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

File #: 2019-0089, **File Type:** Policy **Agenda Number:**

PLANNING AND PROGRAMMING COMMITTEE
FEBRUARY 20, 2019
EXECUTIVE MANAGEMENT COMMITTEE
FEBRUARY 21, 2019

SUBJECT: THE RE-IMAGINING OF LA COUNTY: MOBILITY, EQUITY, AND THE ENVIRONMENT

ACTION: APPROVE RECOMMENDATIONS

RECOMMENDATIONS

APPROVE:

A. the baseline assumptions and priorities (proposed sacred items) for The Re-Imagining of LA County as described in Attachment A and listed as follows:

1. NextGen - The results of the NextGen Bus Service Study must not be compromised to advance capital investments;

2. State of Good Repair (SGR) - To guard against increased maintenance and operations costs and deterioration in service reliability, customer experience, and safety performance, Metro must commit to preserving annual State of Good Repair allocations as a baseline assumption. This will ensure the capital funding level of $475 million per annum for State of Good Repair;

3. Propositions A and C - Maintain the current debt limits for Propositions A and C. Prop A and Prop C revenues are a primary funding source for Operations. The budget committed one-third of Prop A and C revenues to Operations for FY18 and FY19 and the commitment is expected to increase over the next decade as state of good repair expenses rise;

4. Protect Metro's debt covenants - Ensure the funding plan protects Metro's debt covenants to avoid impairing or adversely affecting the rights of bondholders. Issuing large sums of debt significantly increases repayment risk to bondholders;

5. Unfunded Ancillary Efforts - Ensure funding for the following projects needed to support implementation and uphold the integrity of existing Metro transportation system:

    a. Division 20 ($699 M) - Division 20 expansion will provide the overnight storage and maintenance space for the additional subway cars being acquired for the Purple Line

extension;

b. Combined Rail Operations Center (ROC)/Bus Operations Center (BOC) ($190 M) - a new ROC/BOC is essential for the safe and effective operations of the transit system;

c. Maintenance & Material Management System-M3 ($50 M) - the new M3 is imperative for the effective management of the state of good repair program;

d. Train radio for existing subway system ($75 M) - a new train radio system is essential for the safe and effective operations of the expanded rail network;

e. I-210 Barrier Wall ($200 M) - the intrusion problem on I-210 along the Gold Line must be solved for the long-term safety and reliability of the system;

B. The commitment to the goal to convert to an all-electric bus fleet by 2030 as a baseline assumption and priority (sacred item); and

C. The Staff Recommendations on Strategies to Pursue "The Re-Imagining of LA County" (Attachment B).

ISSUE

At its September 2018 meeting, the Board approved Motion 4.1 (Attachment C) by Directors Solis, Garcetti, Hahn, and Butts which directed the CEO to adopt and approve as policy the Twenty-Eight by '28 Initiative. The Motion also directed a report back on a financial and funding plan in February 2019, with an update on the development in December 2018. This Board item also responds to the Motion by requesting approval of the baseline assumptions (proposed sacred items) for the funding/financial plan. More importantly, this response goes beyond the request made in the original Motion by proposing solutions for the eradication of congestion in LA County, drastically reducing the region's carbon footprint and combatting climate change, increasing transit frequency and capacity, realizing equity, and being in a position to be the first major region in the world that could offer free transit services. So, staff chooses to think bigger than the original Motion and rebrand our endeavor as "The Re-imagining of LA County: Mobility, Equity, and the Environment." This item also asks the Board to approve staff recommendations on strategies to pursue the "Re-imagining of LA County" (Attachment B).

BACKGROUND

The Metro Board approved the Twenty-Eight by '28 Initiative project list in January 2018, which includes 28 highway and transit projects totaling $42.9 billion (YOE) in infrastructure investment, with the goal of completing the projects in time for the 2028 Olympic and Paralympic Games. Eight of the 28 projects are currently slated for completion outside the 2028 timeframe. In September 2018, Board Motion 4.1 (Solis, Garcetti, Hahn, Butts) directed the CEO to develop a Twenty-Eight by '28 Funding Plan.

In December 2018, Metro CEO Phillip Washington responded to Motion 4.1 by presenting an

overview of the status of Measure M, parameters of the Measure M Ordinance that govern schedule acceleration, and an initial framework for developing a Twenty-Eight by '28 Program Financing/Funding Plan. The agency is currently meeting or exceeding the Measure M schedule on all projects while also moving forward on additional projects not included in Measure M, such as Link US, MicroTransit, the aerial tram to Dodger Stadium and the environmental process on behalf of the City of Los Angeles for the Arts District Station for the Red/Purple Line subway.

In an effort to proactively and responsibly manage project delivery, the Board adopted two separate policies to guide delivery of the Measure M program. The Board approved an Early Project Delivery Policy in November 2017 with categories to evaluate whether a project is a good candidate for acceleration. The Board also adopted a Cost Management Policy in July 2018 to establish cost controls to successfully deliver projects.

To deliver the projects included in the original initiative, the agency sought to identify $26.2 billion for the planning, design, construction, operations and maintenance of the eight projects that are currently outside the 2028 schedule. During his December 2018 report to the Board, CEO Washington outlined several items that should be considered core baseline assumptions that will not be compromised for any future financing/funding plan to accelerate the eight projects. Those "sacred items" include the NextGen Bus Plan, State of Good Repair projects, maintaining current debt limits on Propositions A & C, honoring covenants with bondholders, and projects of systemwide importance, specifically Division 20, a combined rail/bus operations center, a new M3 system, a new train radio for the subway system, and the I-210 Barrier Replacement Project.

Staff identified a number of potential funding and financing strategies for the Board's consideration to identify the funding needed to complete the projects in the original initiative. Each item was assigned a risk level of high, medium or low and the amount of revenue or financing anticipated in the 10-year timeframe through 2028. These strategies, documented in the original Financing/Funding Plan White Paper (Attachment A), fall into four major categories:

1. Debt
2. Increase Revenues from Existing Sources
3. Reduced Expenditures
4. Generate Revenue from New Sources

DISCUSSION

Baseline assumptions and priorities (proposed sacred items) for the package of strategies used to deliver The Re-Imagining of LA County.

The above listed recommended baseline assumptions and priorities (proposed sacred items) were also described in the Twenty-Eight by '28 White Paper (Attachment A). These investments must be preserved for the integrity of the future system.

Conversion to All-Electric bus fleet by 2030 as a Baseline Assumption and Priority

Staff acknowledges the Metro Board's commitment to improving air quality in the southern California region by converting to an all-electric bus fleet by 2030. To support this goal, staff recommends approval from the Board to include this investment as a baseline assumption and priority.

Strategies to Pursue "The Re-Imagining of LA County"
The matrix in Attachment B provides additional information on the timing of earliest revenue/cost savings realization for each strategy. It also describes for Board consideration, the Metro Staff recommendations for each strategy. Detailed explanations and rationale are provided below.

1. **Change debt policy - Not recommended**
   The original initiative faces a funding issue, not a financing issue. Issuing additional debt for the original initiative will encumber future revenue sources to service that debt. This may prohibit Metro from delivering remaining projects in Measure M on schedule, as mandated by statute. Metro should continue to issue debt as anticipated in our capital plan and on a project basis, when dedicated funding sources are available for the project and when actual projects costs are to be incurred (during construction). Issuing debt too far in advance of construction can violate IRS rules, putting the tax-exempt status of Metro's bonds in jeopardy and potentially incurring substantial costs for non-compliance.

2. **Increase Revenues from Existing Sources**
   a. **Increase fares - Not recommended**
      Fare right-sizing is not recommended as a funding mechanism for the 8 accelerated projects. Metro is currently engaged in a study to simplify and right-size our fare structure. Staff will return to the board in June 2019 with results of the study.

   b. **Advertising - Recommend to pursue**
      Staff recommends moving forward with advertising and corporate sponsorships to generate additional revenue. This will require the adoption of a policy on corporate sponsorships.

   c. **Toll Revenues (ExpressLanes) - Recommend to pursue**
      This proposal aims to withdraw or lend available fund balance from existing ExpressLanes enterprise fund for capital and/or operating costs. Future ExpressLanes revenue could also be leveraged. Available amount is dependent on future toll revenue and operating cost growth and potential competing uses. May be restricted to uses within the I-10 and I-110 corridors.

      Projected toll revenues, including debt financing, in excess of new ExpressLanes capital and operating cost. Funding will be used for other projects in the ExpressLanes network corridor. Projected toll revenues are based on increased occupancy requirements and dual lanes.

   d. **Local, State and Federal Funding**
      Multi-Year Subregional Program - Recommend to pursue
      The Multi-Year Subregional Programs (MSP) carry a 10-year total of $846.4M in funding for the subregions that have Twenty-Eight by '28 projects: Central City, Gateway Cities, South Bay, San Gabriel Valley and Westside. This proposal asks the subregions to agree to allocate their MSP funding to accelerate projects in their areas.

      Local return - Recommend to pursue

This proposal asks local jurisdictions to use their Local Return funding to accelerate projects that have shortfalls. This proposal affects cities and unincorporated county areas that directly benefit from the projects and requires agreements with each.

Federal funding assumptions - Recommend to pursue
This strategy proposes a more aggressive approach to securing additional federal funding participation. While there is limited additional capacity to draw upon for future Federal grant opportunities, this assumes maximizing the $400M annual draw down amount through 2027. As new grant opportunities are announced, Metro would pursue additional funds, where applicable to advance The Re-Imagining of LA County.

State funding assumptions - Recommend to pursue
This strategy proposes a more aggressive approach to securing additional state funding participation. Timeline of funds are based on the State's grant programs cycles. This would require reconfiguring of existing SB 1 programs to generate more funds for Los Angeles County. Many of the SB 1 programs are discretionary. Attaching formulas beneficial to Los Angeles would ensure a larger proportion of funds to Los Angeles.

3. **Reduced Expenditures**
   a. **Transit Operations - Electric bus - conform to state mandate of 2040 rather than 2030 - Not recommended**
   This strategy would slow down the bus fleet electrification effort to meet the 2040 deadline rather than accelerate it to 2030. While this is not recommended to offset costs for The Re-Imagining of LA County, staff recommends holding to the 2030 timeline and moving this initiative to baseline assumptions list, as this is a critical strategy to meet our broader environmental and sustainability goals.

   b. **BikeShare Program - Not recommended**
   Metro considered transferring the management, oversight, and expansion of the BikeShare program to the City of LA to free up cash flow for accelerating projects. Transferring this program to LADOT would not necessarily eliminate the cost to Metro.

   c. **P3 Opportunities - Recommend to pursue**
   Metro is already pursuing public-private partnership opportunities on three of the eight projects identified for potential acceleration. While P3 project delivery has the potential to deliver savings on project costs, the more compelling value is in the cost and schedule certainty, which allows for more predictability in the annual budget process.

4. **Generate Revenue from New Sources**
   a. **Legislative Strategies**
   White House Task force - Approved by Board to pursue under Legislative Program
   In December 2018, Metro staff proposed pursuing the creation of a White House Task Force on the 2028 Olympic and Paralympic Summer Games. Similar efforts in the past resulted in the federal government providing $1.4 billion for highway and transit infrastructure projects to support the Olympic Games held in the United States: 1984

Summer Olympics in Los Angeles, 1996 Summer Olympics in Atlanta, and the 2002 Winter Olympics in Salt Lake City. This proposal has been included and approved in the 2019 Federal Legislative Program.

b. Value Capture - Recommend to pursue

Value capture can add new local revenues to help accelerate the projects through the creation of taxing districts around and adjacent to the stations (on West Santa Ana Branch, Sepulveda Transit Corridor, and Eastside Extension). The property owners could approve a new tax or assessment that would be paid over time and leveraged with debt financing to fund the project acceleration cost. Alternatively, the local governmental entities could approve a tax increment district that would divert incremental property and potentially other local taxes to the new district, and this tax increment could support a debt financing (subject to voter approval) to fund project acceleration, or fund accelerated operating costs.

c. Congestion Pricing - Recommend to pursue all concepts/models

This strategy proposes to investigate the feasibility and framework for conducting congestion pricing pilots with the intent to expand the program in the most traffic-clogged parts of LA County. Three different models would be explored as part of the study: cordon pricing, corridor pricing, and vehicle miles traveled (VMT) pricing. The study will include extensive outreach, including the creation of an Advisory Council. Congestion pricing offers a compelling mobility solution that can also generate substantial revenues that can be used for transit operations and capital construction. When implemented thoughtfully, it can also significantly improve equity by providing more frequent and reliable mobility options for the most disadvantaged citizens in LA County.

At the January 24, 2019 Board meeting, Motions 43.1 (Butts) and 43.2 (Solis, Garcetti, Dupont-Walker, Butts and Hahn) were presented and approved. Motion 43.1 asked Metro staff to respond to seven clarifying questions, some related to the scope and framework of a proposed Congestion Pricing Feasibility Study and others related to Twenty-Eight by ’28 project costs savings and impacts to initiatives such as the NextGen Bus Study. Staff have prepared responses to the various parts of Motion 43.1 in a separate Board Receive and File report (File ID 2019-0083). The response includes a detailed plan for the feasibility study, should the Board approve pursuing this recommended strategy as part of the Re-Imagining LA County Plan. The contents of Motion 43.1 and the related response are provided in Attachment D to this report.

Motion 43.2 focused attention on equity as it relates to the proposed Congestion Pricing Feasibility Study. The motion was comprised of five parts that asked staff to develop an Equity Strategy for the study, engage a variety of experts and stakeholders, and defer congestion pricing implementation until the feasibility study, including the Equity Strategy, is complete. The responses to Motion 43.2 are provided in a separate Board Receive and File report (File ID 2019-0055). The contents of Motion 43.2 and the related response are provided in Attachment E to this report.

d. New Mobility Fees - Recommend to pursue both concepts
The shared mobility device strategy proposes to impose fees on devices, such as scooters, for the use of public rights-of-way.

Staff also proposes to explore the levying of fees for Transportation Networking Company (TNC) trips originating in Los Angeles County as a mechanism for managing demand on our streets and highways.

Both of these proposals would require building support throughout the state for transferring regulatory and taxation authority from the California Public Utilities Commission (CPUC) to Metro.

Metro staff has developed a proposed plan to provide more detailed information regarding the timeline and key activities to pursue a New Mobility service fee in LA County, if the Board approves this recommended strategy as part of the Re-Imagining LA County Plan. The proposed plan is provided in Attachment F to this report.

DETERMINATION OF SAFETY IMPACT

This motion response has no direct impact on safety at this time. However, the approval of the baseline assumptions and strategies, as recommended for approval, will support safe and reliable operations of the transit system in the long-term.

FINANCIAL IMPACT

Approval of the recommended baseline assumptions and priorities will ensure funding for those items in Metro's annual budgets and their inclusion in long-term financial forecasts.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

These baseline priorities for funding are consistent with the goals of Metro, as stated in the 10-year Vision 2028 Strategic Plan. Vision 2028 made an explicit commitment to prioritize significant investments to improve bus service. It goes on to say that, when revenue projections are short of expectations, existing service continuity and state of good repair must take precedence over other investments.

Vision 2028 also describes a desire to seek state and federal funding to help us accelerate projects and commits to improving mobility in ways that can raise revenue, such as congestion pricing and TNC regulation.

IMPLEMENTATION OF EQUITY PLATFORM

The Re-imagining initiative, as it is more broadly defined beyond Twenty-Eight by '28, explicitly addresses approaches and priorities that would advance the mobility needs of the County's most vulnerable riders. The "sacred items," particularly those addressing Next Gen recommendations, State of Good Repair, and protections on Propositions A and C, ensure that the foundation of LA Metro's transit system, upon which many of our most underserved community members depend, is

not compromised to accelerate construction. In addition, the potential for a significantly more robust funding source through strategies such as congestion pricing can enable benefits, such as free transit, to these same underserved communities in ways unimaginable with traditional approaches. The Metro staff and Board must remain committed to Equity as a key evaluative lens as we consider all potential strategies for delivering The Re-Imagining of LA County.

ALTERNATIVES CONSIDERED

The Metro Board of Directors may decide not to approve the recommendations for baseline assumptions and strategies to pursue for The Re-Imagining of LA County. This is not recommended as this would cause assumptions for Metro's short-range financial planning to be discretionary and subject to actions on a project by project basis, missing the opportunity to achieving regional mobility goals from the perspective of the system as a whole.

NEXT STEPS

If the recommendations are approved, Metro staff will proceed with pursuing the recommended strategies for potential funding for The Re-Imagining of LA County. Metro staff will also incorporate the baseline assumptions in future financial plans.

