Mitigation Action, including implementation relative to Equity Focus Communities
6. Any additional Mitigation Actions under consideration for addition to the Bank

Mitigation Action Completion

When a Mitigation Action has been fully funded, it will be removed from the Mitigation Credit Table. Unless otherwise specified, Mitigation Actions and the credit packages sold to fund them will have 20-year lifespans. The 20-year lifespan is intended to meet the mitigation obligations related to induced demand and align with the horizon year of current regional planning efforts. Annual progress reports will be prepared to provide transparency on Mitigation Action performance standards are being achieved.

This diagram shows how a VMT Mitigation Bank model is structured. Mitigation Action implementers can sell VMT “credits” based on the amount of VMT reduction and the cost for implementing the action. SHS project teams can then purchase the VMT credits. The transactions are facilitated by the VMT Bank Administrator, who manages the VMT “credit store” and accounts for each sale.

Figure 2. Bank Model Framework



VMT Bank Administrator VMT Credit Store

BANK ACCOUNTS

ACCOUNT 1

1 1 2 2 2

ACCOUNT 2

2 2 3 3 3 3
3 3 3 3

ACCOUNT 3

3 3

ACCOUNT 4

3 3 3

SHS Project Teams VMT Credit Customers

Project: 1 of 3

NEEDS: 2 VMT CREDITS

2 Credits to Acct 1... \$1.20

Total... \$1.20

Project: 2 of 3

NEEDS: 5 VMT CREDITS

3 Credits to Acct 1... \$1.80

2 Credits to Acct 2... \$1.40

Total... \$3.20

Project: 3 of 3

NEEDS: 13 VMT CREDITS

8 Credits to Acct 2... \$5.60

2 Credits to Acct 3... \$5.00

3 Credits to Acct 4... \$5.00

Total... \$15.60

Public input included at project level

Mitigation Bank Projects

VMT Mitigation Bank projects were evaluated by the VMT Mitigation Program project team, using the CAPCOA GHG Emission Reduction Handbook, information from the SCAG Activity-Based Model (such as socio-economic data and travel demand data), and other published research.

In This Section

- > Mitigation Action Toolbox
- > Future Projects



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The Mitigation Actions to the right were identified through the development of program eligibility and evaluation criteria. Stakeholder input shaped the development of the evaluation criteria, and ensured alignment with Metro's overarching strategic goals: encouraging people to reduce single occupancy vehicle trips while providing mobility benefits across the County and supporting Metro's Equity Platform for EFCs. The Mitigation Actions range from educational programs and commuter programs to transit enhancements and active transportation projects and are detailed in the CAPCOA GHG Emission Reduction Handbook. The 15 Mitigation Actions were evaluated against the following evaluation criteria:

- > Metro Direct Enforceability: the degree to which a mitigation is directly implemented and enforced by Metro.
- > Expansion of Existing Programs: this generally correlates with lower implementation costs attributable to having administrative and organizational infrastructure in place.
- > Cost Effectiveness: assessed on cost per VMT reduced.
- > Scalability: can the mitigation be easily scaled up or expanded.
- > Incorporation into a Highway or ExpressLanes Project: mitigations that can easily and directly be incorporated into the project are more efficient by avoiding separate implementation efforts, cost, and time.
- > Speed of Delivery Timeframe: how quickly the mitigation can be delivered, with shorter implementation times more desirable than longer ones.
- > Benefits to EFCs: does the mitigation provide direct benefits or otherwise better serve EFCs comparatively.
- > Benefits to Populations Affected by VMT/Pollution Burdens: degree to which a mitigation may provide relief to burdened communities.
- > Ease of Implementation: the degree of difficulty associated with inter-jurisdictional coordination required and infrastructure challenges like right-of-way acquisition.

Four Mitigation Actions were advanced to the Mitigation Bank, based on their alignment with the evaluation criteria.

Mitigation Action Toolbox

The following Mitigation Actions were identified as eligible and enforceable actions that would be available to mitigate induced VMT impacts resulting from highway capacity projects on the SHS. Any of these Mitigation Actions are available to use outside the framework of the Mitigation Bank, as they have been determined to be effective and enforceable through an initial review and analysis. Four of these actions have been further analyzed and assembled into implementation-ready packages of VMT credits, for streamlined incorporation into the Bank (described further below and noted in bold italics in the list on this page). If a SHS project team prefers not to purchase credit packages from the Bank, they can negotiate with Mitigation Action implementers directly for any of the tools in the toolbox. Once identified and negotiated, the SHS project team would need to develop and analyze an implementation approach using Metro's VMT Calculator, a customized spreadsheet tool developed through this project, to produce consistent, defensible, quantified VMT reductions specific to LA County.

Metro Actions

1. Provide Bus Rapid Transit
2. ***Provide Metro Bus-Only Lanes***
3. ***Increase Metro Bus Service Frequency***
4. Extend Metro Bus Network Coverage/ Hours
5. Expand Metro Micro
6. Implement Subsidized or Discounted Transit Program (UPass)
7. Implement Subsidized or Discounted Transit Program (Employer Pass)
8. Implement Commute Trip Reduction Program (Employer Commute Support)
9. Implement Community Based Travel Program (TDM Master Plan – Residential Programs)
10. Implement E-Bike Subsidy Program
11. Implement Electric Bikeshare Program
12. Implement Pedal (Non-Electric) Bikeshare Program
13. ***Implement Housing (including Affordable Housing) on Metro Joint Development Sites***

Partner Agency Actions

14. ***Metrolink Service Expansion***
15. Implement South Bay Cities COG Local Travel Network

Pilot Bank Mitigation Actions

Based on the initial list, the following four Mitigation Actions were identified as the Pilot Mitigation Actions for the VMT Mitigation Bank Program. While all the above Mitigation Actions are eligible and enforceable, these four actions have been assembled into implementation-ready packages with associated VMT credit values, costs and minimum units of purchase. This approach addresses the concern that funding

will accrue to a voluntary Mitigation Bank but not be spent in a timely manner. By converting the Mitigation Actions into implementation packages, there is a guarantee that with a single transaction, sufficient funding will be deposited in the Bank such that the Mitigation Action can be implemented.

The four Pilot Mitigation Actions are:



Metro Bus Service Frequency Improvements



Metro Bus Only Lanes

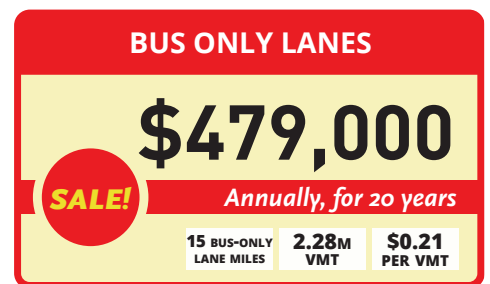
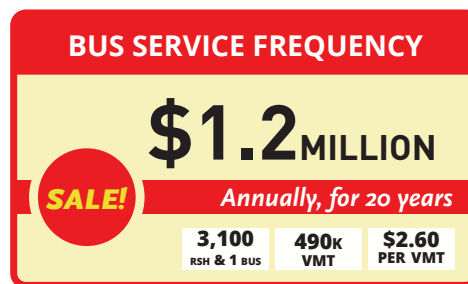
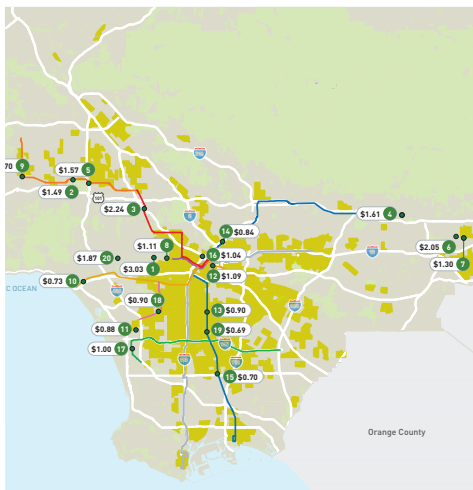


Figure 3. Mitigation Action “Package” Price Tags

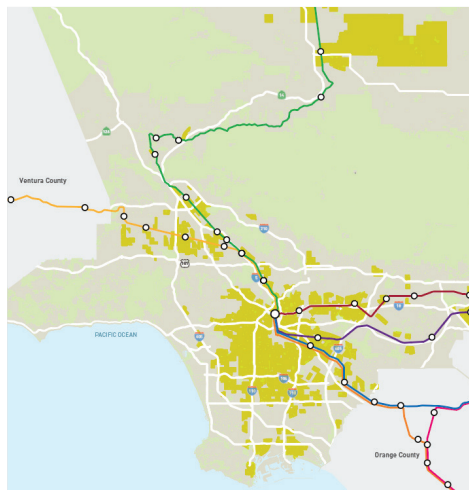
Prices reflect the minimum unit of implementation required to offset the associated VMT for each Mitigation Action, described further in the pages that follow

Table 1. Subregional Alignment

Pilot Bank Actions	South Bay Cities	Gateway Cities	Central	Westside Cities	San Gabriel Valley	Arroyo Verdugo	San Fernando Valley	Las Virgenes Malibu	North County
INCREASE BUS SERVICE FREQUENCY	✓	✓	✓	✓	✓	✓	✓		
IMPLEMENT BUS-ONLY LANES	✓	✓	✓	✓	✓	✓	✓		
METRO JOINT DEVELOPMENT	✓	✓	✓	✓	✓		✓		
METROLINK SERVICE EXPANSION		✓	✓		✓	✓	✓		✓



Metro Joint Development Projects



Metrolink Service Expansion

JOINT DEVELOPMENT UNITS

\$16,200

Annually, for 20 years

SALE!

1 DWELLING UNIT

8,165 VMT

\$1.99 PER VMT

METROLINK SERVICE

IN PROGRESS

Forthcoming details from Metrolink

Metro Bus Service Frequency Improvements

Description

This action corresponds to enhancing and increasing service frequency on the Tier 2 bus lines (lines with 10-15 minute service) from Metro's NextGen Bus Plan to bring those lines closer to the frequency levels of Tier 1 bus lines (10-minute or better service throughout the day), by adding one more run per hour throughout the day or two more runs per hour for lines already at 10-minute service during peak hours. For example, lines at 15-minute service would be upgraded to 12-minute service and lines at 10-minute service in the peak hours would be upgraded to 7.5-minute service for those same hours. Increased bus frequency reduces waiting and overall travel times, which improves the user experience and increases the implied attractiveness of transit service. This results in a mode shift from auto travel to transit, which reduces VMT. For more information about Metro's NextGen Plan, please see <https://www.metro.net/about/plans/nextgen-bus-plan/>.

The VMT credits can be purchased by SHS projects in any subregion. VMT reduction credits from this mitigation action are generated from Metro Tier 2 bus lines which are located in the following subregions, and therefore have the closest geographic alignment with those subregions.

- Central LA
- San Gabriel Valley
- Gateway Cities
- South Bay
- Westside Cities
- San Fernando Valley
- Arroyo Verdugo

Research Basis

The VMT quantification methodology for increasing Metro bus service frequency is based on CAPCOA strategy T-26 Increase Transit Service Frequency. Quantifying the VMT reduction potential from this mitigation action involves estimating the increased countywide transit ridership based on the following factors: percent increase in transit frequency, percent of countywide transit revenue service hours (RSH) being affected, and conversion parameters obtained from published industry research or the regional travel demand model (i.e., the SCAG 2020 RTP/SCS activity-based model). The parameters used here are:

- > A statewide mode shift factor (FHWA, 2017)
- > Elasticity of transit ridership with respect to frequency of service (Handy et al., 2013)
- > Countywide transit mode share (SCAG model)
- > Countywide auto mode share (SCAG model)

The estimated countywide percentage reduction in VMT is multiplied by the baseline countywide passenger-vehicle VMT to yield an estimate of the total VMT reduced, which become the VMT credits available in the Mitigation Bank for the implementation package(s).