ATTACHMENTS

Attachment A - Twenty-Eight by '28 Program Financing/Funding Plan White Paper
Attachment B - Staff Recommendations on Strategies to Pursue "The Re-imagining of LA County" (formerly Twenty-Eight by '28)
Attachment C - Motion 4.1
Attachment D - Motion 43.1 and Response to Motion 43.1 (File ID 2019-0083)
Attachment E - Motion 43.2 and Response to Motion 43.2 (File ID 2019-0055)
Attachment F - LA Metro New Mobility Service Fee Plan

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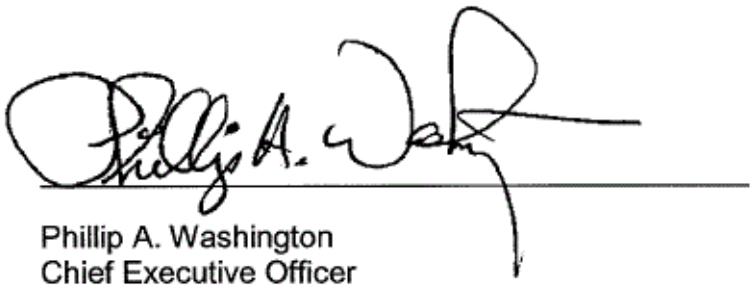

Phillip A. Washington
Chief Executive Officer

TWENTY-EIGHT BY '28 PROGRAM
FINANCING/FUNDING PLAN
WHITE PAPER

Challenge Statement

Design a funding/financing plan for $26.2 billion, which represents the funding gap for the environmental, design, construction, operating, and maintenance costs of the "Twenty-Eight by '28 Initiative" projects listed that are currently outside of the 2028 scheduled completion date.

Introduction/Background

The Twenty-Eight by '28 Program Initiative highlights 28 projects for $42.9 billion (YOE) with the goal of completion by the 2028 Olympic and Paralympic Games. The initiative articulates a vision for what Metro seeks to achieve by 2028, which facilitates obtaining needed support from Metro's many partners in delivering a transformative transportation investment program for Los Angeles County by the commencement of the 2028 Games.

When the Metro Board approved the list in January 2018, 20 of the projects on the list were already slated for completion by 2028, and the remaining eight projects listed were planned for completion post 2028. In order to accelerate their delivery *by 2028*, staff needs to design a funding/financing plan to advance $26.2 billion, which represents the funding gap for the environmental, design, construction, operating, and maintenance costs for the eight projects. All eight of these projects are also listed in the Measure M Expenditure Plan and as such, any acceleration is subject to the Ordinance and related policies.

	Funding Gap Summary	Amount in Billions (YOE)
1	Total Project Cost for Twenty-Eight by '28	$ 42.9
2	(Less) 20 Projects Already Scheduled for Completion by 2028	(19.2)
3	**Remaining 8 Project Construction Cost to be Advanced**	**23.7**
4		
5	Operations & Maintenance Expense for Earlier Revenue Operations	2.2
6	Pre Revenue Service Cost	0.1
7	State of Good Repair	0.2
8	**Sub-total Non Construction Cost to Advance the 8 Remaining Projects**	**2.5**
9		
10	**Total Planned Funding Gap to Advance 28 by 2028**	**$ 26.2**

Objective of the White Paper

Per Motion 4.1 (Solis, Garcetti, Hahn, and Butts) "28 by 2028 Transportation Investments", as staff endeavors to put forth a funding/financing plan, it is important to understand the Measure M parameters in which we currently operate. Because Metro's current budget is committed within its policy constraints and projected expenditures, any such plan must be of an acceptable level of increased risk and/or impact to the agency's planned activities and investments. This White Paper will focus on the following five key areas:

1. Delivery Status of Twenty-Eight by '28

- Review of the Measure M & Twenty-Eight by '28 Project Delivery Status (The Dashboard)

2. Measure M Parameters

- Key Voter-Approved Measure M Ordinance Parameters re: Acceleration
- Board-Approved Policy for an Early Project Delivery Strategy: Approved in November 2017, this policy outlines how projects would/could be accelerated in the Measure M Plan
- Board-approved Measure R and Measure M Cost Management Policy

3. Twenty-Eight by '28 Funding Gap Challenges

- Staff-recommended Protected Programs & Projects: (If allowed, staff will work under these critical baseline assumptions).
- Funding Plan Status for the 20 Projects Scheduled for Completion by 2028

4. Potential Funding/Financing Tools to Address the Funding Gap

- Potential Strategies to Close the $26.2 Billion Funding Gap
  - Risk Allocation Matrix (RAM) Items: Identification and review of the RAM items that the Board, under its purview, could authorize to help reduce the funding gap
  - Debt Affordability Overview
  - Local Return & Multi-Year Sub-regional Program Funding Allocations
- Public Private Partnership (P3) Project Assumptions and Benefits
- State & Federal Funding Assumptions & Impacts/Potential to Yield Additional Awards
- New Revenue Primer: New Mobility Fees & Congestion Pricing

5. Call to Action

- Summary of initiatives that the Board can take to address the Twenty-Eight by '28 funding gap challenge

1. Delivery Status of Twenty-Eight by '28

At its January 2018 meeting, the Board approved the Twenty-Eight by '28 Initiative List to highlight projects for completion by the 2028 Olympic and Paralympic Games. Investments on the list total $42.9 billion (YOE) for capital costs and are distributed countywide, demonstrating proactive regional coordination:

Figure 1 Twenty-Eight by '28 Initiative List

($ in millions)	Total Cost
1. Crenshaw/LAX Line	$2,058.0
2. Microtransit†	$0.0
3. Regional Connector	$1,755.8
4. New Bus Rapid Transit Corridors (Phase 1)	$53.1
5. Orange and Red Lines to Gold Line Transit Connector (North Hollywood to Pasadena)	$317.9
6. Airport Metro Connector Station	$625.6
7. I-5 North Capacity Enhancements	$539.2
8. North San Fernando Valley	$205.6
9. Purple Line Extension Section 1	$2,778.9
10. Gold Line Foothill Extension to Claremont (with ability to extend to Montclair)	$1,406.9
11. LA River Waterway & System Bike Path	$433.2
12. LA River Bike Path and Mobility Hub – San Fernando Valley	$69.6
13. Orange Line Travel Time and Safety Improvements	$320.6
14. Purple Line Extension Section 2	$2,441.0
15. Purple Line Extension Section 3	$3,213.0
16. Sepulveda Pass ExpressLanes	$310.5
17. East San Fernando Valley	$1,563.0

($ in millions)	Total Cost
18. I-105 ExpressLanes*	$348.9
19. I-710 South Corridor Early Action (Ph1)*	$897.0
20. South Bay Light Rail Extension*	$1,167.3
21. Blue Line Signal and Washington/Flower Junction Improvements†°	$112.5
22. I-10 ExpressLanes I-605 to San Bernardino Line†	$500.0
23. SR-57/60 Interchange Improvements*	$1,087.5
24. Vermont Transit Corridor	$522.7
25. Sepulveda Transit Corridor*	$8,591.1
26. Gold Line Eastside Extension to Whittier or South El Monte*	$4,438.5
27. West Santa Ana Branch*‡	$6,311.9
28. I-405 South Bay Curve Improvements*	$883.1
TOTAL	**$42,952.2**
TOTAL, accelerated projects	**$23,725.2**

*** Accelerated project.**
† Non-Measure R or non-Measure M project.
° Project cost could be as much as $860 million.
‡ Comprised of FY28 and FY41 projects; only FY41 project is accelerated.
Based on non-accelerated project delivery schedules.

Project lifecycle has six key stages: planning, environmental, final design, construction, operations, and ongoing maintenance. Most of the 28 projects are also Measure M projects. (Metro staff is currently meeting or exceeding the Measure M Schedule.) All 28 projects listed on *Figure 1* are in project development:

- 7 (25%) are in the Planning stage (4, 5, 8, 11, 16, 24, 25)
- 8 (29%) are in the Environmental stage (12, 17, 18, 19, 20, 26, 27, 28)
- 7 (25%) are in the Final Design stage (2, 6, 7, 14, 15, 21, 23)
- 6 (21%) are in the Construction stage (1, 3, 9, 10, 13, 22)
- 0 (0%) are in the Operations & Maintenance stages

A complete list of the status of all 28 projects is provided in the Appendix as *Attachment A – The Dashboard*.

2. Measure M Parameters

All of the eight projects originally planned for completion post 2028 are Measure M projects. The capital cost estimate for the eight projects is $23.7 billion (YOE). As such, any funding acceleration is governed by the Measure M Ordinance.

Figure 2 Eight Projects with Schedules Post-2028

I-105 ExpressLanes	Sepulveda Transit Corridor
I-710 South (Early Action)	Gold Line Eastside Extension
SR57/60 Interchange	West Santa Ana Branch
I-405 South Bay Curve	South Bay Light Rail Extension

Key Voter-Approved Measure M Ordinance Parameters

As noted in the "Delivery Status of Twenty-Eight by '28" section above, these eight projects are in project development, despite their original delivery date of post 2028. A summary of available acceleration options for these projects is provided below:

- In order to accelerate funding for construction of a Measure M project, an amendment to the "Schedule of Funds Available" is required.

- Acceleration of funding for projects is allowed by 2/3 vote of the Metro Board only if it results in no funding reductions to other projects (Major or Multi-year Sub-regional Programs (MSP)), per Ordinance §11.b.

- Metro shall hold a public meeting on the proposed amendments to the "Schedule of Funds Available" prior to adoption. Metro is required to provide notice of the public meeting to the Los Angeles County Board of Supervisors, the city council of each city in Los Angeles County, and the public, and shall provide them with a copy of the proposed amendments at least 30 days prior to the public meeting.

  **Note: Some of these projects are also Measure R Projects. The Measure R Ordinance allows for amendments with a 2/3 vote of the Metro Board. The noticing requirements are the same as above.*

Role of the Independent Taxpayer Oversight Committee (ITOC)

It should also be noted that prior to a vote by the Metro Board, any proposal to accelerate a Measure M project must also be reviewed by the Measure M ITOC. Specifically:

- The Committee shall review all proposed debt financing and *make a finding* as to whether the benefits of the proposed financing for accelerating project delivery, avoiding future cost escalation, and related factors exceed issuance and interest costs.

- The Committee shall review any proposed amendments to the Ordinance, including the Expenditure Plan, and *make a finding* as to whether the proposed amendments further the purpose of the Ordinance.

- For major corridor projects, included in the Expenditure Plan, the Committee shall review at least once a year…the funding available and programmed for the projects included in the Expenditure Plan, as well as any funding gaps for each of these projects. The Committee shall provide recommendations on possible improvements and modifications to deliver the Plan.

Measure M Early Project Delivery Strategy

At its November 2017 meeting, the Board approved a uniform policy for determining when Measure M projects can be delivered earlier than scheduled in compliance with the Ordinance. The policy identifies four categories of strategic inputs for early project delivery – Funding, Partnerships, Process, and Innovations – as these are the areas most impactful in driving how projects are completed. In general, multiple acceleration inputs are typically needed to result in accelerating a project schedule. A project's funding, schedule, scope, or legal/regulatory environment are integral to the acceleration inputs. The complete Measure M Early Project Delivery Strategy is provided in *Attachment B – The Policy for Early Project Delivery*.

The cities of West Hollywood and Los Angeles are currently using the Early Project Delivery Tool to address acceleration efforts for the Crenshaw Northern Extension & LA Streetcar Measure M Projects. It is worth noting that these projects are not on the Twenty-Eight by '28 list – the Early Project Delivery evaluation is available to *any* project in the Measure M approved expenditure plan.

Measure R and Measure M Cost Management Policy

Approved by the Metro Board in July 2018, the objective of the Policy is to ensure the prompt development and consideration of project cost alternatives that genuinely address the cost controls necessary to successfully deliver all Measure R and M transit and highway projects. As such, this Policy will apply to the Twenty-Eight by '28 Initiative.

If increases in the latest cost estimate occur, the Metro Board must approve a plan of action to address the issue prior to taking any action necessary to permit the project to move to the next milestone. Shortfalls will first be addressed at the project level prior to evaluation for any additional resources using these methods in this order as appropriate:

1) Scope Reductions;
2) New Local Agency Funding Resources;
3) Value Engineering;
4) Other Cost Reductions within the Same Transit or Highway Corridor;
5) Other Cost Reductions within the Same Sub-region; and
6) Countywide Transit or Highway Cost Reductions or Other Funds Will Be Sought Using Pre-Established Priorities.

The Policy also states that no project will receive Measure M funds over and above the amount listed in the Expenditure Plan, except under the following circumstances:

- The cost is related to inflationary pressures, and meets the requirements for the Inflation related Contingency Fund provisions provided under the Measure M Ordinance. These are addressed in the Measure M Contingency Fund Guidelines Section VII of the Measure M Final Guidelines, June 2017 (the "Final Guidelines").

- Additional Measure M funds are provided for and consistent with amendments in tandem with the Ten-Year Comprehensive Program Assessment permitted under the Ordinance. This process is addressed in the Measure M Comprehensive Program Assessment Process & Amendments Section III of the Final Guidelines.

- Redirection of Measure M sub-regional funds aligned with the project's location, so long as the project satisfies all sub-regional program eligibilities and procedures consistent with the Final Guidelines, and with the agreement of jurisdictions otherwise eligible for those sub-regional funds.

3. Twenty-Eight by '28 Funding Gap Challenges

When the Metro Board approved the project list in January 2018, 20 of the projects on the list were already slated for completion by 2028, and the remaining eight projects listed were planned for completion post 2028. In order to accelerate their delivery *by 2028*, staff needs to design a funding/financing plan to advance $26.2 billion, which represents the funding gap for the environmental, design, construction, operating, and maintenance costs for the eight projects.

Figure 3 Twenty-Eight by '28 Funding Gap

	Funding Gap Summary	Amount in Billions (YOE)
1	Total Project Cost for Twenty-Eight by '28	$ 42.9
2	(Less) 20 Projects Already Scheduled for Completion by 2028	(19.2)
3	**Remaining 8 Project Construction Cost to be Advanced**	**23.7**
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5	Operations & Maintenance Expense for Earlier Revenue Operations	2.2
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8	**Sub-total Non Construction Cost to Advance the 8 Remaining Projects**	**2.5**
9		
10	**Total Planned Funding Gap to Advance 28 by 2028**	**$ 26.2**

Staff Recommended Baseline Assumptions/Priorities

As staff endeavors to put forth a funding/financing plan for 28 by 2028, it is important to identify critical baseline assumptions. The proposed "stakes in the ground" reflect items that are so vital to supporting the implementation, operations and maintenance of Metro's transportation services and facilities that those funds should not be deferred in an effort to bring $26.2 billion "gap" funds forward to accelerate Twenty-Eight by '28. These assumptions will inform the framework for the development of the funding/financing plan:

- NextGen – ensure that the funding/financing plan does not hamper the ability to implement the results of NextGen so the system is connected, efficient and utilized. Transit service must not be compromised to advance capital investments.

- State of Good Repair (SGR) – By 2028, Metro will have more than $20 billion in capital assets, including rolling stock, structures, facilities, equipment and infrastructure. An annual capital funding (SGR) level of roughly $475 million per year for rehabilitation and replacement of our capital assets will ensure that no more than 10% of our capital stock, by value, will exceed their FTA useful life benchmarks. These benchmarks are indicators of when an asset should be replaced or rehabilitated. While not an absolute, as assets begin to exceed their useful lives, they begin to fail with greater frequency with failure consequences depending on the asset type. These consequences could include decreased service reliability, increased operations and maintenance costs, a deterioration in the customer experience, and reduced safety performance;

- Do not increase current debt limits of Propositions A and C because these sales taxes are currently used to fund operations;

- Ensure the funding plan protects Metro's debt covenants to avoid impairing or adversely affecting the rights of bondholders. Issuing large sums of debt significantly increases repayment risk to bondholders. Investors' assessment of our ability to repay debt is critical to accessing capital in the financial markets.

- Unfunded Ancillary Efforts – ensure that the funding/financing plan does not defer funding for the following projects as they are needed to support implementation of Twenty-Eight by '28 and the integrity of existing Metro transportation assets:
    - Division 20 ($699 M) – without Division 20 expansion, the subway cars being acquired for the Purple Line extension will have no overnight storage yard or maintenance space,
    - Combined Rail Operations Center (ROC)/Bus Operations Center (BOC) ($190 M) – without a new ROC the rail system cannot be safely or effectively operated,
    - Maintenance & Material Management System -M3 ($50 M) – without a new M3, the state of good repair of the physical system cannot be effectively managed or addressed,
    - Train radio for existing subway system ($75 M) – without a new train radio for the expanded system, it cannot be safely or effectively operated, and
    - I-210 Barrier Wall ($200 M) – the intrusion problem on I-210 along the Gold Line must be solved for the long-term safety of the system.

Funding Plan Status for the 20 Projects Scheduled for Completion by 2028

It should be noted that for the 20 projects with schedules aligned with 2028, Measure M has pledged "other funding"; however, in many cases that funding has not been secured. In particular, discretionary funds may be needed to fully fund the projects and that is not soley under the Board's control. In addition, three of the projects are not Measure R or M and a portion of the funding has yet to be identified.

4. Potential Funding/Financing Tools to Address the Funding Gap

There are various tools that the Board could use to address the funding challenges. The tools below are grouped into two categories: tools within the Board's control and tools outside of the Board's control.

Risk Allocation Matrix (RAM)

The RAM identifies options that the Board, under its purview, could act upon to help address the Twenty-Eight by '28 funding challenges. The RAM assigns a risk level of "High", "Medium", or "Low" to each option. The table below summarizes how levels of risk were developed.

H	Financial and legal risks high Violation of sales tax ordinances Significant risk to agency and public
M	Some financial and legal risk to agency Impact to agency and public, but mitigation efforts available
L	Minimal impact to agency and public

The RAM list identified an estimated $4.1 billion in low, $16.5 billion in medium, and range of $65.3 billion - $129.1 billion in high risk options for the Board to consider. A selection from the menu of options (*See Attachment C*) could help bridge the financial challenges faced while assuming some level of risk.

Debt Policy/Debt Affordability Overview

The Metro Board approved Debt Policy restricts borrowing primarily to ***capital allocation categories of ordinances***.

Figure 4 Summary of Current Debt Policy

Sales Tax Ordinances	Categories Available for Bonding	Maximum Revenue used for Debt Service per Debt Policy
Proposition A	35% Rail Capital Revenues	87% of 35%
Proposition C	40% Discretionary; 25% Highway; 10% Commuter Rail	40% of 40%; 60% of 25%; 40% of 10%
Measure R	35% Transit Capital; 20% Highway Capital; 3% Metrolink Capital; 2% Metro Rail Transit Capital	87% of 35%; 60% of 20%; 87% of 3%; 87% of 2%
Measure M	35% Transit Construction; 17% Highway Construction; 2% Metro Active Transportation;2% State of Good Repair; 1% of Regional Rail	87% of 35%; 87% of 17%; 87% of 2%; 87% of 2%; 87% of 1%

Metro has debt outstanding for all of the sales taxes except for Measure M. Most of the debt is long term – outstanding for a 25-30 year period. A summary of the current debt outstanding is provided below:

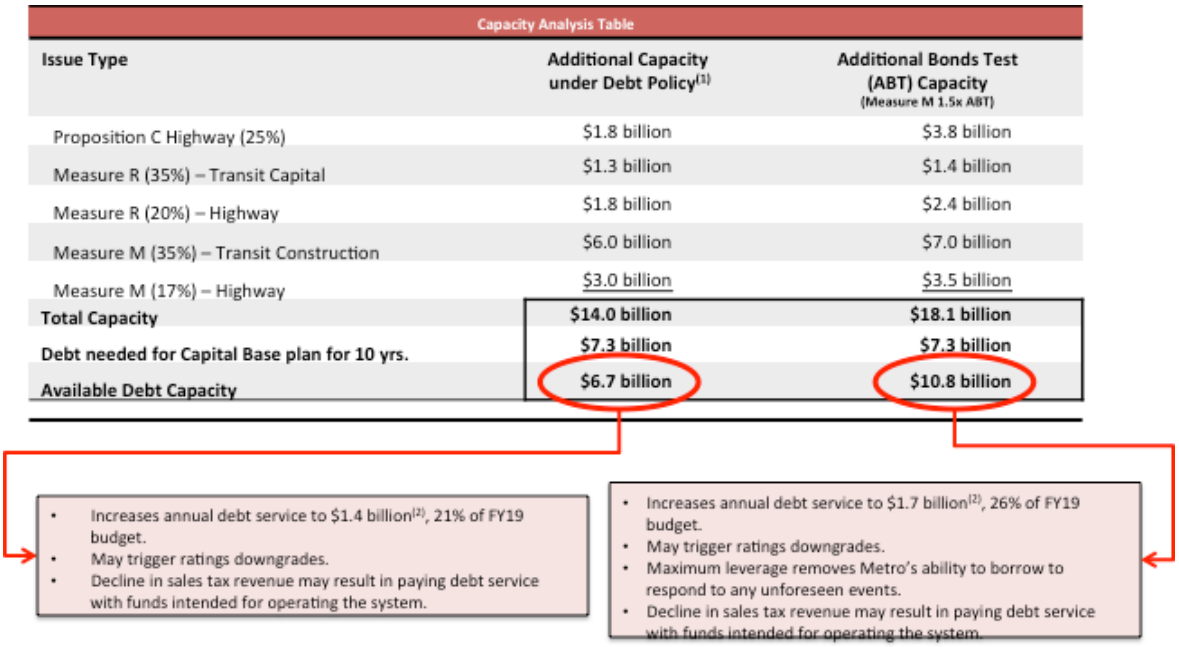
Figure 5 Current Debt Outstanding

Long-term Debt (as of 11-1-2018)					
Issue Type	**Principal Outstanding**	**Moody's**	**S&P**	**Fitch**	**KR**
Proposition A Bonds	$1,187,295,000	Aa1	AAA	NR	AA (Series Or
Proposition C Bonds	$1,326,345,000	Aa2	AA+	AA+	N
Measure R Bonds	$1,113,825,000	Aa1	AAA	NR	N
Measure R TIFIA Loans (Drawn to Date)	$1,211,303,044	NR	Private	Private	N
General Revenue	$88,910,000	Aa2	AA	NR	N
Total Long-term Debt	**$4,927,678,044**				
Short-term Debt					
Issue Type	**Principal Outstanding**	**Moody's**	**S&P**	**Fitch**	**KR**
Proposition A CP (ST Ratings for LOC Providers, MUFG Union Bank, SMBC, and Citibank)	$105,000,000	P-1	A-1	NR	N
Proposition C CP (ST Ratings for LOC Provider, Bank of America N.A.)	$68,885,000	P-1	A-1	NR	N
Proposition C Revolving Credit	$75,000,000	NR	NR	NR	N
Measure R Short-term Obligations	$65,422,743	NR	NR	NR	N
Total Short-Term Debt	**$314,307,743**				
Total Debt Outstanding	**$5,241,985,788**				

All Measure R and Measure M debt issuance must be reviewed by their respective Independent Taxpayer Oversight Committee for a finding of benefit, prior to Board approval.

Under the current Debt Policy, the debt capacity is $14 billion. Issuing to our legal limits could yield an additional $4.1 billion without changing our Debt Policy. NOTE: The maximum leverage leaves Metro without the ability to respond to unforeseen cost increases.

Figure 6 Debt Capacity Analysis



Capacity Analysis Table

Issue Type	Additional Capacity under Debt Policy[1]	Additional Bonds Test (ABT) Capacity (Measure M 1.5x ABT)
Proposition C Highway (25%)	$1.8 billion	$3.8 billion
Measure R (35%) – Transit Capital	$1.3 billion	$1.4 billion
Measure R (20%) – Highway	$1.8 billion	$2.4 billion
Measure M (35%) – Transit Construction	$6.0 billion	$7.0 billion
Measure M (17%) – Highway	$3.0 billion	$3.5 billion
Total Capacity	**$14.0 billion**	**$18.1 billion**
Debt needed for Capital Base plan for 10 yrs.	**$7.3 billion**	**$7.3 billion**
Available Debt Capacity	**$6.7 billion**	**$10.8 billion**

- Increases annual debt service to $1.4 billion[2], 21% of FY19 budget.
- May trigger ratings downgrades.
- Decline in sales tax revenue may result in paying debt service with funds intended for operating the system.

- Increases annual debt service to $1.7 billion[2], 26% of FY19 budget.
- May trigger ratings downgrades.
- Maximum leverage removes Metro's ability to borrow to respond to any unforeseen events.
- Decline in sales tax revenue may result in paying debt service with funds intended for operating the system.

The potential impacts of increasing the debt capacity by $4.1 billion (from $6.7 billion to $10.8 billion) include a spectrum of:

- Rating downgrades from leveraging to the "additional bonds test" (ABT)*;
- Debt service payments that exceed 20% of our annual budget;
- A decline in sales tax receipts may require using revenue intended for operating the system to pay debt service;
- Eliminates reserve of debt capacity that may be needed to meet emergencies; and
- Reduction in current agency services, programs and projects.

*NOTE: The ABT is a computation of the maximum annual debt service in comparison to current sales tax receipts that secure the Metro debt. In a press release on November 19, 2018, the Fitch Rating Agency announced that it

upgraded Metro's Issuer Default Rating from AA to AA+. Fitch noted that it "does not expect the Authority to leverage to the ABT. Rather, Fitch expects the Authority to comply with voter approved spending allocations and Board policies that require much of the pledged sales tax revenue to be spent on operations and uses other than debt service, limiting leveraging of the revenue stream."

Measure M Guidelines for Local Return & Multi-Year Sub-regional Programs (MSP)

As part of the "bottom up" approach to the development of the Measure M Expenditure Plan, each sub-region submitted a list of priority major capital projects for their area. The eight projects on the Twenty-Eight by '28 list with planned completion dates post-2028 were submitted as priority projects by a sub-region. As a result, the effort to develop a funding/financing plan for these projects also includes a review of the sub-regional funding that may be available to help accelerate these projects.

The eight accelerated projects are located within 27 jurisdictions that have the potential flexibility to direct investments towards these projects through their Local Return funding and MSP. In addition, local communities will receive a benefit due to the acceleration of the transit/highway project. The Institute for Applied Economics of the Los Angeles Economic Development Corporation estimated the economic impact of these construction projects as follows:

	Economic Impact				
Project	**Net Spending ($ millions)**	**Output ($ millions)**	**Jobs**	**Labor Income ($ millions)**	**Tax Revenue ($ millions)**
South Bay Sub-region					
South Bay LRT Ext	489	941	5,820	323	117
I-405 SB Curve	381	768	4,070	234	85
South Bay, Central, & Gateway Sub-regions					
I-105 Express Lane	166	335	1,780	102	37
Central & Gateway Sub-regions					
West Santa Ana	3,361	6,465	40,010	2,218	801
Gateway & San Gabriel Sub-regions					
Gold Line Eastside Extension (one alignment)	1,425	2,740	16,960	940	340
San Gabriel Sub-region					
SR 57/60	732	1,476	7,810	449	163
San Fernando Valley & Westside Sub-regions					
Sepulveda Pass Transit Corridor (Phase 2)	3,857	7,417	45,890	2,546	920

(excludes 710 South (Early Action) Project)

Local Return

Jurisdictions receive Local Return funding from Prop A, Prop C, Measure R and Measure M. The 10 year forecast of Local Return funding from all these sources for the 27 jurisdictions totals $2.7 billion.

Figure 7 Local Return Forecast for Cities that Benefit from Acceleration

		I-105 ExpressLanes	I-710 South Corridor Early Action Ph 1 only	South Bay Light Rail Extension	SR-57/60 Interchange Improvements	Sepulveda Transit Corridor	Gold Line Eastside Extension to Whittier or South El Monte	West Santa Ana Branch	I-405 South Bay Curve Improvements	PROP A/C MEASURE R/M LOCAL RETURN
	LOCAL JURISDICTION	**18**	**19**	**20**	**23**	**25**	**26**	**27**	**28**	**10yr Allocations**
1	ARTESIA							1		$ 12,184,139.57
2	BELL		1					1		26,379,648
3	BELLFLOWER							1		55,542,316
4	CERRITOS							1		36,256,075
5	COMPTON		1							72,491,863
6	DIAMOND BAR				1					41,347,533
7	DOWNEY	1						1		82,477,698
8	GARDENA								1	43,995,786
9	HAWTHORNE	1		1						63,516,059
10	HUNTINGTON PARK							1		43,026,330
11	INGLEWOOD	1								83,251,525
12	LAWNDALE			1					1	24,174,823
13	LONG BEACH		1							347,912,396
14	LYNWOOD	1	1							52,165,883
15	MONTEBELLO						1			46,311,468
16	MONTEREY PARK						1			44,637,018
17	NORWALK	1								76,459,533
18	PARAMOUNT	1	1					1		40,519,365
19	PICO RIVERA						1			46,404,936
20	REDONDO BEACH			1					1	49,927,004
21	ROSEMEAD						1			39,839,006
22	SOUTH EL MONTE						1			15,115,695
23	SOUTH GATE	1	1					1		71,465,166
24	TORRANCE			1					1	106,582,964
25	WALNUT				1					21,833,781
26	WHITTIER						1			63,549,388
27	LOS ANGELES CITY*	1	1			1	1	1		1,082,060,231
	Total Local Return - Affected Jurisdictions									**$ 2,689,427,629**

* Includes Central Cities and Sherman Oaks estimated allocations

MSP

Another consideration would be to work with the impacted sub-regions to allocate all, or a portion of their $864 million from the MM MSP to mitigate these funding challenges.

The tables below show amounts to be programmed to sub-regions as part of the MSPs. Only sub-regions that have Twenty-Eight by '28 projects are included. (No revenue is shown for MSPs that do not receive funding by FY2028 per the Expenditure Plan.)

Figure 8 below shows cash-flows through FY2028. The cash flow could potentially be used on Twenty-Eight by '28 projects. However, a portion will likely be programmed on other projects during FY2019. The South Bay sub-region has $464.1 million available for highway-eligible uses through FY2028 that could include Twenty-Eight by '28 projects.

Figure 8 MSP Forecast for Next 10 Years

Measure M Multi-Year Subregional Program Cashflows (FY 2018 - FY 2028)
$ in millions (Year of Expenditure) dollars

Program	Sub-region	Ground-breaking Start Date	Unallocated Balance from FY 2017/2018	FY 2018 FY 2019	FY 2019 FY 2020	FY 2020 FY 2021	FY 2021 FY 2022	FY 2022 FY 2023	FY 2024 FY 2028	10-Year Total Plus Unallocated Balance
Active Transportation, 1st/Last Mile, & Mobility Hubs	cc	FY 2018	$ 2.2	$ 2.2	$ 2.3	$ 2.3	$ 2.4	$ 2.4	$ 18.7	$ 32.5
Los Angeles Safe Routes to School Initiative	cc	FY 2033								
BRT and 1st/Last Mile Solutions e.g. DASH	cc	FY 2048								
Freeway Interchange and Operational Improvements	cc	FY 2048								
LA Streetscape Enhancements & Great Streets Prog.	cc	FY 2048								
Public Transit State of Good Repair Program	cc	FY 2048								
Traffic Congestion Relief-Signal Synchronization	cc	FY 2048								
Central City Area Subregion Total										**$ 32.5**
Active Transportation Program	gc	FY 2018				TBD				$ -
I-605 Corridor 'Hot Spot' Interchange Improvements [a]	gc	FY 2018	$ 12.4	$ 12.7	$ 13.1	$ 13.4	$ 13.7	$ 14.1	$ 107.9	$ 187.3
Gateway Cities Subregion Total										**$ 187.3**
South Bay Highway Operational Improvements [a]	sb	FY 2018	$ 11.0	$ 11.3	$ 11.6	$ 11.9	$ 12.2	$ 12.5	$ 95.8	$ 166.1
Transportation System and Mobility Improve. Prog.	sb	FY 2018	$ 3.5	$ 3.6	$ 3.7	$ 3.8	$ 3.9	$ 4.0	$ 119.9	$ 142.3
Transportation System and Mobility Improve. Prog.	sb	FY 2018	$ 19.6	$ 20.1	$ 20.6	$ 21.1	$ 21.6	$ 22.2	$ 30.5	$ 155.7
South Bay Subregion Total										**$ 464.1**
Active Transportation Prog. (Including Greenway Proj.)	sg	FY 2018	$ 2.3	$ 2.4	$ 2.4	$ 2.5	$ 2.6	$ 2.6	$ 20.1	$ 34.9
Bus System Improvement Program	sg	FY 2018	$ 0.6	$ 0.6	$ 0.6	$ 0.6	$ 0.6	$ 0.6	$ 4.8	$ 8.3
First/Last Mile and Complete Streets	sg	FY 2018	$ 2.0	$ 2.0	$ 2.1	$ 2.1	$ 2.2	$ 2.2	$ 17.2	$ 29.9
Highway Demand Based Prog. (HOV Ext. & Connect.)	sg	FY 2018	$ 2.3	$ 2.4	$ 2.4	$ 2.5	$ 2.6	$ 2.6	$ 20.1	$ 34.9
Goods Movement (Improvements & RR Xing Elim.)	sg	FY 2048								
Highway Efficiency Program	sg	FY 2048								
ITS-Technology Program (Advanced Signal Tech.)	sg	FY 2048								
San Gabriel Valley Subregion Total										**$ 108.0**
Active Transportation 1st/Last Mile Connections Prog.	w	FY 2018	$ 3.6	$ 3.7	$ 3.8	$ 3.9	$ 4.0	$ 4.1	$ 31.4	$ 54.5
Westside Subregion Total										**$ 54.5**

Notes:
[a] - Includes all funding sources programmed in the Expenditure Plan (page 3 of Attachment A) to subregional program.
Forecasts assume inflation. Revenue only for programs that receive funding by FY 2028 per the Expenditure Plan.