Figure 4. Metro Bus Service Frequency Improvements

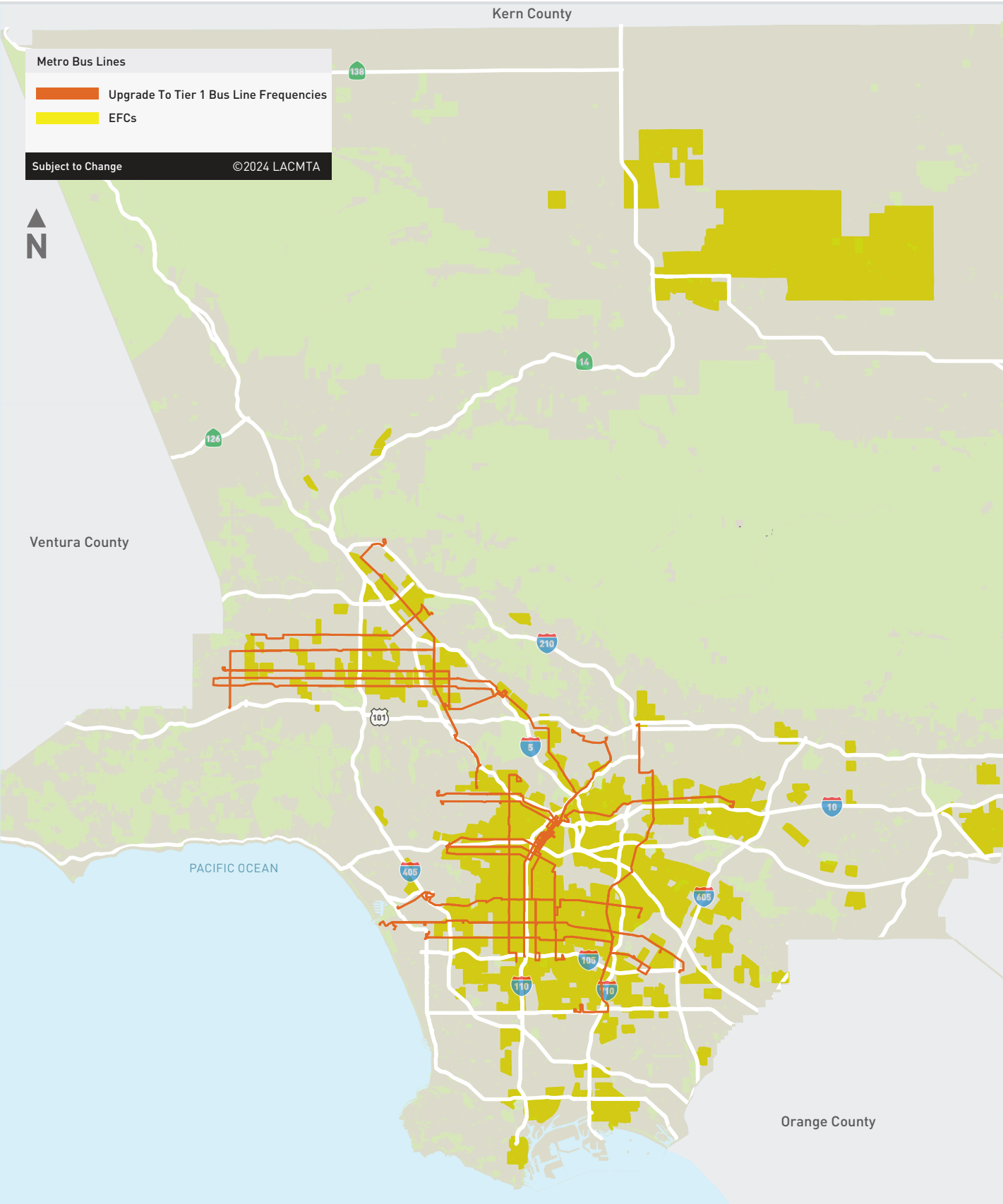


Table 2. Tier 2 Bus Line Frequency Improvements

ONE-TIME COST ESTIMATES	
ADDITIONAL FLEET NEEDED	89
COST PER NEW BUS	\$1,600,000
TOTAL ONE-TIME FUNDING REQUIRED	\$142,400,000
ANNUAL COST ESTIMATES	
ADDITIONAL WEEKDAY RSH	774.5
COST PER WEEKDAY RSH	\$211.77
ANNUALIZATION FACTOR (CONVERTING FROM DAILY TO ANNUAL VMT)	355:1
ADDITIONAL ANNUAL RSH	274,938.9
TOTAL ANNUAL FUNDING REQUIRED	\$58,223,815
LIFETIME COST ESTIMATES	
DURATION (YEARS)	20
YEAR-OVER-YEAR INFLATION (ANNUAL COST ONLY)	3.2%
ADMINISTRATION	15%
CONTINGENCY	15%
TOTAL LIFETIME FUNDING REQUIRED	\$2,260,851,202
VMT ESTIMATES	
PERCENT INCREASE IN FREQUENCY ON AFFECTED LINES (BY RSH)	21.1%
PERCENT OF COUNTY LINES RECEIVING IMPROVEMENTS (BY RSH)	11.7%
TOTAL ANNUAL VMT REDUCED (2024)	43,538,390
TOTAL LIFETIME VMT REDUCED	870,767,800
VMT COST EFFECTIVENESS	
ANNUAL COST PER VMT	\$2.60

VMT Credit Valuation & Implementation Packages

Increasing service frequency on all Metro NextGen Tier 2 bus lines by adding one more run per hour throughout the day or two more runs per hour for lines already at 10-minute service during the peak hours would reduce a total of **43.5 million annual VMT** (forecast year 2024). Based on information provided by Metro operations staff, this reduction would require roughly 275k additional annual Metro bus revenue service hours (RSH) and a one-time purchase of 89 new bus vehicles.

The estimated cost per unit of sale is **\$2.60/annual VMT reduction credit**, with a total of 43.5 million annual credits available for sale. The total cost of implementing this Mitigation Action for 20 years is \$2.26 billion.

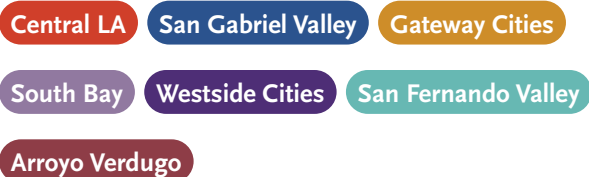
The minimum unit of sale for this mitigation action is 490k annual VMT credits for a duration of 20 years, which translates to approximately 3.1k added annual RSH and 1 new bus. Bundles of frequency improvements by subregion or by line may be assembled as a mitigation but must include the capital costs for the associated number of new buses.

Metro Bus-Only Lanes

Description

Bus-only lanes refers to the conversion of general traffic lanes on local roadways to lanes marked for exclusive use by buses. This action corresponds to implementing bus-only lanes in both directions for all Tier 1 bus lines from Metro's NextGen Plan, independently of any associated service changes such as improved frequency. Providing dedicated bus-only lanes that allow buses to bypass the delays from traffic congestion can improve travel times and service reliability, which improves the user experience and increases the modal attractiveness of transit service. This results in a mode shift from auto travel to transit, which reduces VMT. By improving end-to-end travel times, bus-only lanes can also free up revenue service hours that may be redeployed towards higher frequency or greater geographic coverage on the same line(s) at minimal additional cost. Additionally, conversion of general traffic lanes to bus-only lanes reduces roadway capacity for auto travel, which can further incentivize transit use. These associated effects serve to further reduce VMT. Note, this Mitigation Action would need to be implemented in partnership with a local jurisdiction.

VMT reduction credits from this mitigation action are generated from Metro Tier 1 bus lines in the following subregions, and have the closest geographic alignment with those subregions. The VMT credits can be purchased by SHS projects in any subregion.



Research Basis

The VMT quantification methodology for implementing bus-only lanes is based on CAPCOA strategy T-28 Provide Bus Rapid Transit but adapted based on Metro internal data. Quantifying the VMT reduction effect from this mitigation action involves estimating the increased countywide transit ridership based on improved travel times, upon the percent of countywide route miles (RM) being affected, and applying conversion parameters obtained from published industry research or the regional travel demand model. The parameters used here are:

- > A statewide mode shift factor (FHWA, 2017).
- > Percent change in transit ridership due to bus-only lanes (Metro staff; TRB, 2007)
- > Percent change in transit travel time due to bus-only lanes (TRB, 2007)
- > Elasticity of transit ridership with respect to transit travel time (TRB, 2007)
- > Countywide transit mode share (SCAG model)
- > Countywide auto mode share (SCAG model)

The estimated countywide percentage reduction in VMT is multiplied by the baseline countywide passenger VMT to yield an estimate of the total VMT reduced, which become the VMT credits available in the Mitigation Bank for the implementation package(s).

Table 3. Metro Bus-Only Lanes on Tier 1 Bus Lines

ONE-TIME COST ESTIMATES	
TIER 1 LINES LANE MILES	1,003.1
LANE MILES BUILT/UNDER CONSTRUCTION	97.8
REMAINING LANE MILES UNFUNDED	905.3
COST PER LANE MILE	\$500,000
SUBTOTAL ONE-TIME COST	\$452,656,431
LIFETIME COST ESTIMATES	
ADMINISTRATION	15%
CONTINGENCY	15%
TOTAL LIFETIME FUNDING REQUIRED	\$588,453,361
VMT ESTIMATES	
PERCENT INCREASE IN FREQUENCY ON AFFECTED LINES (BY RSH)	0.0%
PERCENT OF COUNTY LINES RECEIVING IMPROVEMENTS (BY RSH)	27.9%
TOTAL ANNUAL VMT REDUCED (2024)	137,334,361
TOTAL LIFETIME VMT REDUCED	2,746,687,220
VMT COST EFFECTIVENESS	
ANNUAL COST PER VMT	\$0.21