Figure 9 below shows cash flows through FY2057, which could be used on Twenty-Eight by '28 projects by borrowing against the funds. The South Bay sub-

region has $2.7 billion available for highway–eligible uses from FY 2029 to 2057 that could include Twenty-Eight by ‘28 projects. The San Gabriel sub-region has $1.3 billion available for highway & transit-eligible uses from FY2029 to 2057 that could include Twenty-Eight by ‘28 projects. NOTE: The eligibility of any individual MSP program would have to align with the Twenty-Eight by ’28 project.

Figure 9 MSP Forecast Post 2028

Measure M Multi-Year Subregional Program Cashflows (FY 2029 - FY 2057)
$ in millions (Year of Expenditure) dollars

Program	Sub-region	Ground-breaking Start Date	FY 2029 FY 2033	FY 2034 FY 2038	FY 2039 FY 2043	FY 2044 FY 2048	FY 2049 FY 2053	FY 2054 FY 2057	Total
Active Transportation, 1st/Last Mile, & Mobility Hubs	cc	FY 2018	$ 45.5	$ 52.7	$ 61.1	$ 70.8	$ 82.1	$ 75.0	$ 387.1
Los Angeles Safe Routes to School Initiative	cc	FY 2033							
BRT and 1st/Last Mile Solutions e.g. DASH	cc	FY 2048							
Freeway Interchange and Operational Improvements	cc	FY 2048							
LA Streetscape Enhancements & Great Streets Prog.	cc	FY 2048							
Public Transit State of Good Repair Program	cc	FY 2048							
Traffic Congestion Relief-Signal Synchronization	cc	FY 2048							
Central City Area Subregion Total									**$ 387.1**
Active Transportation Program	gc	FY 2018							$ -
I-605 Corridor 'Hot Spot' Interchange Improvements [a]	gc	FY 2018	$ 262.2	$ 303.9	$ 352.3	$ 408.4	$ 473.5	$ 432.5	$ 2,232.8
Gateway Cities Subregion Total									**$ 2,232.8**
South Bay Highway Operational Improvements [a]	sb	FY 2018	$ 232.6	$ 269.6	$ 312.5	$ 362.3	$ 420.0	$ 383.7	$ 1,980.8
Transportation System and Mobility Improve. Prog.	sb	FY 2018	$ 108.7	$ -	$ -	$ -	$ -	$ -	$ 108.7
Transportation System and Mobility Improve. Prog.	sb	FY 2018	$ 74.0	$ 85.8	$ 99.4	$ 115.3	$ 133.6	$ 122.1	$ 630.2
South Bay Subregion Total									**$ 2,719.6**
Active Transportation Prog. (Including Greenway Proj.)	sg	FY 2018	$ 48.8	$ 56.6	$ 65.6	$ 76.1	$ 88.2	$ 80.6	$ 416.0
Bus System Improvement Program	sg	FY 2018	$ 11.6	$ 13.5	$ 15.6	$ 18.1	$ 21.0	$ 19.2	$ 99.0
First/Last Mile and Complete Streets	sg	FY 2018	$ 41.9	$ 48.5	$ 56.3	$ 65.2	$ 75.6	$ 69.1	$ 356.5
Highway Demand Based Prog. (HOV Ext. & Connect.)	sg	FY 2018	$ 48.8	$ 56.6	$ 65.6	$ 76.1	$ 88.2	$ 80.6	$ 416.0
Goods Movement (Improvements & RR Xing Elim.)	sg	FY 2048							
Highway Efficiency Program	sg	FY 2048							
ITS-Technology Program (Advanced Signal Tech.)	sg	FY 2048							
San Gabriel Valley Subregion Total									**$ 1,287.5**
Active Transportation 1st/Last Mile Connections Prog.	w	FY 2018	$ 76.3	$ 88.5	$ 102.6	$ 118.9	$ 137.8	$ 125.9	$ 650.0
Westside Subregion Total									**$ 650.0**

Notes:
[a] - Includes all funding sources programmed in the Expenditure Plan (page 3 of Attachment A) to subregional program.
Forecasts assume inflation. Revenue only for programs that receive funding by FY 2028 per the Expenditure Plan.

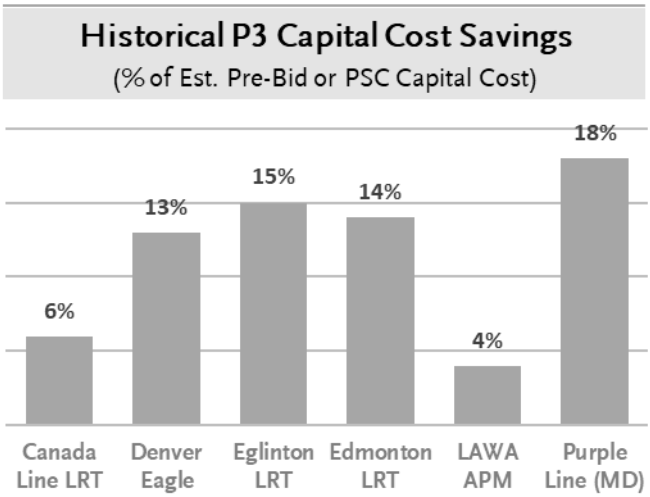
Public Private Partnership (P3) Project Assumptions & Benefits

P3 is a delivery and financing strategy – it is not a funding strategy.
The market determines the viability of a P3 based on a range of project and agency characteristics related to approach, cost, schedule, and risk. Not all projects are suited to P3 delivery.

Over the last 18 months, Metro has received a number of Unsolicited Proposals from the private sector indicating a potential interest in delivery of certain projects as P3s. Metro is currently performing additional study and diligence to determine the optimal structure for such P3s, including commercial approach, risk allocation,

and pricing, to support procurement when an sufficient level of project design is complete.

P3 project delivery has been shown to provide project cost and schedule certainty, and potential savings on capital, operations and maintenance (O&M), and state-of-good-repair costs. Design-Build-Finance-Operate-Maintain (DBFOM) procurements in the U.S. have achieved construction cost savings through competitive pricing, design innovation, and avoided cost inflation. The chart below shows some of the construction cost savings realized through P3 delivery for recent transportation projects in North America.



Benchmarked P3 projects also generally have lower O&M costs and lower escalation rates, reducing cumulative costs during operations. Finally, P3 developers have generally acted to perform state of good repair (SOGR) work earlier and more frequently, optimizing lifecycle investments.

The table below illustrates the possible P3 savings for three potential Metro projects based on assumed cost efficiencies in construction, O&M, and long-term capital replacement/SOGR over a projected 30-year operating period following construction. These efficiency assumptions are based on cost information across a range of projects and markets.

Project	Estimated Capital Cost ($ millions)	Potential Capital P3 Savings	Estimated O&M/SOGR Cost	Potential O&M/SOGR P3 Savings	Total Estimated Project Cost	Total Potential P3 Savings
West Santa Ana Branch	$ 6,312	($ 505)	$ 7,761	($ 1,269)	$ 14,073	($ 1,592)
Sepulveda Transit Corridor	$ 8,591	($ 687)	$ 10,569	($ 1,727)	$ 19,160	($ 2,167)
East San Fernando Valley	$ 1,563	($ 125)	$ 4,991	($ 816)	$ 6,554	($ 824)
Totals	$ 16,466	($ 1,317)	$ 23,321	($ 3,265)	$ 39,787	($ 4,582)

It's important to note that every market and project is different, and there are many variables specific to each market, project, and contract that influence the extent to which project savings are achieved, if at all.

State and Federal Funding Assumptions

State and federal funds are limited by funding availability each year and award cycles. The awards are based on eligibility and estimated future availability of funds. The state and federal funding for Measure M projects is programmed, and is projected to be awarded over time, as funding is available and open for application. The total funding is assumed limited and Metro expects to receive a proportional amount.

The advancing of state and federal funding would require that either more total funding is available, or Metro receives an increasing share throughout the State or US. In summary, Metro's committed and secured programming of funding for the Twenty-Eight by '28 projects is comprised of 15.4% in Federal funds and 11.8% in State funds; the remaining 72.85% is funded locally. In a Medium-Risk environment, we anticipate the funding shares to increase to 19.2% Federal and 14.5% State with 66.3% funded locally. In a High-Risk environment, the anticipated ratio would change to 22.1% Federal and 17.9% State with a 60.1% Local contribution.

LRTP Financial Projections
(Twenty-Eight by 2028 Projects) in $ million

All 28 Projects						
Total Funding by Fund Source (millions $)						
Funding Sources	**Today**		**Medium**		**High**	
Federal Funds	FY18-'27	% of Total		% of Total		% of Total
FASTLANE/INFRA Grants	40.5		44.6		TBD	
Congestion Mitigation & Air Quality Program (CMAQ)	406.6		447.3		TBD	
Section 5309 New Starts*	2,176.9		3,076.9		TBD	
Surface Transportation Block Grant Program (STBGP) formerly RSTP	34.8		38.3		TBD	
Expedited Project Delivery (EPD) Grant Program			25.0		TBD	
BUILD (formerly TIGER)			10.0		TBD	
Federal Total	**2,658.8**	**15.4%**	**3,642.0**	**19.2%**	**4,624.5**	**22.1%**
State Funds						
SB1 - Active Transportation Program	67.3		87.4		TBD	
SB1 - Solutions for Congested Corridors Program	149.8		249.8		TBD	
SB1 - Trade Corridors Program	269.0		336.3		TBD	
Regional Improvement Program Funds (RIP)	410.4		492.4		TBD	
Traffic Congestion Relief Program Funds (TCRP)			85.5		TBD	
Transit and Intercity Rail Capital Program (TIRCP)	1,151.5		1,496.9		TBD	
State Total	**2,048.0**	**11.8%**	**2,748.4**	**14.5%**	**3,743.5**	**17.9%**
Local Total	**12,585.5**	**72.8%**	**12,585.5**	**66.3%**	**12,585.5**	**60.1%**
TOTAL	**17,292.3**		**18,975.9**		**20,953.5**	

***New Starts Projects:**
Today, we currently have three FFGA in place for WPLE 1,2, Regional
Connector Medium Risk includes $1.3B FFGA for WPLE3
High Risk assumes $400m annual drawdowns maxed out through 2027 for WSAB and Sepulveda projects
EPD Grant Program - still in conceptual stage at the Federal level; slated to be funded by the General Fund. Projects with New Starts awards will not be considered for additional EPD funding.

Federal Funding Assumptions

Metro currently has three Section 5309 New Starts Full Funding Grant Agreements (FFGA) within the Capital Investment Grant (CIG) Program, which is the federal government's primary method of funding new rail transit projects. The multi-year funding agreement through which the CIG Program funds transit projects is achieved through a FFGA - which outlines the terms and flow of dollars (year over year) that will be committed to a transit project through the annual congressional appropriations process.

All three New Starts grant awards are Twenty-Eight by '28 projects – Regional Connector, and Westside Purple Line Extension Sections 1 and 2. Metro recently received a Letter of No Prejudice (LONP) from the Federal Transit Administration (FTA) for tunnel construction for another Twenty-Eight by '28 project, the Westside Purple Line Extension Section 3, in the amount of $491m. Metro is working closely with the FTA to secure federal funding for this project, as we are seeking an FFGA in the amount of $1.3 billion of New Starts funds.

If Metro is awarded this FFGA, the annual Federal drawdowns within the CIG Program will reach a total of $400m for all four projects, in 2019 and 2020. Assuming we maximize the $400m annual drawdown amount through 2027, this leaves us with limited additional capacity to draw upon for future Federal grant opportunities.

Whilst we will actively pursue any and all future grant opportunities, the amount and timing of these additional funds should not be assumed. (For example, our original LONP request was $786m, $294m more than the actual FTA approval amount of $491m.) Our high risk projections assume we will seek New Starts funds for two additional Twenty-Eight by '28 projects – West Santa Ana Branch and Sepulveda Pass Transit Corridor, bringing our total Federal contribution up to 22.1% for the Twenty-Eight by '28 projects (inclusive of Federal funds from programs such as Congestion Mitigation & Air Quality (CMAQ), FASTLANE/INFRA Grant and Surface Transportation Block Grant (STBG)). If the total Federal share of the CIG Program does not increase, the risk of obtaining the required funds for these two projects, prior to 2028, will be high.

Future additional funds may be available via the Pilot Program for Expedited Project Delivery (EPD), which is still in the conceptual stage at the FTA and only $25m has been identified for projects nation-wide. If the total EPD funding pool amount increases with future Federal appropriations, Metro could potentially apply for a grant opportunity that is favorable and in line with the Twenty-Eight by '28 initiative.

State Funding Assumptions

The State-approved increase in fuel and other transportation taxes is expected to direct around $4 billion of SB1 funding to Metro over the next 10 years (based on State forecasts). The SB1 funds provide for both operating and capital costs, and are allocated to Metro by formula and through competitive, discretionary programs. Metro's capture of State discretionary programs includes grant awards announced in spring 2018 of $1.7 billion, including $700 million from SB1 and $1.0 billion from the "Cap and Trade" Transit and Intercity Rail Capital Program (TIRCP).

We are assuming a total of roughly $2.0B in State funds for the Twenty-Eight by '28 initiative, over the next nine years; 11.8% of the total required funding share. If we assume an additional $700m of potential future funds across SB1 and TIRCP, this would pose a Medium-Risk and would increase the total state funding contribution to 14.5%. Since an increase in State funding capacity is unknown, any assumption above 12% presents a risk, unless there is an increase to the overall State's base fund.

New Revenue Primer: New Mobility Fees & Congestion Pricing

As we explore development of a funding/financing plan for Twenty-Eight by '28, the identification of potential new revenue sources is appropriate for consideration by the Metro Board.

New Mobility Fees

Background and Justification

Technological innovation is changing the ways that consumers access goods and services. Most dramatic has been the rise of transportation network companies (TNCs), such as Uber and Lyft, enabling new and better demand-responsive travel options for many people. But these private companies are in the business of profiting from public investments in roads and infrastructure that enable their success, putting out shared bicycles, scooters, and cars on the streets with the expectation of using public rights of way to generate private benefit.

In response to these new services, 7 major cities and 12 states have started levying fees or taxes on TNC trips to serve a variety of purposes, including revenue generation, congestion management, parity of compliance, and transportation equity.[1] Other cities have put in specific regulations to cap or regulate new mobility providers.

[1] See "Taxing New Mobility Services: What's Right? What's Next," by So Jung Kim and Robert Puentes. Eno Center for Transportation. July 23, 2018

New Mobility Fees Today

Several urban areas have instituted fees on TNCs. The most common ways to tax TNCs are to charge a flat per-ride fee or to collect a percentage of the total fare revenue of a TNC on a regular basis. Another approach could be to utilize a tiered tax approach to encourage preferred travel behaviors, such as lower fees for shared rides or fuel-efficient vehicles, higher fees for rides that originate or end in congested areas, or fee waivers to encourage services to underserved areas of the County, such as low-income neighborhoods.

Potential Policy Objectives

1. **Generate revenue for investment in transit and infrastructure**
   Taxes and fees are common tools used to raise revenue for public goods and services. Levying a fee on TNC or other new mobility trips originating in Los Angeles County serves as a potential revenue opportunity for Metro to then reinvest in its own transit and infrastructure.
2. **Manage congestion through influencing supply and demand**
   Fees for TNC trips is one form of pricing that can be utilized to manage demand in the most traffic-clogged areas of the County, ensure that customers prioritize shared rides over single passenger rides, or even to incentivize a substitution to transit use instead.
3. **Bring the new mobility industry into regulation**
   Instituting fees on TNCs can serve as the beginning of a more comprehensive regulatory plan to set the rules of engagement for private new mobility providers, for known (i.e scooters) or future options yet to manifest.
4. **Support programs that improve transportation equity**
   Taxes or fees on TNC trips can help improve transportation equity by either influencing behavior directly or by putting revenues towards supporting programs with similar goals such as the recently signed SB1376, requiring the CPUC to assess at least $.05 per TNC ride to help pay for wheelchair accessible vehicles (WAVs).

Estimated Revenue Potential from New Mobility Fees

The exact number of rides provided by all ridehailing services in Los Angeles County is unknown because these private companies are very protective of their data. However, we know that in 2016 Lyft averaged 70,000 rides a day in Los Angeles County, with about 20% market share.[2] These trips cost $9.66 on average.[3] We can therefore estimate that the entire ridehailing market provided roughly 350,000 rides a day in LA County in 2016 numbers, and know that both Lyft and Uber have continued to increase in popularity since then. Using our estimate that amounts to revenues between $70,000 to $962,500 per day, or

[2] Brown, Anne Elizabeth. “Ridehail revolution: Ridehail Travel and Equity in Los Angeles,” Institute for Transportation Studies, UCLA, Jan. 2018.
[3] Ibid.

between approximately $25M to $350M annually. The shared devices are projected to generate up to $552M annually.

In summary, new mobility services have both positive and negative impacts. Any decision to enact a tax or fee should consider how it will affect travel behaviors, and should be made with consideration towards the goals outlined in Vision 2028. Taxes on new mobility services can go beyond raising revenue and can work towards improving the quality of life for LA County residents. Any mechanism for taxing these new mobility trips should be used in carefully targeted ways designed to reduce single-occupancy vehicle use and improve metropolitan mobility.

The complete Primer on New Mobility Fees is provided in *Attachment D.*

Congestion Pricing

Background and Justification

The concept of congestion pricing has been around for decades and dates back at least to Nobel Prize winning economist William Vickrey. Simple supply and demand will tell you that when you provide something for free, people use more of it than they would otherwise. This means charging higher fees for roadway use when demand is high and lower or zero fees when demand is low, a concept known as congestion pricing.

The price of a road (usually zero) bears no relationship to demand for that road at that time. For example, it costs the same to use a road at 3am as it does in the peak of rush hour traffic, even though demand for roads is much lower at 3am. The net effect is that instead of paying for roadway space with money, we all pay with our time.

We waste our time sitting in traffic, essentially waiting in line, to use roads. This vastly inefficient method of allocating roadway space may seem very democratic, in the sense that all must pay with their time. However, it actually discriminates against the poorest and most vulnerable members of society. Transit riders, who have far lower incomes than non-riders in Los Angeles County, use buses that sit in that same slow traffic. Moreover, low-income people typically have less flexible work schedules with hourly wages and face severe penalties for lateness. Whereas higher-income individuals may be able to shift their travel times or work from home to avoid congested periods, lower-income people often cannot.

Congestion Pricing Today

Congestion pricing has proven challenging to implement for reasons such as lack of political viability, technical and privacy concerns, and equity concerns. Despite these challenges, several metropolitan areas have implemented various forms of congestion pricing. Once implemented, these schemes have had various degrees of success but, notably, none have ever been repealed. This includes the only

congestion pricing pilot of any kind implemented to date in Los Angeles County, Metro's Express Lanes program.

More comprehensive congestion pricing schemes are currently in place in London, Stockholm, Singapore, and Milan. Each of these experiences offers lessons learned, but perhaps most notable is Stockholm. In this city, the congestion pricing scheme was widely opposed and was put in place on a pilot basis. After the trial period, the scheme proved so popular that it was accepted permanently. This demonstrates the value of a pilot period to test such a product, and to demonstrate its value, before casting judgment.

Congestion Pricing Models and Revenue Forecasts

In Los Angeles, there are three conceivable ways congestion pricing could be implemented. These are the following:

1) *Cordon Pricing*. It involves creating a boundary around a central district and then charging vehicles to cross that boundary. The fee can be variable, meaning it can go up or down based on demand. Alternatively it could be set at a specific rate for peak versus off-peak times. Either way, the idea is to reduce the number of vehicles entering a central area when demand is higher. This is the most common method of congestion pricing employed around the world.

   Cordon pricing is most effective when there is a strong Central Business District (CBD) with high quality mass transit options as alternatives to driving. Los Angeles County does not have a typical CBD, as job centers are dispersed throughout the region. Preliminary average revenues from cordon pricing of all trips entering downtown LA have been estimated to be as high as $1.2 billion per year (in year of expenditure dollars). This form of pricing is among the easiest to implement and has the most history to learn from.

2) *VMT Pricing*. Charging drivers based on Vehicle Miles Traveled (VMT) has been floated for many years as a potential substitute for a gas tax. However, a VMT fee platform can potentially be used to charge variable prices based on location and time of day. There have been VMT-fee experiments in California, Oregon, and Iowa. While none of these pilots have attempted to include additional fees for congestion, the Oregon pilot tested the idea by calculating the number of miles driven in the "congestion zone". In short, the technology exists to use VMT as a method of alleviating congestion but it has not yet been attempted due to political challenges.

   Preliminary average annual revenues from implementing VMT pricing have been estimated at $10.35 billion per year (in year of expenditure dollars) for the larger metropolitan area. While net revenues from Los Angeles County

alone would be less, Los Angeles County is the most populous part of the region and accounts for more VMT than the rest of the region. This estimate provides a sense of the strong revenue potential of such a scheme.

3) *Corridor Pricing*. Corridor pricing is a new kind of congestion pricing that has not been implemented anywhere. The idea is to price all lanes on all roads within a specific corridor with high traffic congestion but a viable public transit alternative. Functioning similar to cordon pricing, anyone traveling within a designated corridor during peak times would pay a fee based on how many miles they travel within the corridor. The price for travel within the corridor would be set high enough to ensure free flow traffic within that entire corridor.

Absolute revenues vary greatly, largely because the tolled areas vary considerably in their size and the demand for the road space they allocate.

In summary, Congestion pricing offers a powerful mobility solution that faces substantial barriers to implementation, but once implemented, tends to prove highly popular while generating substantial revenues that can be used for transit. In addition, congestion pricing can represent a significant improvement in equity.

The complete Primer on Congestion Pricing is provided in *Attachment E.*

5. Board Call to Action

The Metro Board is in a unique position to aid in the development of a funding/financing plan for Twenty-Eight by '28. The Board Call to Action items are recommended as follows:

- Approve the Baseline Assumptions/"Stakes in the Ground" recommended by staff;
- Include in the 2019 Federal Legislative Plan a Request for the Establishment of a White House Task Force re: Transportation Infrastructure Support for the 2028 Games;
    - The federal government has provided significant funding and support for the Olympic Games when held in the US (i.e. 1984, 1996, 2002). 74% of the past federal support has been for projects related to preparing the host cities' infrastructure.
- Continue to support and explore the use of innovative project delivery approaches, such as P3s, along with supportive changes to state and federal law and policy;
- Advocate for additional State and Federal Funding to support acceleration of projects;
- Minimize scope increases for Twenty-Eight by '28 projects;

    - The “triple constraints” rule for major projects states that any increase in scope can impact budget and schedule. As a result, it is important that Board decisions are made on schedule with the forecast milestones. In addition, increases in scope should be minimized in order to increase the likelihood of completing the Twenty-Eight by ’28 Initiative.
- Direct the Executive Management Committee to agendize and further frame the debt policy issues; and
- Direct Metro staff to conduct Feasibility Studies for a Congestion Pricing Pilot and a New Mobility Policy Strategy

APPENDICES

Attachment A – The Dashboard
Attachment B – The Policy for Early Project Delivery
Attachment C - RAM Listing
Attachment D – Primer on New Mobility Fees
Attachment E – Primer on Congestion Pricing

TWENTY-EIGHT BY '28 PROJECT LIST DELIVERY STATUS (updated November 2018)

Project	Measure M Completion Date[1]	Schedule (Measure M)	Phase	Target 28x28 Completion Date	Accomplishments	Status
1. Crenshaw/LAX Line	2019			2019	• Progressing with construction	• In construction; • Over 85% complete; • Forecast revenue service date is under review
2. MicroTransit **	2019	ON SCHEDULE		2019	• Awarded design contracts in April 2018 • Completed Interim Report in August-September 2018	• In design phase; • Final Report/Proposal to be completed in January 2019; • Anticipate launch of MicroTransit pilot in late 2019.
3. Regional Connector	2021	ON SCHEDULE		2021	• Completed Tunneling operations in January 2018 • Completed excavation of Broadway station • Completed decking of Flower Street • Zero Lost Time Incidents	• In construction; • 52% complete; • Forecast revenue service date is winter 2022
4. New Bus Rapid Transit Corridors (Phase 1)	2022	ON SCHEDULE		2022	• RFP for BRT Vision and Principles Study released on May 10, 2018	• Corridor will be identified and analyzed through the BRT Vision and Principles Study. Anticipated Notice to Proceed in October 2018.
5. Orange and Red Lines to Gold Line Transit Connector (North Hollywood to Pasadena)	2022	ON SCHEDULE		2022	• Technical and Outreach contracts awarded in May/June 2018, respectively.	• Alternatives Analysis (AA) underway as of July 2018 • Five community (pre-scoping) meetings scheduled between 9/29/18-10/13/18; other public outreach activities ongoing in fall 2018 • Complete AA, Board action to select alternatives for EIR, Public Scoping expected in spring 2019
6. Airport Metro Connector Station	2023	ON SCHEDULE		2023	• 60% package for site work completed • Begun coordination with LAWA's APM design team in integrating the AMC Station with the Automated People Mover project.	• Progressing towards 60% design completion, anticipated for November 2018 • 60% package for temporary shoofly scheduled for mid-October
7. I-5 North County Capacity Enhancements	2023	ON SCHEDULE		2023	• Design on schedule and within budget	• In final design; • 95% plans submitted to Caltrans for review; • Target date for start of construction is 2019
8. North San Fernando Valley	2023	ON SCHEDULE		2023	• Technical and Outreach contracts awarded • Five community meetings held September 2018 across the study area	• Alternatives Analysis began July 2018 and is expected to be completed in spring 2019 • Public Participation activities ongoing fall 2018 • Board Action anticipated in April 2019 to receive the Alternatives Analysis and to select alternatives for Environmental Review • Anticipate scoping to begin late spring 2019
9. Purple Line Extension Section 1	2023	ON SCHEDULE		2023	• Excavation and waler/strut installation completed July 2018 • TBM components lowered into the station box for assembly in August 2018 • Tunneling to start September 2018	• In construction; • Over 41% complete; • Forecast revenue service date is fall 2023

Project	Measure M Completion Date[1]	Schedule (Measure M)	Phase	Target 28x28 Completion Date	Accomplishments	Status
10. Gold Line Foothill Extension to Claremont (with ability to extend to Montclair)	2025	ON SCHEDULE		2025	• Released Request for Proposals for the Phase 2B Alignment Design-Build Project (C2002) in May 2018; • First contract (utility relocation) for Foothill Gold Line Light Rail Project completed under budget and ahead of schedule	• Anticipate Design-Build Contract award by January 2019; • Major construction expected to start in 2020; • Construction anticipated to be completed in 2026
11. LA River Path	2025	ON SCHEDULE		2025	• Technical and Outreach contracts awarded	• Conceptual Design Report under review • 5% Conceptual Drawings under review • Pre-environmental outreach underway • Anticipate scoping to begin late spring to early summer 2019
12. LA River Way (plus Mobility Hub**) – San Fernando Valley	2025	ON SCHEDULE		2025	• City of LA nearing completion of environmental document	• CEQA document anticipated to be certified spring 2019; • Pursuing NEPA clearance in separate document; • Working on 30% design for Van Alden to Balboa segment in anticipation of award of ATP Cycle 4 grant.
13. Orange Line Travel Time and Safety Improvements	2025	ON SCHEDULE		2025	• Board approved project description and Statutory Exemption at the July 2018 meeting; • NOE circulation period ended Aug. 29, 2018	• Construction Groundbreaking to be held on Oct. 12, 2018; • Continuing work on gating traffic impact analysis and coordination with LADOT; • Preliminary Engineering and Community Outreach are ongoing; • Coordination with other SFV transit projects underway
14. Purple Line Extension Section 2	2025	ON SCHEDULE		2025	• Groundbreaking ceremony held on February 23, 2018; • Bureau of Engineering approved a nine-month street closure of a small part of Constellation in May 2018; • Demolition of the 1940 Century Park East building and 1950 CPE parking structure have been completed; • 130c Tech Memo for N. Canon completed in Sept 2018	• In Engineering; 11% complete; • Forecast revenue service date is Summer 2025
15. Purple Line Extension Section 3	2026	ON SCHEDULE		2026	• Addendum approved by Metro Board in May 2018; • FTA approved Entry into FTA New Starts Engineering Phase in August 21, 2018; • FTA LONP approved on Sept 19, 2018	• Construction contracts expected to be awarded late 2018 and early 2019; • Forecast revenue service date is winter 2026

Project	Measure M Completion Date[1]	Schedule (Measure M)	Phase	Target 28x28 Completion Date	Accomplishments	Status
16. Sepulveda Pass ExpressLanes	2026	AHEAD OF SCHEDULE		2026	• Finalizing Level 2 Traffic and Revenue Study • Preparing scope of work for technical studies • Coordinating with Planning on the Sepulveda Transit Corridor Study	• Currently working on the Tier 1 ExpressLanes Network Project Study Report/Project Development Support (PSR/PDS) which includes this project slated for completion in the summer/fall of 2019; • Upon completion of PSR/PDS, an application will be submitted to the CTC in fall 2019 to obtain tolling authority; • Staff is coordinating efforts with transit studies underway
17. East San Fernando Valley	2027	ON SCHEDULE		2027	• Metro Board selected an LPA in July 2018 and authorized staff to execute scope modifications to complete: Grade Crossing Safety Study; Metro Orange Line Connectivity Study; ACE; and a First Last Mile Plan. • Work on Final EIS/EIR initiated along with work on Board approved scope modifications.	• Work being conducted on Final EIS/EIR; • Anticipate Board certification of Final EIS/EIR in early 2019
18. I-105 ExpressLanes	2029	AHEAD OF SCHEDULE		2027**	• Continuing to work with Caltrans to prepare PAED. • Investment Grade Traffic and Revenue Study and Concept of Operations underway • Scoping meetings held in March 2018 • Coordinating with West Santa Ana Branch (WSAB) team on potential new I-105 WSAB/Green Line station	• The development of a Project Approval Environmental Document (PAED) is underway and slated for completion in early 2020; • Concept of Operations and Traffic and Revenue studies are currently underway; • An INFRA grant was submitted for this project in an effort to expedite project delivery to commence operations in 2025; • Staff anticipates submitting an application to the CTC to obtain tolling authority in the summer/fall of 2018; • If funds are advanced, the project can be completed before the target completion date
19. I-710 South Corridor Early Action	2032	AHEAD OF SCHEDULE		2027**	• Metro Board adopted Alternative 5C as the Locally Preferred Alternative for addition of one lane and upgrading the freeway	• In environmental phase; anticipated completion date of the final environmental document is early 2019; • Discussions with Caltrans in progress to expedite; • Potential lawsuit(s); • Once the environmental document is final/approved, contracts for final design of “early action” projects will commence
20. Green Line Light Rail Extension to Torrance	2030	AHEAD OF SCHEDULE		2027**	• Presented Supplemental Alternatives Analysis (SAA) including incorporation of stakeholder/city feedback and refinement/updates to alternatives to the Board at September 2018 meeting • Board approved carrying forward Alternative 1 and Alternative 3 for environmental review	• Re-initiation of environmental review is next phase of project

Project	Measure M Completion Date[1]	Schedule (Measure M)	Phase	Target 28x28 Completion Date	Accomplishments	Status
21. Blue Line Signal and Washington/Flower Junction Improvements*	2028	ON SCHEDULE		2028	• RFP released, and proposals were due on April 13, 2018	• Notice to Proceed received June 2018, with construction (on entire Blue Line) starting in January 2019; • Construction on Washington/Flower junction anticipated to occur in spring/summer 2019
22. I-10 ExpressLanes I-605 to San Bernardino Line*	2027	ON SCHEDULE		2027	• Coordinating with San Bernardino County Transportation Authority • Coordinating with Caltrans District 7 regarding Network Project Study Report and related technical studies	• Project is in construction being built as HOV lanes; conversion to ExpressLanes upon completion of construction; • No funding has as yet been identified for ExpressLanes implementation; however, the ExpressLanes Tier 1 Network Project Study Report/Project Development Support (PSR/PDS) currently underway will complete the initial study for this effort
23. SR-57/60 Interchange Improvements	2031	AHEAD OF SCHEDULE		2028**	• Final design contract award approved by the Metro Board in September 2018 for a three-year or faster period of performance;	• Construction start by 2022
24. Vermont Transit Corridor	2028	ON SCHEDULE		2028	• Key stakeholder meetings to discuss initial six preliminary rail concepts and potential refinement of BRT concepts took place in April/May 2018; • Identified six preliminary rail concepts for the corridor; • Based on an initial set of criteria, identified the three most promising rail concepts to move forward into the next level of detailed analysis	• BRT Technical Study was completed in February 2017; • Rail Conversion/ Feasibility Study, which will explore the feasibility of converting proposed BRT concepts to rail, began in December 2017; • October 2018 – Currently conducting key stakeholder meetings to discuss the results from the more detailed analysis of the three most promising BRT concepts
25. Sepulveda Transit Corridor	2033	AHEAD OF SCHEDULE		2028**	• Elected officials roundtable meetings, as well as outreach to major study area stakeholders held in April 2018 • Developed initial concepts for the Valley to Westside portion of the study area • Completed first round of community outreach in June 2018	• Feasibility Study/Technical Compendium began December 2017 and is expected to be completed by fall 2019, with findings presented at the November 2019 Metro Board meeting; • Evaluating Valley to Westside initial concepts and developing Westside to LAX initial concepts
26. Gold Line Eastside Extension to Whittier or South El Monte	2035	AHEAD OF SCHEDULE		2028**	• Executed the new outreach contract with consultant in July 2018 • Completed the contract amendment negotiation process for the reinitiated environmental study in August 2018. • Released RFP for the advanced conceptual engineering work in March 2018, completed the consultant selection process and contract negotiation process as of September 2018 • Conducted one round of briefings with corridor cities	• Anticipate award of new contracts in October 2018 to reinitiate the environmental study, including the negotiated Contract Modification No. 18 to CDM Smith/AECOM for the EIS/EIR work and the new advanced conceptual engineering (ACE) design services contract in support of the environmental study.