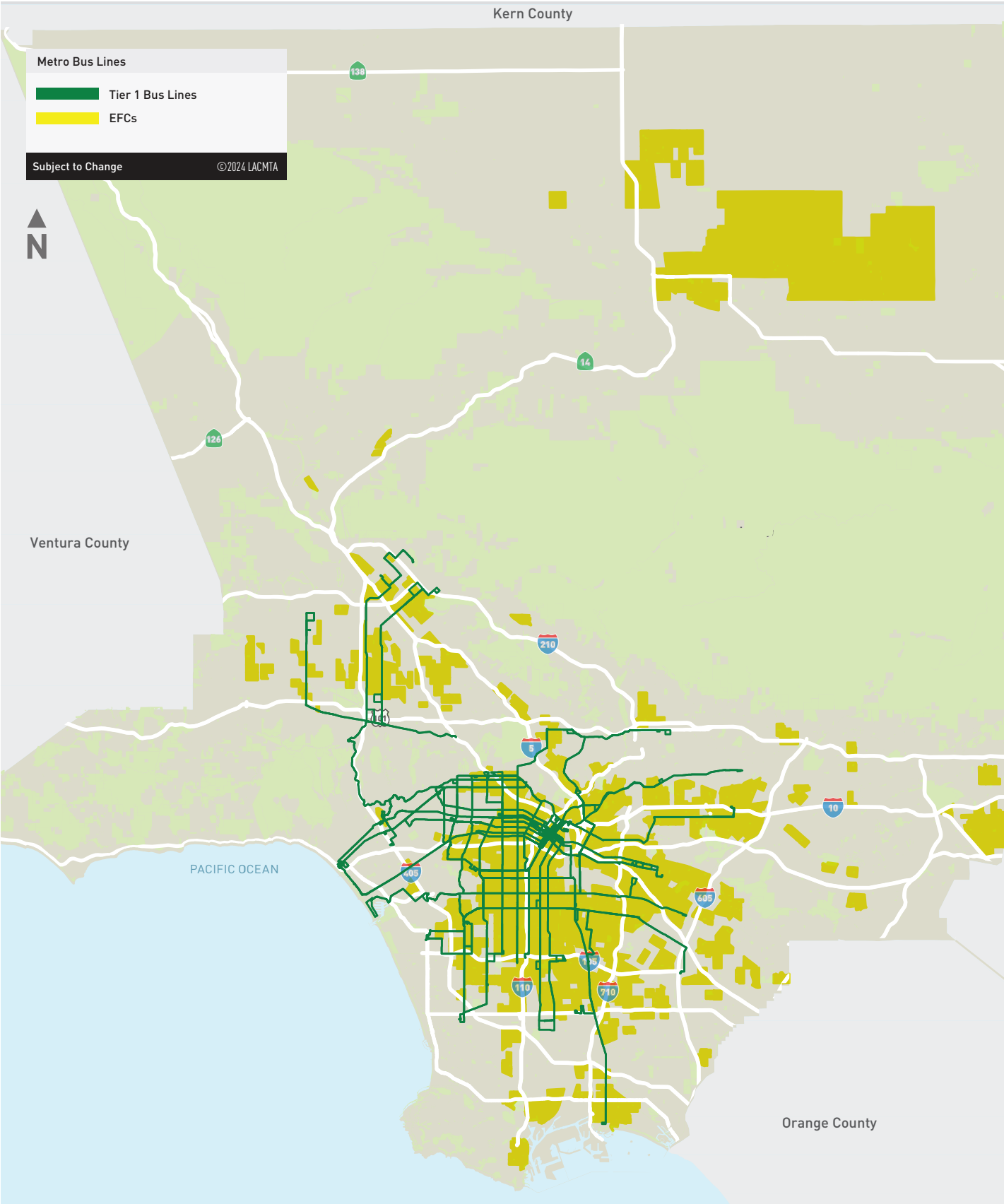
VMT Credit Valuation & Implementation Packages

Implementing bus-only lanes on all Metro NextGen Tier 1 bus route miles—beyond those which have already been implemented on such corridors as Wilshire Blvd. and Alvarado St.—would reduce a total of **137.3 million annual VMT** (forecast year 2024). Based on information provided by Metro operations staff, this reduction would require a one-time implementation of roughly 905 added lane miles of bus-only lanes.

The estimated cost per unit of sale is **\$0.21/annual VMT reduction credit**, with a total of 137.3 million annual credits available for sale. The total cost of implementing this Mitigation Action for 20 years is \$588.4 million.

The minimum unit of sale for this mitigation action is 2.28 million annual VMT credits for a duration of 20 years, which translates to approximately 15 added lane miles of bus-only lanes.

Figure 5. Metro Bus-Only Lanes on Tier 1 Bus Lines



Metro Joint Development

Description

This action corresponds to Metro's Joint Development program, a real estate development program for Metro-owned properties that prioritizes such land for housing development. Metro's policy goal is to add 10,000 dwelling units to its countywide portfolio by 2031, approximately half of which will be income-restricted. Metro's Joint Development staff have identified 20 sites—almost all located adjacent to Metro Rail stations—with capacity for approximately 7,500 new units, which will allow Metro to meet and surpass its goal. The 20 sites included in this program have been identified but not funded; gap funding is particularly critical as developers assemble funding packages to deliver housing in support of Metro's policy goals. This Bank provides a means by which Metro could provide the gap funding necessary to construct the housing.

The Metro Joint Development program reduces VMT in multiple ways. Increasing residential density decreases VMT in an area by decreasing the distance between homes and destinations like jobs and entertainment districts. Additionally, affordable housing typically generates less VMT per capita than market-rate housing. Increasing the density of housing near rapid transit further reduces VMT by increasing the transit mode share for new residential growth.

The VMT credits can be purchased by SHS projects in any subregion. VMT reduction credits from this mitigation action are generated from Joint Development sites which are located in the following subregions, and therefore have the closest geographic alignment with those subregions.



Research Basis

The VMT quantification methodology for supporting Metro Joint Development projects is based on CAPCOA strategies T-1 Increase Residential Density, T-3 Provide Transit-Oriented Development, and T-4 Integrate Affordable and Below Market Rate Housing. A SHS project may mitigate its VMT by providing key gap funding for Joint Development developments on a per-dwelling-unit basis which will serve to reduce subregional VMT by increasing market-rate and affordable housing supply near transit hubs and increasing residential density at a local scale.

Quantifying the VMT reduction effect from this mitigation action involves estimating the reduction resulting from two separate sources: the percent VMT reduction for residents of the new development, and the percent VMT reduction for the adjacent community's existing residents. In turn, the percent VMT reduction for residents of the new development is calculated in two parts: the VMT reduction due to the new housing being near transit, and the VMT reduction due to the development containing income-restricted units. Each of these components applies conversion parameters obtained from published industry research or the regional travel demand model. The parameters used here are:

- > The minimum percentage of each development's units that are income-restricted (see the Request for Qualifications which Metro released to developers in Aug. 2023)
- > Percent reduction in VMT for affordable units compared to market-rate units (ITE, 2021)
- > Elasticity of VMT with respect to residential density (Stevens, 2016)
- > Ratio of transit mode share for TOD compared to existing mode share in subregion (Lund et al., 2004)
- > Number of households in same zone as each development (SCAG model)

> Countywide transit mode share (SCAG model)

> Countywide auto mode share (SCAG model)

The estimated total reduction in VMT is the sum of the VMT mitigated from each of these components, which becomes the VMT credits available in the Mitigation Bank for the implementation package(s).

VMT Credit Valuation & Implementation Packages

Funding approximately 7,500 Joint Development sites would reduce a total of **60.8 million annual VMT** (based on the forecast year 2024). Metro Joint Development staff estimate that the present average funding gap per dwelling unit across the Joint Development program is \$250,000 per unit. This would be offered to a developer to enable assembly of other funding sources needed to construct the site. The estimated cost per unit of sale is **\$1.99/annual VMT reduction credit**, with a total of 60.8 million annual credits available for sale. The total cost of implementing this Mitigation Action for 20 years is \$2.42 billion.

The minimum unit of sale for this mitigation action is 8,165 annual VMT credits for 20 years, which translates to gap funding for 1 dwelling unit.

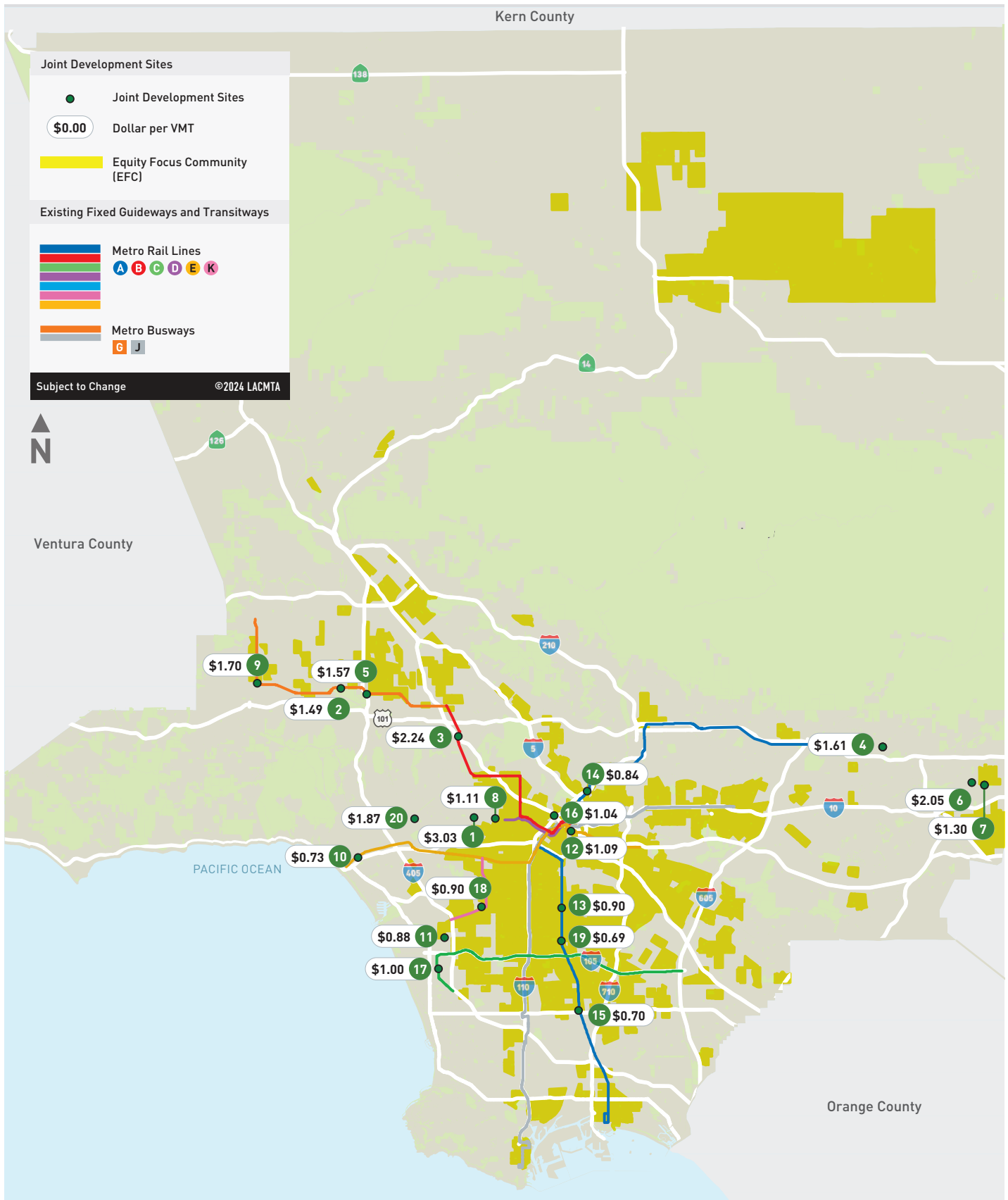
Table 4. Joint Development Program

ONE-TIME COST ESTIMATES	
TOTAL DWELLING UNITS TO SUBSIDIZE (20 JD SITES)	7,457
FUNDING GAP PER DWELLING UNIT	\$250,000
SUBTOTAL ONE-TIME COST	\$1,864,250,000
LIFETIME COST ESTIMATES	
ADMINISTRATION	15%
CONTINGENCY	15%
TOTAL LIFETIME FUNDING REQUIRED	\$2,423,525,000
VMT ESTIMATES	
PERCENT UNITS AFFORDABLE (BY SITE, RANGE)	25-100%
TOTAL ANNUAL VMT REDUCED FROM AFFORDABILITY	15,546,813
TOTAL ANNUAL VMT REDUCED FROM TOD	20,015,461
TOTAL ANNUAL VMT REDUCED FROM INCREASED RESIDENTIAL DENSITY	25,322,016
TOTAL ANNUAL VMT REDUCED (SUM)	60,884,290
TOTAL LIFETIME VMT REDUCED	1,217,685,797
VMT COST EFFECTIVENESS	
ANNUAL COST PER VMT	\$1.99

Table 5. Joint Development Sites

Development Sites	Estimated Dwelling Units per Site	Annual VMT Reduced	Total VMT Reduced	Cost (Funding Gap)	\$/VMT
1 Wilshire/La Brea	1,659	6,846,685	136,933,702	\$414,750,000	\$3.03
2 Balboa/Victory	1,152	9,633,874	192,677,471	\$288,000,000	\$1.49
3 Universal City/Studio City	842	4,693,266	93,865,325	\$210,500,000	\$2.24
4 Glendora	631	4,909,760	98,195,210	\$157,750,000	\$1.61
5 Sepulveda	533	4,231,293	84,625,863	\$133,250,000	\$1.57
6 La Verne	411	2,502,497	50,049,933	\$102,750,000	\$2.05
7 Pomona	350	3,376,597	67,531,945	\$87,500,000	\$1.30
8 Wilshire/Crenshaw	217	2,454,711	49,094,212	\$54,250,000	\$1.11
9 Canoga Park	193	1,417,198	28,343,950	\$48,250,000	\$1.70
10 17th St/SMC	190	3,245,358	64,907,169	\$47,500,000	\$0.73
11 Aviation/Century	187	2,658,062	53,161,243	\$46,750,000	\$0.88
12 Pickle Works	182	2,095,862	41,917,232	\$45,500,000	\$1.09
13 Florence	167	2,324,813	46,496,262	\$41,750,000	\$0.90
14 Heritage Square	157	2,346,286	46,925,712	\$39,250,000	\$0.84
15 Artesia	140	2,513,253	50,265,054	\$35,000,000	\$0.70
16 Temple/Beaudry	119	1,426,300	28,526,006	\$29,750,000	\$1.04
17 El Segundo	109	1,356,980	27,139,590	\$27,250,000	\$1.00
18 Fairview Heights	78	1,084,243	21,684,866	\$19,500,000	\$0.90
19 103rd St/Watts Towers	73	1,319,551	26,391,028	\$18,250,000	\$0.69
20 Century City	67	447,701	8,954,024	\$16,750,000	\$1.87

Figure 6. Joint Development Sites



Metrolink Service Expansion

Description

This action corresponds to increasing service frequency and time-of-day span in accordance with Metrolink's Service Growth Development Plan (SGDP), which is currently in the final stages of development. Increased regional rail frequency reduces waiting and overall travel times, which improves the user experience and increases the modal attractiveness of transit service. In particular, the Metrolink SGDP service improvements are intended to enable cross-regional travel in non-peak directions during times of day when such travel was not previously feasible. These incentives result in a mode shift from auto travel to transit, which reduces VMT.