Project	Measure M Completion Date[1]	Schedule (Measure M)	Phase	Target 28x28 Completion Date	Accomplishments	Status
27. West Santa Ana Branch	2041	AHEAD OF SCHEDULE		2028**	• Received Board approval in March 2018 for further study to expand northern study options; • Conducted community meetings in March 2018 to share new northern alignment concepts and solicit feedback; • Completed an Updated Northern Alignment Screening Report in May 2018. Received Board approval on May 24, 2018 to carry forward Alternatives E and G into the Draft EIS/EIR; • Held updated Scoping Meetings in July 2018. Scoping comment period ended August 24, 2018.	• Draft EIS/EIR work continuing; • Significant resources are currently devoted to preparing for P3 procurement; • Project planning, design, environmental clearance, engineering and P3 delivery procurement work are actively being accelerated with multiple standing Metro interdisciplinary teams in place
28. I-405 South Bay Curve Improvements	2047	AHEAD OF SCHEDULE		2028**	• Two task orders for widening and auxiliary lanes were awarded to consultant in March 2018 via the Highway Program on-call services contract with a seven-month period of performance;	• Upon completion of PSRs (expected in October 2018), the two projects will be advanced to environmental and final design; • Discussions with South Bay Cities COG in progress to fund the projects by their Measure R/M subregional highway allocations.

* non-Measure R nor Measure M project
** These accelerated completion dates can only be accomplished with Board approved actions pertaining to the Twenty-Eight by '28 Motion (Motion #4.1)
1 – Expected completion date has a 3-year range. First year of expected opening date shown.


AA/Technical Report


Environmental


Design/Engineering


Construction

Adopted Metro Board Policy: Early Project Delivery Strategy

EFFECTIVE DATE:
November 30, 2017

TITLE
- This Policy shall be referred to as the **Early Project Delivery Strategy**.

PURPOSE
- This Policy establishes clear, uniformly applied criteria to determine if a Measure M Project can be delivered faster than scheduled in the Measure M Expenditure Plan. A comprehensive policy allows for rigorous and expeditious analyses and determinations. It provides for transparency and financial accountability. Projects can be accelerated as long as others are not negatively impacted, pursuant to the Measure M Ordinance.

PROCESS
1. Identify multiple inputs that suggest a potential for acceleration. A screening tool will then be utilized to assist in identifying the inputs that potentially have occurred and whether an initial assessment of the propensity for acceleration is warranted.
2. If warranted, staff will then conduct an analysis to confirm the ability to accelerate a project schedule, determine the extent to which a project could be accelerated and what would be the impacts of that action.
3. The Board of Directors will review the staff analysis and may: (a) give direction to subsequently provide notice and take action pursuant to controlling law; (b) decline to find for early project delivery; or (c) direct staff to undertake further analysis.

GENERALLY
- Multiple acceleration inputs are typically needed to result in accelerating a project schedule.
- A project's funding, schedule, scope or legal/regulatory environment are integral to the acceleration inputs.
- Acceleration inputs considered may also indirectly relate to the project if they are demonstrated to substantially advance system performance or adopted policies of the Board.
- Acceleration inputs are intended to be transportation mode-neutral, unless otherwise indicated (e.g., mode-specific funding revenues or fees).
- Funding considerations must be consistent with all applicable local, state, and/or federal rules and regulations; and Board-adopted debt policy.

DEFINITION
- **Accelerator:** a single strategic input that could partially support facilitating early delivery of a Measure M project.

STRATEGIC INPUTS FOR EARLY PROJECT DELIVERY

	Accelerator	Points
Funding (30 points)	1. **New Revenue.** Has new, committed funding become available at an amount greater than 25% of the total project construction cost?	15
	A. Is this funding discretionary?	2
	B. Is this funding somehow conditional to the project or time-sensitive?	5
	C. Is funding cash flow available sooner as a result of a delayed project?	3
	D. Are confirmed surplus funds available from another project in the same subregion, based on a final Life of Project budget?	2
	E. Would there be cost savings of at least 25% based on the time value of money resulting from this funding accelerator?	3
Partnerships (30 points)	2. **Regional Responsibility.** Have one or more of the local jurisdictions within which the project is located substantially advanced or committed to advancing the implementation of one or more Metro Board adopted goals and policies that support the integration of transportation and land use for which Metro is reliant upon its local partners to achieve?	6
	3. **Process Streamlining.** Have all responsible local agencies streamlined permitting processes and executed or committed to executing necessary memoranda of agreements prior to awarding of the project construction contract?	5
	4. **Additional Support.** Is the local jurisdiction and/or other local partner contributing at least 10% more than the required 3% contribution or 5% of the project cost within that jurisdiction from other sources?	5
	5. **Value Capture.** Is a local improvement, financing district or other value capture financing tool existing or will be established within three years of the groundbreaking date for the purpose of funding at least 10% of the project cost within the jurisdiction in which the financing tool is established?	5
	6. **Advance Funding.** Is there a proposal by a local jurisdiction or other party to advance funding, which would deliver all or a functional segment of the project 10% earlier?	5
	7. **Impact Fees.** Is there a program to collect a fee in-lieu of providing required parking and/or local traffic improvements, with revenues allocated to transportation demand management (TDM) strategies that are directly dependent on and in support of Metro's project, or a goods movement impact fee program to fund improvements, in conformance with California and federal laws?	4

	Accelerator	Points
Process (25 points)	8. **Streamlined Review.** Is this project currently undergoing or can commit to a streamlined planning and environmental review process that does not exceed three years in duration?	5
	9. **Clearance Complete.** Has this project concluded the planning and environmental review process, needing no more than a refresh of the environmental document(s), not exceeding one year in duration to complete (Operation Shovel Ready)?	10
	10. **Phased Completion.** Can this project be designed to phase improvements to achieve early action, incremental benefits?	8
	11. **Property Availability.** Has at least 75% of the required right-of-way and site acquisitions been completed or is anticipated to be completed within one year?	2
Innovations (15 points)	12. **Alternative Solutions.** Is there an equal or superior, less costly improvement to accomplish the capacity and performance intended by the transportation project?	3
	13. **Technological Innovations.** Are there technological innovations that will reduce the planned capital and/or operating cost of the project?	3
	14. **Consolidated Delivery.** Is there an opportunity to combine two or more projects/segments to achieve economy of scale and minimize impacts of multiple back-to-back construction over a long period of time such that the combined project construction cost is reduced by at least 25%?	3
	15. **Delivery Method.** Is this project the subject of a public-private partnership proposal or other unsolicited proposal that can reduce the estimated construction cost by a minimum of 10% or accelerate the delivery date by at least 5 years?	6

PROPENSITY FOR EARLY PROJECT DELIVERY

High:	67-100	Automatically advances to staff analysis and Board consideration
Medium:	34-66	Advances to staff review, which determines whether Board consideration is warranted
Low:	0-33	Does not advance to staff review nor Board consideration
Exception:	N/A	Project acceleration can unambiguously be demonstrated by an exceptional condition regardless of scoring (e.g., unexpected full funding from outside source)

MEASURE M PROJECT EVALUATION READINESS TOOL (M-PERT)

- M-PERT is an evaluation tool only—not a determinative decision tool.
- Required initial screening step (unless exceptional condition, per above).
- All Measure M projects ordered as listed in the Expenditure Plan are included.
- The above acceleration strategic inputs are set forth as "yes" or "no" questions to answer.
- A score given to each input to measure its relative strength in impacting project timing; a "yes" answer returns the possible score for that input, as listed above.
- An overall score given as a low, medium and high indicator for acceleration.
- An accounting of evaluations conducted is logged and reported.
- The M-PERT tool is for use by Metro staff, Board Directors and their deputy staff.

MAINTAINING PROJECT SCHEDULES: HOW TO HELP METRO DELIVER PROJECTS

	Responsibilities
Funding	• Protect all funding sources allocated to the project, per Metro's financial plan.
	• Keep the project within the budgeted cost identified in the Measure M Expenditure Plan.
Partnerships	• Request design features that have a rational nexus to potential project impacts.
	• Minimize permitting requirements and ensure that ministerial actions are a staff-level decision, done timely.
	• Establish and maintain an effective, genuine public and stakeholder engagement process.
Process	• Select a Locally Preferred Alternative that can be constructed within budget or augmented with reasonably expected, new outside funding sources that are needed to achieve desired community goals and compatibility.
	• Pursue constructive conflict resolution, creativity and solutions that are in rough proportionality to the problem to avoid litigation delays.
	• Thoroughly address environmental issues and avoid project design features that trigger costly mitigation measures.
Innovations	• Rely upon current, proven technology for the project design, rather than await speculative innovations.
	• Seek any necessary regulatory reform and streamlining to allow the rapid deployment of any available state-of-the-art, proven technologies that can increase capacity, reduce travel times or improve safety, which can help keep the project on time and at or below budget.

DISCLOSURE AND RECOVERY PLAN

- A disclosure and recovery plan shall be prepared for a project at risk for delay.

ANNUAL REPORTING AND EVALUATION

- The CEO shall report annually on activities and actions pertaining to this Policy, including projects being considered for early project delivery, the number of screening inquiries conducted for each project using M-PERT and projects under or being considered for a Disclosure and Recovery Plan.

28 x 2028 Strategy Listing

Summary Description	Risk	Comments	10-Yr Estimate
DEBT			
Issue additional debt within current policy for capital categories only.	M	- Issue an additional $6.7B on top of current $7.3B base planned debt, totaling $14B in new debt over 10 years. This equates to $1.4B in debt service annually or 21% of the FY19 annual budget. Current debt service makes up 6.5% of the annual budget. - Potential rating downgrade resulting in higher borrowing costs (est. $2M to $6M aggregate cost for every $100M issued) - Drop in sales tax revenue may require paying debt service with funds intended for operating the system	$6,700,000,000
Issue additional debt by bonding for capital categories only to the maximum permitted by the Additional Bonds Test (ABT) and assume an ABT of 1.5x for Measure M	H	- Issue an additional $10.8B on top of current $7.3B base planned debt, totaling $18.1B - Estimated $1.7B a year in debt service (26% of FY19 annual budget) or $17B over 10 years - Potential rating downgrade resulting in higher borrowing costs (est. $2M to $6M for every $100M issued) - Maximum leverage removes Metro' ability to borrow to respond to any unforeseen financial event - Decline in sales tax revenue may require paying debt service with funds intended for operating the system	$10,800,000,000
INCREASE REVENUES FROM EXISTING SOURCES			
Fare Revenues			
Increase fares by 10%	L	Low impact to riders; requires public hearing and Board adoption	$302,614,000
Increase fares by 15%	M	Medium impact to riders; requires public hearing and Board adoption	$453,921,000
Increase fares by 20%	H	High impact to riders; requires public hearing and Board adoption	$605,228,000
Increase fares by 25%	H	High impact to riders; requires public hearing and Board adoption	$756,535,000
Advertising			
Expanded Advertising and Corporate Sponsorship	L	Metro Board to reconsider Expand advertising (Digital Bus stops/Billboards) Corporate Sponsorship (rail lines, stations, Special Event Service	$1,000,000,000
Toll Revenues			
Toll revenue from new ExpressLanes (EL) Conservative projected revenues	L	Projected toll revenues, including debt financing, in excess of new EL capital and operating cost. Funding will be used for other projects in the EL network corridor. Projected toll revenues (conservative estimates) are based on increased occupancy requirements and dual lanes. Requires Board approval of Interfund Loan Policy.	$399,000,000
Toll revenue from new ExpressLanes (EL) High projected revenues	H	Projected toll revenues, including debt financing, in excess of new EL capital and operating cost. Funding will be used for other projects in the EL network corridor. Projected toll revenues are based on increased occupancy requirements and dual lanes. Requires Board approval of Interfund Loan Policy.	$798,000,000
Funding			
Multi-Year Subregional Funds by impacted subregions on 8 accelerated projects	M	Total of $846.4M in MM MSP funding over 10 years for the following subregions: Central City, Gateway Cities, South Bay, San Gabriel Valley and Westside (only subregions that have 28 by 2028 projects)	$846,400,000
Local Return funds by impacted cities on 8 accelerated projects	H	- Represents all Local Return (PA, PC, MR, MM); requires agreements with cities - Impacts 27 cities	$2,689,427,629
Require 3% of accelerated costs to be funded by cities' Local Return	H	Seek cooperative agreement with cities to contribute (3% of the Accelerated capital costs of $23.7B) to be funded by cities' impacted. May impact cities' planned projects.	$711,000,000
Increase Federal funding share from 15.4% to 19.2% (FFGA for WPLE3)	M	Assumes federal contribution for WPLE3 increases by $1.3B. Timing and amount of grant award is medium to high risk	$983,200,000
Increase Federal funding share from 15.4% to 22.1% (Expands total New Starts Drawdown across WPLE, WSAB, and Sepulveda)	H	There is limited additional capacity to draw upon for future Federal grant opportunities Assumes applying for New Starts Grants for WSAB & Sepulveda in addition to WPLE3, maximizing the $400M annual drawdown amount through 2027. If the total CIG Program appropriation nationally does not increase, the risk of obtaining the required funds for these two projects, prior to 2028, will be high.	$1,965,700,000
Increase State funding share from 11.8% to 14.5% - across various 2028 projects	M	Since an increase in State funding capacity is unknown, any assumption above 12% State funding contribution presents a risk, unless there is an increase to the overall State's base fund.	$700,400,000
Increase State funding share from 11.8% to 17.9% - across various 2028 projects	H	Additional SB 1 funds - Probability is high risk due to state's future rounds of eligible funds, competitive process, timing and programming	$1,695,500,000
Legislative Strategies			
Increase the percentage of Cap and Trade Funds allocated to public transit	M	Two cap and trade categories allocate funds to transit. Doubling the percentages of those funds and attaching allocation formulas beneficial to Los Angeles would increase funding for capital and operations purposes.	$600,000,000
Reconfigure existing SB 1 programs to generate more funds for Los Angeles County	H	Many of the SB 1 programs are discretionary. Attaching formulas beneficial to Los Angeles would ensure a larger proportion of funds to Los Angeles.	$1,000,000,000

28 x 2028 Strategy Listing

Summary Description	Risk	Comments	10-Yr Estimate
REDUCE EXPENDITURES			
Transit Operations			
Electric bus - conform with state mandate of 2040 rather than 2030	L	The CARB plan requires that all vehicles purchased after January 2029 be electric thereby converting all fleets to electric by 2040. Staggering procurements according to the CARB plan will save $350M.	$350,000,000
Bikeshare Program			
Bikeshare Program	M	Transition/Sell to City of LA The Bikeshare program annual budget for Metro operating costs is $25M. About 65% of that cost is reimbursed by participating cities, resulting in a net savings of $8.75M annually if the program were to be transitioned/sold to City of LA.	$87,500,000
P3 Opportunities			
Explore P3 opportunities	M	Covers possible savings on three potential Metro projects through P3 delivery, from cost efficiencies across construction, O&M, and long-term capital replacement (SGR) West Santa Ana, Sepulveda Transit Corridor, East San Fernando Valley Estimate based on utilizing discount rates of 8% for the construction costs and 14% over the construction/operating period.	$5,100,000,000
GENERATE REVENUES FROM NEW SOURCES			
Legislative Strategies			
Seek to back the creation of a White House Task Force on the 2028 Olympic and Paralympic Summer Games	L	We recommend the creation of a White House Task Force on the 2028 Olympic and Paralympic Games. Similar efforts in the past resulted in the federal government providing $1.4 billion for highway and transit infrastructure projects to support the Olympic Games – 1984 Summer Olympics in Los Angeles, 1996 Summer Olympics in Atlanta, and the 2002 Winter Olympics in Salt Lake City. We recommend that Metro prepare an infrastructure package in the range of $1.5-2 billion that would enhance our highway and transit systems to serve the region during the 2028 Games. When indexing for inflation, this request is consistent with the funds granted to Salt Lake City when it hosted the 2002 Winter Games.	$2,000,000,000
Value Capture			
Value Capture financings (Variety of locations)	M	Taxing districts formed at key location of new LRT lines. Funding used for project costs. Estimated funding amount based on historical value capture financings at a variety of locations.	$93,000,000
Value Capture financings (Desirable locations)	H	Taxing districts formed at key location of new LRT lines. Funding used for project costs. Estimated funding amount based on historical value capture financings at desirable locations.	$370,000,000
Congestion Pricing			
Congestion Pricing - Cordon Pricing	H	Common method of congestion pricing - Creating a boundary around central district and charging vehicles to cross that boundary. Estimates based on downtown LA, $1.2B annually.	$12,000,000,000
Congestion Pricing - VMT Pricing	H	Charging drivers based on Vehicle Miles Traveled (VMT). Most challenging to implement, but most comprehensive and has highest upside in terms of mobility benefits. Estimates based on $10.4B annually.	$103,500,000,000
Congestion Pricing - Corridor Pricing (10 corridors)	H	Price all lanes on all roads within a specific corridor with high traffic congestion but a viable public transit alternative. Travelling within a designated corridor during peak times would pay a fee based on how many miles they travel within the corridor. Estimates based on implementing corridor pricing at 10 corridors at $520M per corridor per year.	$52,000,000,000
New Mobility Fees			
Shared Devices - Fee at $1 per device per day	M	Levy a fee on shared mobility devices (i.e. scooters)	$580,000,000
Levy a fee on TNC - Fee of $0.20	M	Levy a fee on TNC or other new mobility trips originating in Los Angeles County (Fee of $0.20)	$401,000,000
Levy a fee on TNC - Fee at $2.75	H	Levy a fee on TNC or other new mobility trips originating in Los Angeles County (Fee of $2.75)	$5,500,000,000

LOW	$4,051,614,000
MED	$16,545,421,000
HIGH	$65,316,228,000 - $129,075,162,629

Primer on Congestion Pricing

Background and Rationale

The concept of congestion pricing has been around for decades and dates back at least to Nobel Prize winning economist William Vickrey. In the 1940s Dr. Vickrey was among the first economists to note that roads are one of the few goods in society which are provided for free. Simple supply and demand will tell you that when you provide something for free, people use more of it than they would otherwise. Dr. Vickrey theorized that this concept explains why roads are often congested. He and many others since have suggested charging fees for roadway congestion. This means charging higher fees for roadway use when demand is high and lower or zero fees when demand is low, a concept known as congestion pricing.

Admittedly, roads are not actually provided free of charge. We all pay taxes that are used to build and maintain the roads. However, with the exception of toll roads (which represent a very small percentage of miles driven in the U.S.) people pay zero out-of-pocket costs for their direct road usage. More critically, the price of a road (usually zero) bears no relationship to demand for that road at that time. For example, it costs the same to use a road at 3am as it does in the peak of rush hour traffic, even though demand for roads is much lower at 3am.

This type of pricing structure is rarely applied to other goods. For example, you would not expect to pay the same price for the same seat at Dodger Stadium during the World Series as you would during pre-season. If these two items were priced the same, either they would be too expensive and few people would go to a regular game, or they would be too cheap and the World Series tickets would be given to whoever could get in line to buy them first. Yet this is how we allocate roadway space every day – it is vastly underpriced, demand exceeds supply, and whoever gets there first gets the space. This is why people will leave their houses earlier and earlier in the morning to avoid traffic.

The net effect is that instead of paying for roadway space with money, we all pay with our time. We waste our time sitting in traffic, essentially waiting in line, to use roads. This vastly inefficient method of allocating roadway space may seem very democratic, in the sense that all must pay with their time. However, it actually discriminates against the poorest and most vulnerable members of society. Transit riders, who have far lower incomes than non-riders in Los Angeles County, use buses that sit in that same slow traffic. Moreover, low-income people typically have less flexible work schedules with hourly wages and face severe penalties for lateness. Whereas higher-income individuals may be able to shift their travel times or work from home to avoid congested periods, lower-income people often cannot. Low-income people typically cannot afford the most fuel-efficient vehicles, so they spend a greater proportion of their income on gas when stuck in traffic. And finally, this unnecessary traffic creates greater emissions and pollution, and low-income individuals typically inhabit the areas with the poorest air quality.

When implemented effectively, congestion pricing can represent a significant improvement in equity. If the proceeds from roadway pricing are used to subsidize increased or improved transit service, or low

income fare programs, congestion pricing becomes a massive wealth transfer from rich to poor wherein both groups benefit from travel times improvements.

Implementation

Congestion pricing has proven challenging to implement for a number of reasons. First, charging people for something that has previously been given away for free is never a politically popular idea. Second, there are technical and privacy challenges with respect to charging people based on where and when they drive. Third, there is the perception that charging for roads is inequitable and discriminates against lower-income individuals who will not be able to afford to pay the charge. Despite these challenges, several metropolitan areas have implemented various forms of congestion pricing. Once implemented, these schemes have had various degrees of success but, notably, none have ever been repealed. This includes the only congestion pricing pilot of any kind implemented to date in Los Angeles County, Metro's Express Lanes program.

Congestion Pricing Models and Revenue Forecasts

More comprehensive congestion pricing schemes are currently in place in London, Stockholm, Singapore, and Milan. Each of these experiences offers lessons learned, but perhaps most notable is Stockholm. In this city, the congestion pricing scheme was widely opposed and was put in place on a pilot basis. After the trial period, the scheme proved so popular that it was accepted permanently. This demonstrates the value of a pilot period to test such a product, and to demonstrate its value, before casting judgment.

In Los Angeles, there are three conceivable ways congestion pricing could be implemented. These are the following:

1) *Cordon Pricing*. This is the type of scheme often proposed for New York City, and implemented in all four cities above. It involves creating a boundary around a central district and then charging vehicles to cross that boundary. The fee can be variable, meaning it can go up or down based on demand. Alternatively it could be set at a specific rate for peak versus off-peak times. Either way, the idea is to reduce the number of vehicles entering a central area when demand is higher. This is the most common method of congestion pricing employed around the world.

   Cordon pricing is most effective when there is a strong Central Business District (CBD) with high quality mass transit options as alternatives to driving. Los Angeles County does not have a typical CBD, as job centers are dispersed throughout the region. This makes cordon pricing more of a challenge here. However, previous studies have been conducted that looks at cordon pricing in downtown Los Angeles and the Westside. Preliminary average revenues from cordon pricing of all trips entering downtown LA have been estimated to be as high as $1.2 billion per year (in year of expenditure dollars). In theory, cordon pricing could be piloted in one area of Los Angeles County and then expanded to other job centers if it proves popular. State legislation is pending that would allow such a pilot. This form of pricing is among the easiest to implement and has the most history to learn from.

2) *VMT Pricing*. Charging drivers based on Vehicle Miles Traveled (VMT) has been floated for many years as a potential substitute for a gas tax. However, a VMT fee platform can potentially be used to charge variable prices based on location and time of day. There have been VMT-fee experiments in California, Oregon, and Iowa. While none of these pilots have attempted to include additional fees for congestion, the Oregon pilot tested the idea by calculating the number of miles driven in the "congestion zone". In short, the technology exists to use VMT as a method of alleviating congestion but it has not yet been attempted due to political challenges.

   VMT pricing would be easier to implement in LA County if it were first put in place at the state level. With a state level program charging based on VMT in place, LA Metro could layer on a fee based on congestion by time of day. In theory variable rates could be put in place to also encourage fuel-efficiency and vehicle occupancy. Without a state program in place, Metro would need to at least seek state authorization to pilot a VMT program. This form of pricing is the most challenging to implement, but also the most comprehensive and has the highest upside in terms of mobility benefits. Preliminary average annual revenues from implementing VMT pricing have been estimated at $10.35 billion per year (in year of expenditure dollars) for the larger metropolitan area. While net revenues from Los Angeles County alone would be less, Los Angeles County is the most populous part of the region and accounts for more VMT than the rest of the region. This estimate provides a sense of the strong revenue potential of such a scheme.

3) *Corridor Pricing*. Corridor pricing is a new kind of congestion pricing that has not been implemented anywhere. The idea is to price all lanes on all roads within a specific corridor with high traffic congestion but a viable public transit alternative. Functioning similar to cordon pricing, anyone traveling within a designated corridor during peak times would pay a fee based on how many miles they travel within the corridor. The price for travel within the corridor would be set high enough to ensure free flow traffic within that entire corridor.

   This idea would be more feasible and appropriate for Los Angeles because the County has a series of congested corridors. Metro could select a specific corridor, such as a 1-2 mile area surrounding the 101 near the Red Line or the 10 corridor near the Expo Line, as a pilot program. We could offer the Red or Expo Line as transit alternatives but also run frequent express and local buses within the corridor and provide discounts for higher occupancy vehicles in order to offer numerous alternatives to driving alone. Drivers within the corridor would enjoy faster trips as would transit users. If successful, such a pilot could generate enthusiasm for further implementation elsewhere in the County.

Review of Finances and Performance of Existing Congestion Charging Programs

Congestion Pricing Programs: Cost and Revenue Estimates

City/Program	Status	Initial Investment	Annual Operating Costs	Annual Net Revenue	Efficiency (Costs/Revenue)
Oslo, Norway	*active*	USD $30M	USD $11M	USD $70M	16%
Singapore	*active*	USD $145M	USD $25M	USD $110M	23%
London, UK	*active*	USD $211M	USD $170M	USD $179M	95%
Stockholm, Sweden	*active*	USD $222M	USD $12M	USD $144M	8%
Dubai, UAE	*active*	n/a	n/a	USD $217M	n/a
Milan, Italy	*active*	€7M	€7M	€29.4M	24%
Gothemberg, Sweden	*active*	USD $84M	USD $12M	USD $89M	13%
San Francisco, USA	*active*	$56.3M	$944M	$1.3B	72%
Singapore	***active***	S $6.6M	S $5M	S $47M	11%
Manchester, UK	*proposed*	$195M	$55M	$140M	39%
Netherlands	*proposed*	n/a	n/a	n/a	n/a
New York City, USA - Variable Price	*proposed*	$265M	$150M		9%
New York City, USA - Variable Tolls	*proposed*	$282M	$110M	$2.2B	5%

Sources available upon request

UCLA quickly analyzed eight active congestion programs. In each case, the program examined runs in the black and generates surplus revenue. Across the eight programs, the operating cost-to-revenue ratio averaged 36 percent, suggesting that program revenues substantially exceed costs.

Two proposed programs that are not yet in operation also show favorable cost-to-revenue ratios. Manchester, England's proposal has an estimated cost-to-revenue ratio of 39 percent, while the proposed New York cordon tolling scheme is estimated to have costs that are only 9 percent of revenues.

Absolute revenues vary greatly, largely because the tolled areas vary considerably in their size and the demand for the road space they allocate. The London Congestion Charge, despite having very low revenue margins, nevertheless raises tremendous net revenue absolutely (about US $179 million annually) because access to central London is so valuable. Stockholm, conversely, is remarkably efficient compared to London (with costs being only 8 percent of revenues) but nevertheless brings in less net revenue absolutely (about US $144 million). Keep in mind that both of these charges are for central areas that are very small relative to the size of the entire metropolitan area. In Los Angeles, where there are many more drivers and a much larger area to cover, revenues could be much higher.

Case Studies

Singapore

Singapore has the longest established and perhaps most fully realized road pricing system. In 1974, the government conducted a year-long assessment and education program prior to launching a cordon price scheme known as Area Licensing Scheme (ALS) in 1975. Drivers entering a cordon in the downtown area of Singapore were required to purchase a license in advance and display it on the windshield. Singapore also simultaneously doubled parking fees in the downtown area and implemented parking cordon license enforcement. This resulted in an approximately 20% reduction in congestion levels. The annual

growth rates of vehicles entering the inner city per day dropped from 6% to 4%. Further, the program earned widespread citizen support.

In 1998, due to advancement in technology, Singapore replaced ALS with Electronic Road Pricing (ERP) scheme. Vehicles were required to have an In-Vehicle Unit (IU) on the dashboard and a smart card with fare stored in it. ERP gateways and gantries detected the type of vehicle and the real time congestion of the route and charged the vehicle based on road conditions. Charges were between $0-$3 USD. Larger vehicles are priced higher because they take up more space.

The goal of the ERP scheme is to keep the roads moving at desired speeds set by the Land Transportation Authority (LTA). Singapore simultaneously increased parking fees inside the restriction zone, increased the number and frequency of bus service, allowed for HOV+4 lanes, and created 15,000 park and ride spaces. The results of this program were significant. In 1998 when ERP was launched, Singapore's population was 3.9 million, with 235,000 vehicles entering the inner city daily. While the population grew by 44% in 2016 to 5.6 million, only 300,400 vehicles entered the inner city daily. Further, traffic was reduced in the inner city by 24% and average speeds increased from 18-22mph to 24-28 mph. Bus and train ridership increased by 15%. CO2 and other greenhouse gas emissions were reduced by 10-15% within the inner city. Singapore has an annual net revenue of $110M from the program. Revenues from the ERP program are earmarked for public transit, street safety, and transit oriented development.

In 2020, Singapore's LTA is moving from the ERP system to a Global Navigation Satellite System (GNSS), which is considered the next generation in technology. Due to the prohibitive costs required to upgrade and install new gantries, Singapore chose a technology that doesn't rely on overhead gantries. In-Vehicle Units will be replaced with On-Board Units (OBU) to support value-added services like automatic payment for off-peak usage, electronic payment for roadside parking, and electronic payment for checkpoint tolls. Singapore's goals with GNSS are to make the system even more targeted, flexible, and equitable.[1]

London

Since the 1960s, London had experienced decades of congestion due to increasing population and its complexity of streets. Led by the newly elected mayor, Ken Livingstone, who had made congestion pricing one of his main campaign promises, Transport for London (TfL) launched a cordon pricing scheme in 2003. The zone included the area inside London's Inner Ring Road, a route comprising main roads encircling the inner city. The system is a fully automatic fee payment system that utilizes number place recognition. Vehicles are registered automatically by cameras that take pictures of the license plates. This is achieved by utilizing overhead gantries, cameras at all entrance points of the zone,

[1] See "Road Pricing In London, Stockholm and Singapore: A Way Forward For New York City," *Tri-State Transportation Campaign*. Jan. 2018; "Electronic Road Pricing: Experience & Lessons from Singapore," *Prof. Gopinath Menon, Dr. Sarath Guttikunda*. 2010; "Lessons Learned from International Experience in Congestion Pricing," Federal Highway Administration. 2008.

pavement markings, and street signage. Drivers can make payments via telephone, text message, online, mail, or auto-pay. Drivers are fined if they do not submit payment.