This initial implementation package is for informational purposes only, and cannot be sold for VMT credits until Metrolink staff have formally developed their preferred implementation package. Once the Mitigation Action becomes available, a SHS project sponsor can opt to mitigate VMT by contributing funding towards the service expansion along one or several Metrolink lines.

The VMT credits can be purchased by SHS projects in any subregion. VMT reduction credits from this Mitigation Action are generated from Metrolink lines present in the following subregions, and therefore have the closest geographic alignment with those subregions.



Research Basis

The VMT reduction estimates for this Mitigation Action derive from Metrolink's internal analysis as part of their forthcoming SGDP, and they are based on a forecasted reduction of 23.6 VMT per additional ride generated by the additional rail service. The future annual ridership levels used to forecast the total VMT reduction reflect the Medium Growth Scenario from Metrolink's SGDP. As with the other Mitigation Actions featured here, these VMT reduction estimates include some VMT reduced from trips with one end outside L.A. County. Unlike the other Mitigation Actions, implementation packages for Metrolink Service Expansion include service enhancements to be implemented at least partially outside the county. This will require careful accounting to ensure once the VMT credits from this Mitigation Action are sold to a SHS project sponsor, they are not also sold to sponsors of projects outside LA County – this will be the responsibility of both Metro as the Bank Administrator as well as Metrolink as the Mitigation Action implementer.

Figure 7. Metrolink Service Map

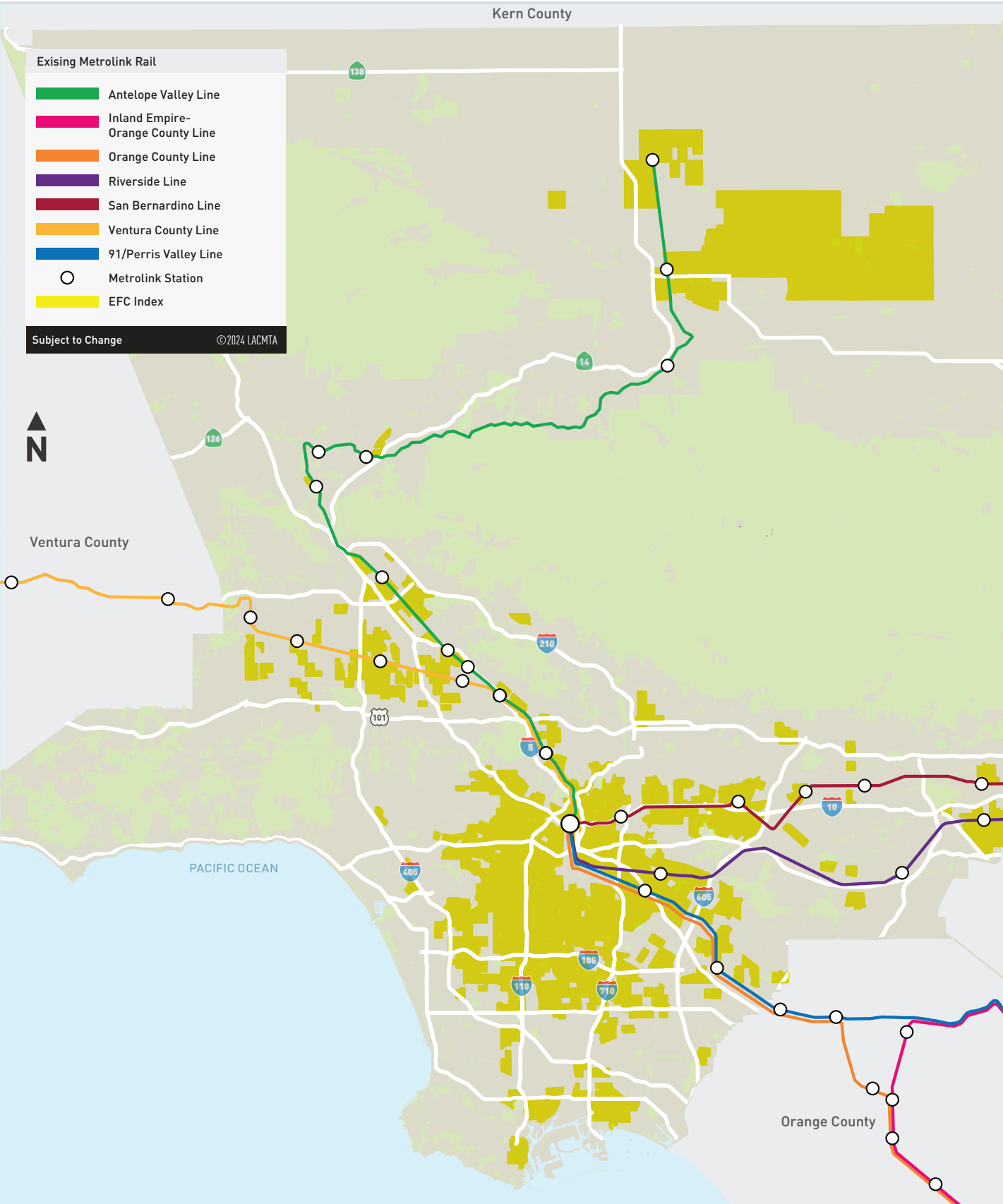


Table 6. Metrolink Service Expansion

ANNUAL COST ESTIMATES	
ANNUAL OPERATING SUBSIDY FOR BASELINE SERVICE (2019)	\$293,392,617
ANNUAL OPERATING SUBSIDY FOR PROPOSED SERVICE (SGDP)	\$330,808,685
TOTAL ANNUAL FUNDING REQUIRED	\$37,416,068
LIFETIME COST ESTIMATES	
DURATION (YEARS)	20
YEAR-OVER-YEAR INFLATION (ANNUAL COST ONLY)	3.2%
ADMINISTRATION	15%
CONTINGENCY	15%
TOTAL LIFETIME FUNDING REQUIRED	\$1,333,916,374
VMT ESTIMATES	
VMT AVOIDED PER RIDE	23.6
RIDERSHIP WITH BASELINE SERVICE (2028)	7,573,536
RIDERSHIP WITH PROPOSED SERVICE	13,185,089
VMT AVOIDED BY BASELINE SERVICE (2028)	178,583,975
VMT AVOIDED BY PROPOSED SERVICE	310,904,402
TOTAL ANNUAL VMT REDUCED (2028)	132,320,426
TOTAL LIFETIME VMT REDUCED	2,646,408,527
VMT COST EFFECTIVENESS	
ANNUAL COST PER VMT	\$0.50

VMT Credit Valuation & Implementation Packages

Implementing the Metrolink SGDP in full would reduce a total of **132.3 million annual VMT** (forecast year 2028). Based on information provided by the SGDP planning team, this reduction would require roughly 1.8 million added annual revenue service miles (RSM) or a 63% expansion of service systemwide.

The estimated cost per unit of sale is **\$0.50/annual VMT reduction credit**, with a total of 132.3 million annual credits available for sale. The total cost of implementing this Mitigation Action for 20 years is \$1.3 billion.

Note that Metrolink’s Southern California Optimized Rail Expansion (SCORE) program is anticipated to implement the capital improvements necessary to enable these service enhancements, thus there is no one-time capital investment associated with this Mitigation Action. Instead, all the associated costs are assumed to be annual and related to service enhancements.

The minimum unit of sale for this Mitigation Action will be determined as a key next step by Metrolink, to ensure funding accrues in a minimum amount sufficient to support service improvements for a reasonable operating segment of their system.

Future Mitigation Actions

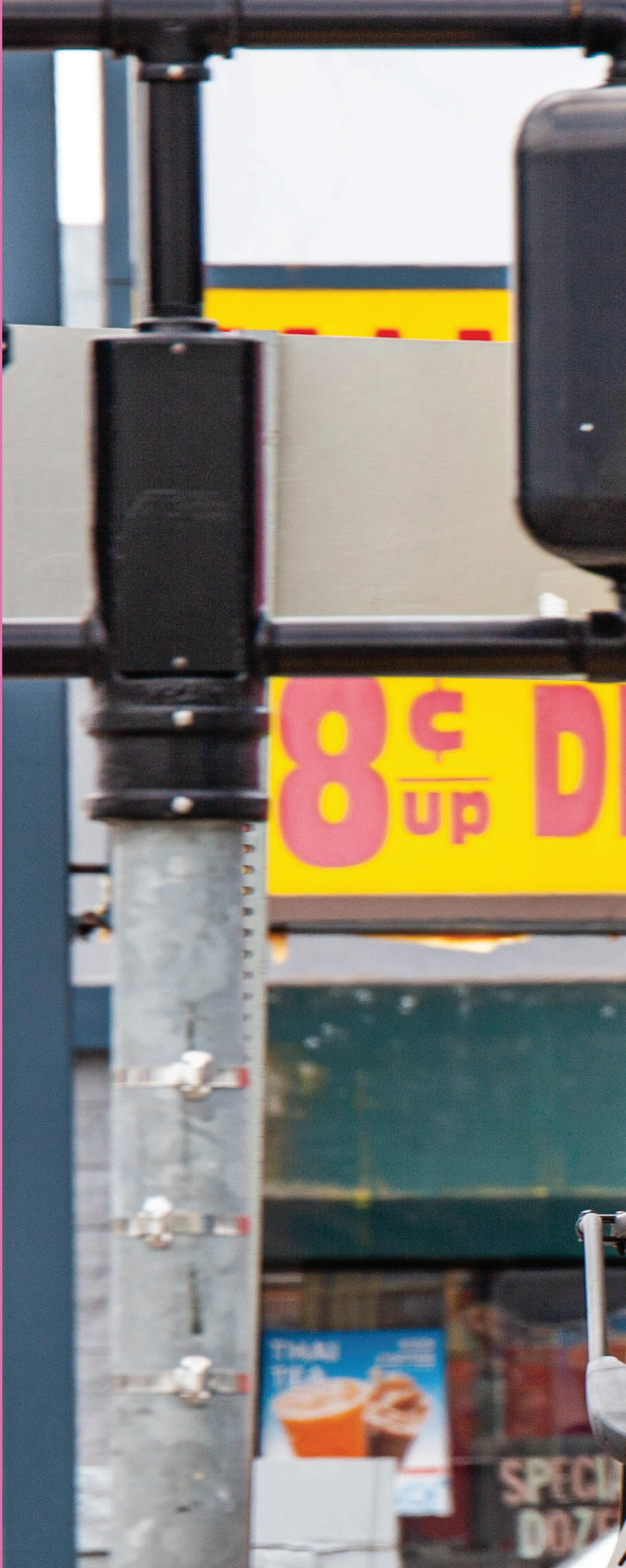
Future Mitigation Actions can be added to the Mitigation Bank as needed based on the success of the Pilot Program and the demand for additional VMT credits. It is envisioned that once 50% of the credits have been sold and the Mitigation Actions are meeting interim success standards, that the Mitigation Bank Manager will identify additional Mitigation Actions, based on future SHS project needs to ensure that mitigation credits will be available. Similarly, Metro may decide to expand the Bank Program to allow local agencies or developers to purchase VMT credits.

To add a future Mitigation Action to the Mitigation Bank, the Mitigation Bank Manager will be required to prepare a report outlining the Mitigation Action, including details of the proposed action, lifespan and success standards.

The Metro Board can approve the use of the Mitigation Bank by its member agencies or other public agency at any time. The Mitigation Bank Manager would need to bring the request to the Board through a simple Board Report.



Mitigation Bank Credit Tables





Mitigation Bank Credit Table

As described above, an annual cost per VMT credit will be established for each Mitigation Action in the Mitigation Bank, and for the Pilot Bank in its entirety. Each Mitigation Action will have a minimum number of VMT credits that must be purchased in a single transaction to ensure that funding is accruing to the Bank in amounts that can be spent implementing each Mitigation Action. Each Mitigation Action will have its own number of annual credits based on the VMT reduction possible associated with the implementation of the packages described above. Project VMT impacts are typically reported in terms of annual VMT, and will be translated to number of annual credits required to achieve full or partial mitigation and the number of years that are required to achieve full mitigation. Note, for the purposes of this study, we have assumed a 20-year cost basis for the Mitigation Actions, and a 20-year duration of required mitigation. If a future project requires a different duration of mitigation, the cost basis should be re-evaluated to ensure

sufficient funding is provided to implement the Mitigation Action for the required duration. The Project's environmental documents will specify the necessary number of annual credits to be purchased and the number of years of mitigation required. For example, if a SHS project is determined to have an impact of 10 million annual VMT for a duration of 20 years, the project sponsor could select a Mitigation Action with 10 million annual VMT credits available, multiply the total number of annual credits by the annual cost per VMT, and multiply this total by 20 years to derive the total VMT credits and total cost. Table 7 shows an example VMT Mitigation Bank Credit Table, outlining the total number of credits available for each Mitigation Action. Credits that are purchased by each SHS project would be documented in the right-most three columns, itemizing the number of annual credits purchased, the name of the SHS project making the purchase, and the date of the transaction.

Table 7. Metro VMT Mitigation Bank Credit Table

MITIGATION ACTION	# OF CREDITS (MILLIONS) ANNUAL CREDITS AVAILABLE	# OF CREDITS DEBITED	NAME OF SHS PROJECT RECEIVING DEBITS	DATE OF DEBITS
Increase Metro Bus Service Frequency	43,538,390	<i>To be filled in when credits are purchased</i>	<i>To be filled in when credits are purchased</i>	<i>To be filled in when credits are purchased</i>
Implement Metro Bus-Only Lanes	137,334,361	<i>To be filled in when credits are purchased</i>	<i>To be filled in when credits are purchased</i>	<i>To be filled in when credits are purchased</i>
Implement Housing on Metro Joint Development Sites	60,884,290	<i>To be filled in when credits are purchased</i>	<i>To be filled in when credits are purchased</i>	<i>To be filled in when credits are purchased</i>
Expand Metrolink Service	132,320,426	<i>To be filled in when credits are purchased</i>	<i>To be filled in when credits are purchased</i>	<i>To be filled in when credits are purchased</i>



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Eligible Costs

In This Section

- > One Time Implementation Costs
- > Ongoing Implementation Costs
- > Other Costs





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The cost of implementing the Mitigation Actions has been estimated as described above for the purposes of deriving a cost/annual VMT reduction credit for each Mitigation Action. The four Mitigation Actions included in the Bank are all expansions of existing programs, which benefit from longstanding organizational investment in planning, management, and implementation of each of the Mitigation Actions (running Metro buses and Metrolink trains,

partnering to implement bus-only lanes, and establishing housing on joint development sites). Therefore, Mitigation Bank enjoys a “marginal cost” benefit; estimated costs of expanding existing programs are lower on a per-VMT basis than emerging practice has shown across the State of California to date. Details on the approach to deriving the costs are further elaborated below.



One Time Implementation Costs

Planning

Implementers of the four Mitigation Actions have already undertaken processes to determine how their programs might expand if additional funding were unlocked both before the Mitigation Bank was initiated, as well as through the process of developing the Mitigation Bank. Part of the selection process for the Mitigation Bank's Mitigation Actions was to determine Mitigation Action implementers' readiness to receive and spend mitigation dollars. Therefore, for this Pilot Mitigation Bank, no additional planning costs are anticipated.

For any future Mitigation Action that is a fully new activity, or demands new planning efforts to be undertaken, those planning costs will be identified and attributed to each Mitigation Action. These costs will include program establishment and approval costs.

Management

Bank staff will be required to coordinate with implementers to manage the Bank's Mitigation Actions to track performance and report annually. Any additional administration or management costs required to implement Mitigation Actions are eligible costs under the Mitigation Bank. At this time, none of the Mitigation Action implementers anticipate additional management costs resulting from implementation of the Mitigation Action.

Capital/Construction

The following capital costs have been included in each Mitigation Action's cost estimate.

- > **Increase Metro Bus Service Frequency:** procurement of additional buses to support additional service
- > **Implement Metro Bus-Only Lanes:** construction of bus-only lanes, estimated on a per-mile basis and inclusive of signing, striping, pavement resurfacing, transit signal improvements, bus stop/shelter improvements, and other similar capital costs
- > **Implement Housing on Metro Joint Development Sites:** cost is derived based on gap funding on a per-dwelling-unit basis. While this may be used for construction or capital outlay, the gap funding will be delivered in the form of a per-unit subsidy to the site developers
- > **Expand Metrolink Service:** no capital costs are included, though the service improvements would be enabled by the SCORE program of capital improvements, funded through other funding streams.

Ongoing Implementation

Other Costs

Operation

The duration of mitigation and the number of years of operation should be aligned with the duration of the impact that is being mitigated. The Mitigation Action costs have been based on a 20-year horizon and assume that mitigation will be required for 20 years. The following operational costs have been included in each Mitigation Action's cost estimate.

- > **Increase Metro Bus Service Frequency:** cost of delivering additional revenue service hours on Tier 2 bus lines
- > **Implement Metro Bus-Only Lanes:** no operating costs are included
- > **Implement Housing on Metro Joint Development Sites:** no operating costs are included; any operating costs of housing developments would be borne by the developer or building manager
- > **Expand Metrolink Service:** cost of delivering additional rail service across Metrolink's service area

Maintenance

At this time, no maintenance costs have been assumed as part of the cost of delivering each Mitigation Action. Over time, this may be adjusted if there are unforeseen maintenance costs that change the viability of continuing to implement each Mitigation Action.

For each Mitigation Action, a lifetime cost has been developed to demonstrate the full cost of implementation for a 20-year duration. Lifetime costs include a 3.2% escalation factor to account for inflation. One-time costs described above are not subject to inflation. Lifetime costs also include a contingency factor of 15%, intended to cover unexpected costs of implementing each Mitigation Action, as well as an administrative factor of 15%, which is intended to cover the administrative costs of managing and administering the Bank.



Piloting the Bank



Metro Local

CA 37363





Timing of Credit Purchases

Capital improvement projects on the SHS will analyze their impacts to VMT during the Project Approval & Environmental Document phase (PA&ED) phase, identifying the number of necessary Mitigation Bank credits for the project. The type of credits to be debited for the SHS project will be the discretion of the SHS project sponsor. The Mitigation Bank administrator may recommend purchase of specific Mitigation Action credits to complete funding for a Mitigation Action, align with the geography of the SHS project, or direct funding towards EFCs first. The Bank administrator, the SHS Project sponsor, and Caltrans together will make the final determination as to the type of mitigation credits purchased. As the lead agency, Caltrans would have the discretion to select other mitigation actions if this program design does not offer a feasible mitigation option.

Projects on the SHS often take four or more years to construct once PA&ED is complete. Mitigation credits should be purchased at the close of PA&ED, to ensure credit availability. Typically, a mitigation commitment between Caltrans and the SHS project sponsor would occur at the draft environmental impact report (DEIR) stage. The SHS project will not be completed for several years after PA&ED. Studies show that full VMT impact occurs in year ten of a project. Therefore, the purchase and implementation of mitigation credits to support the mitigation commitment would need to be fully in place within approximately 14 years. This timeframe is expected to provide ample time for a Mitigation Action to be fully funded and implemented.

Pilot Term & Evaluation

The initial pilot term of this effort will not be temporal but instead based on the application of the tools to a minimum of one highway project and one ExpressLanes project. Note, this term should not be construed to impose any mandate to deliver a single project on the SHS.

Following adoption of this Pilot Program Report, Metro staff will work to advance the Mitigation Bank through establishment of the administrative processes that will be required, including identifying staff and continuing to work with sponsors of projects on the SHS to further identify timing and magnitude of anticipated mitigation needs. Mitigation Bank staff will also continue to work with Mitigation Action implementers to coordinate on anticipated timing of funding. Finally, Metro will continue to coordinate with Caltrans as the lead agency of projects on the SHS to ensure the Mitigation Bank implementation aligns with Caltrans policies and CEQA guidelines.

Staff will measure success of the Pilot Mitigation Bank according to the following specific performance metrics:

- > How mitigations meet stakeholder expectations and needs (particularly in EFCs),
- > Local public agency satisfaction with process and outcomes,
- > Project Manager satisfaction with process and outcomes,
- > VMT Mitigation Bank Administrator satisfaction with process and outcomes,
- > Timeliness of delivery of mitigations,
- > Administrative cost to operate and maintain the Bank,
- > Consistent and reliable feedback from our CEQA lead in Caltrans, and
- > Potential to apply the Bank concept to additional Metro goals.

Regular updates will be provided to the Metro Board on VMT Mitigation Bank transactions, mitigation status, investments in EFCs, successes and challenges, and any forthcoming projects that may require mitigation.

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