The goals of the program are to reduce congestion, improve bus service, and improve trip reliability. In addition to congestion pricing scheme, TfL simultaneously made public transit improvements, increased enforcement of parking and traffic regulations, increased bus service and frequency, and provided more than 8,500 park and ride spaces.

Since launch in 2003, London has seen a 30% reduction in traffic congestion, an increase in average speed by 30%, and significant increased in travel time reliability. Bus service increased by 23% and reliability and journey time improved. Bus ridership increased by 38%. Of the thousands of car trips once made to the cordon zone, 50% shifted to public transit, roughly 25% were diverted to outside the cordon area, and the rest attributed to carpooling, walking, or biking. Further, CO2 emissions declined by 16%. London has annual net revenue of $179M; however, TfL faces extremely high operating costs.[2]

Stockholm

In 2003, in response to growing traffic congestion in the inner city, Stockholm's City Council voted to test congestion charge trials. In 2004, the Swedish Parliament approved a congestion pricing pilot program. This is despite incredibly low public support for the pilot—roughly 80% of residences opposed the program. Stockholm launched congestion pricing with a phased approach. The first phase saw an expansion of public transit, including 197 new buses and 16 new bus routes, as well as an expansion of existing service hours. The second phase consisted of 2,800 new park and ride facilities to allow for customers to drive to the edge of the cordon and then take transit into the center. The third phase was the actual implementation of the congestion charge, in which vehicle owners were required to pay USD $3 for driving into or out of the Stockholm inner city.

The Stockholm Transport Administration, together with the Transportation Board, manages the program. The overhead gantry technology and cameras at all cordon entrance points allow for a fully automatic fee payment system. Owners are sent monthly invoices for the total tax incurred from the month of driving. This can be paid via mail, direct debit, or electronically.

After only a few weeks of operation, traffic around the cordon decreased to 22%, down from 30-50%. Travel time reliability increased, and transit use increased by 4-5%. Public opinion on the congestion program changed, and the media characterized the service more positively. In fact, Stockholm constituent's voted to make the congestion pricing trial permanent through a referendum. In 2007, Stockholm launched the permanent pricing system. In 2016, variable pricing was added by time of day. This led to an additional 5% decrease in traffic congestion. Updates to the pricing scheme have been made over time to keep up with the changes in traffic patterns. Currently, travel across the cordon during peak periods cost as much as USD $4.14. In addition to reduction in traffic, the area has seen a

[2] See "Road Pricing In London, Stockholm and Singapore: A Way Forward For New York City," *Tri-State Transportation Campaign*. Jan. 2018; "Congestion Pricing Impacts Monitoring: Sixth Annual Report," Transport for London. 2008; and "Lessons Learned from International Experience in Congestion Pricing," Federal Highway Administration. 2008.

reduction of 14% in CO2, and GHG is down by 2.5%. Net revenues from the program are USD $144M annually.

Conclusions

Congestion pricing offers a powerful mobility solution that faces substantial barriers to implementation, but once implemented, tends to prove highly popular while generating substantial revenues that can be used for transit. This suggests that testing one or more congestion pricing ideas in Los Angeles County will be required in order to demonstrate the benefits and win over the public. This is why the Board agreed to look into the feasibility on Congestion Pricing in the Metro Strategic Plan, Vision 2028. It will take substantial political courage to even get a pilot program in place. But if successful, and if the revenues are used effectively, there is substantial evidence that this would be a better mobility initiative than anything else we could possibly undertake. Benefits of these programs are not limited to only revenue generation, but also in their proven ability to reduce delay, crashes and air pollution--consequences not easily monetized but unique and by most estimates very large.

Primer on New Mobility Fees

Background and Justification

Technological innovation is changing the ways that consumers access goods and services. Most dramatic has been the rise of transportation network companies (TNCs), such as Uber and Lyft, which has enabled new and better demand-responsive travel options for many people. But these private companies are in the business of profiting from public investments in roads and infrastructure that enable their success. Moreover, recent research has also shown that these on-demand transportation services, often known as ridehailing services, exacerbate congestion and pollution, and typically operate under different rules than other similar providers such as taxi services.[1]

Meanwhile, other new "shared" services have appeared with similar business models. Private companies have put shared bicycles, scooters, and cars on the streets with the expectation of using public rights of way to generate private benefit. In response to these new services, 7 major cities and 12 states have started levying fees or taxes on TNC trips to serve a variety of purposes, including revenue generation, congestion management, parity of compliance, and transportation equity.[2] Other cities have put in specific regulations to cap or regulate new mobility providers.

New Mobility Fees

While no city or region has yet to attempt to charge all private new mobility providers collectively, several have instituted fees on TNCs. The most common ways to tax TNCs are to charge a flat per-ride fee or to collect a percentage of the total fare revenue of a TNC on a regular basis. While these are the basic approaches, there are many innovative ways to leverage these approaches to support the policy goals of Metro. For example, utilizing a tiered tax approach can encourage preferred travel behaviors, such as lower fees for shared rides or fuel-efficient vehicles, and higher fees for rides that originate or end in congested areas. This type of pricing could extend to other new mobility services. For example, reduced or waived fees could be used as a mechanism to encourage services to underserved areas of the County, such as low-income neighborhoods that often do not receive services such as shared scooters or bicycles.

[1] See "Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States," by Regina R. Clewlow and Gouri Shankar Mishra, Institute of Transportation Studies, UC Davis, Oct. 2017.
[2] See "Taxing New Mobility Services: What's Right? What's Next," by So Jung Kim and Robert Puentes. Eno Center for Transportation. July 23, 2018

Potential Policy Objectives

1) Generate revenue for investment in transit and infrastructure

Taxes and fees are common tools used to raise revenue for public goods and services. Levying a fee on TNC or other new mobility trips originating in Los Angeles County serves as a potential revenue opportunity for Metro to then reinvest in public transit and infrastructure. For example, Chicago requires a per-ride charge from TNC passengers. As of Nov. 2017, the fee was $0.67 per ride. Fees were expected to raise $16 million for CTA in 2018, and $30 million in 2019 due to an increase by $.05. The revenue has been earmarked for specific, long-deferred maintenance on the rail system including upgrades to the track, structure, signal, and power systems, providing total trip time savings of 2-6 minutes.[3]

2) Manage congestion through influencing supply and demand

Congestion in LA County is prevalent throughout the day and occurs on arterial streets, as well as on regional highways. Research findings have shown that TNCs contribute to increases in vehicle miles traveled (VMT).[4] Fees for TNC trips are a form of pricing that could effectively manage demand in the most traffic-clogged areas of the County, to ensure that customers prioritize shared rides over single passenger rides, or even to incentivize a substitution to transit use instead. For example, New York City (which has a roughly similar population to Los Angeles County) taxes the total fare revenue of large TNCs (defined as high-volume for-hire services dispatching more than 10k a day in the city) at 8.875%. Additionally, beginning in 2019, New York City will impose a $2.75 flat surcharge for each trip beginning, ending, or entering a congestion zone by a for-hire vehicle. For the purposes of the surcharge, the congestion zone is the area of New York City, in the borough of Manhattan, south of and excluding 96th street. For pooled vehicles, the surcharge is imposed at a lower rate of $.75 per each person that enters and exits. New York City estimates this will bring $400 million per year to the Metropolitan Transportation Authority (MTA), and earmarked the funding for MTA's Subway Action Plan that addresses deferred maintenance on the subway.

3) Bring the new mobility industry into regulation

Instituting fees on TNCs can serve as the beginning of a more comprehensive regulatory plan to set the rules of engagement for private new mobility providers. Most of the new fee requirements instituted by cities and states have been included with other regulatory requirements, such as insurance minimums and data reporting. Additionally, proponents of

[3] So Jung Kim and Robert Puentes,"Taxing New Mobility Services: What's Right? What's Next," Eno Center for Transportation. July 23, 2018

[4] Regina R. Clewlow and Gouri Shankar Mishra, "Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States," Institute of Transportation Studies, UC Davis, Oct. 2017.

taxing new mobility services argue that it creates parity with existing taxi regulations and levels the playing field for competition.

The City of Santa Monica established an electric scooter pilot program in 2018. In addition to capping the total number of devices to 3,500, the city also charges an annual base operator fee of $20,000, plus an annual device charge of $130 per device.[5] Additionally, the City Council voted to enact a public land use fee for the right to use public land for commercial activities. Scooter companies are charged a $1.00 per device, per day fee, and Santa Monica estimates monthly revenues of $89,000, earmarked for improvements such as expanding sidewalks, green lanes, making walking, biking, scooter riding, and moving around Santa Monica easier and safer.[6]

4) Support programs that improve transportation equity

Taxes or fees on TNC trips can help improve transportation equity by either influencing behavior directly or by putting revenues towards supporting programs with similar goals. For example, the California Public Utilities Commission (CPUC) regulates TNCs in the state of California. CPUC collects a .33% tax on total fare revenue, and earmarks this towards the administrative costs of regulating TNCs. Governor Brown recently signed SB1376 into law, requiring the CPUC to assess at least $.05 per TNC ride to help pay for wheelchair accessible vehicles (WAVs) and for groups to advance the deployment of WAVs.

Estimated Revenue Potential from TNCs

The exact number of rides provided by all ridehailing services in Los Angeles County is unknown because these private companies are very protective of their data. However, we know that in 2016 Lyft averaged 70,000 rides a day in Los Angeles County, with about 20% market share.[7] These trips cost $9.66 on average.[8] We can therefore estimate that the entire ridehailing market provided roughly 350,000 rides a day in LA County in 2016 numbers, and know that both Lyft and Uber have continued to increase in popularity since then. This estimate is supported by TNC ridership from other cities/regions. The city of Boston had 96,000 TNC rides

[5] "Scooter and Bike Share Services" by City of Santa Monica Planning & Community Development. https://www.smgov.net/Departments/PCD/Transportation/Shared-Mobility-Services/. Access on Nov. 20, 2018

[6] "Santa Monica City Council Clarifies Rules for Electric Devices on the Beach Bike Path and Approves Public Right of Way," City of Santa Monica. August 29, 2018.

[7] Brown, Anne Elizabeth. "Ridehail revolution: Ridehail Travel and Equity in Los Angeles," Institute for Transportation Studies, UCLA, Jan. 2018.

[8] Ibid.

per day in 2017.[9] King County Metro, with a population of 2.1M people, had 91,000 rides a day from Uber and Lyft in 2018.[10]

Flat per-ride charge.

To estimate what kind of revenue can be generated utilizing a flat per-ride charge, we looked at the range of per-ride fees. Massachusetts charges the lowest per-ride fee per trip at $0.20 and NYC charges the highest at $2.75 per trip. Using our estimate of 350,000 daily ridehailing trips in 2016, that amounts to revenues between $70,000 to $962,500 per day, or between approximately $25M to $350M annually. If we assume increasing numbers of TNC rides since 2016, the range increases considerably. See table below for estimates.

TNC Rides	Fee of $0.20	Fee of $2.75	Low Range Annual Revenue	High Range Annual Revenue
350000	$ 70,000	$ 962,500	$ 25,550,000	$ 351,312,500
450000	$ 90,000	$ 1,237,500	$ 32,850,000	$ 451,687,500
550000	$ 110,000	$ 1,512,500	$ 40,150,000	$ 552,062,500

A flat per-ride charge is not the optimal way to charge TNCs. A more flexible charge that helps to achieve the mobility and equity goals of Metro and the County is preferred. However, such a charge would not necessarily change the revenue range estimates.

Estimated Revenue from Shared Devices

The exact number of shared mobility devices in LA County, such as e-scooters and e-bikes, is even more challenging to estimate than number of TNCs due to the relatively recent emergence of these devices. However, based on the City of Santa Monica's new pilot programs, we can make some rough estimates.

Santa Monica's City Council approved a public land use fee for bike and scooter companies. The City will charge scooter companies a fee of $1.00 per device, per day for the right to use public land for commercial activities. Santa Monica estimates revenue of $1.07M/annually.[11] The rest of Los Angeles County is not as conducive to bicycles and scooters as Santa Monica. However, even if we estimate only half as much demand for scooters and bikes in the rest of Los Angeles County, annual revenues could still be as high as **$58M** annually from scooters and bikes. This is a very rough estimate based on very little data.

[9] "Rideshare in Massachusetts: 2017 Data Report." By Department of Public Utilities. Accessed Nov. 2018.
[10] Gutman, David. "How popular are Uber and Lyft in Seattle? Ridership numbers kept secret until recently give us a clue," The Seattle Times. Nov. 5, 2018.
[11] Catanzaro, Sam. "City Council to Consider Public Right of Way Fee For Scooter Companies," Santa Monica Daily Mirror. August 24, 2018.

Conclusions

New mobility services have both positive and negative impacts. Any decision to enact a tax or fee should consider how it will affect travel behaviors, and should be made with consideration towards the goals outlined in Vision 2028. This is an opportunity to strategically shape and influence travel behavior in the public interest. New Mobility fees should be considered one component of a comprehensive pricing strategy around managing travel demand, in concert with congestion pricing.

A tiered tax allows for Metro to reward pooled riders or bicycle/scooter trips and includes policy safeguards for equity provision of service, congestion-like pricing, and a market-based approach. Taxes on new mobility services can go beyond raising revenue and can work towards improving the quality of life for LA County residents. Any mechanism for taxing these new mobility trips should be used in carefully targeted ways to designed to reduce single-occupancy vehicle use while improving equity and mobility.

Description	10-yr Estimate	Earliest Revenue Realization	Staff Recommendation
Debt			
Change debt policy	$10,800,000,000	6 months	**Not Recommended** – This is not recommended as Twenty-Eight by '28 faces a funding issue, not a financing issue. Issuing additional debt for Twenty-Eight by '28 will encumber future revenue sources to service that debt. This will prohibit Metro from delivering remaining projects in Measure M on schedule, as mandated by statute. Metro should continue to issue debt on a project-by-project basis, when dedicated funding sources are available for the project and when actual projects costs are to be incurred (during construction). Issuing debt too far in advance of construction can violate IRS rules, putting Metro's tax-exempt status in jeopardy and potentially incurring substantial costs for non-compliance.
Increase Revenue from Existing Sources			
Increase fares	$756,535,000	6-12 months	**Not Recommended** - This is not recommended as a funding mechanism for the 8 accelerated projects. Currently engaged in study to simplify and right-size our fare media. Will return to the board in June 2019.
Expand advertising and corporate sponsorship	$1,000,000,000	12-24 months	**Recommend Pursuing**
Toll revenue from existing ExpressLanes	$200,000,000	12-24 months	**Recommend Pursuing**
Toll revenue from new ExpressLanes	$300,000,000-500,000,000	5 years	**Recommend Pursuing**
Multi-Year Subregional Funds by impacted subregions on 8 accelerated projects	$846,400,000	12-18 months	**Recommend Pursuing**
Local Return funds by impacted cities on 8 accelerated projects	$2,689,427,629	12-18 months	**Recommend Pursuing**
Require 3% of accelerated costs to be funded by cities' Local Return	$711,000,000	12-18 months	**Not Recommended**
Increase Federal funding assumptions	$1,965,700,000	24-36 months	**Recommend Pursuing**
Increase State funding assumptions	$1,695,500,000	24-36 months	**Recommend Pursuing**

Description	10-yr Estimate	Earliest Revenue Realization	Staff Recommendation
Reduce Expenditures			
Electric bus - conform with state mandate of 2040 rather than 2030	$350,000,000	2 years	**Not Recommended –** Staff recommends retaining the original 2030 conversion time frame and moving this item to the baseline assumptions and priorities (proposed sacred items)
Bikeshare Program	$87,500,000	18 months	**Not Recommended –** Staff considered transferring the management, oversight, and expansion of the BikeShare program to the City of LA to free up cash flow for accelerating the Twenty-Eight by '28 projects. Transferring this program to LADOT would not necessarily eliminate the cost to Metro.
Explore P3 opportunities	$5,100,000,000	N/A	**Recommend Pursuing -** These estimates are based on long-term savings, not revenues. The savings would materialize over ten years of Measure M spending.
Generate Revenue from New Sources			
Seek to back the creation of a White House Task Force on the 2028 Olympic and Paralympic Summer Games	$2,000,000,000	6-12 months	**Recommend Pursuing**
Value Capture financings (Variety of locations)	$370,000,000	3 - 9 years	**Recommend Pursuing**
Congestion Pricing - Cordon Pricing	$9,600,000,000	12-24 months	**Recommend Pursuing**
Congestion Pricing - VMT Pricing	$83,000,000,000	12-24 months	**Recommend Pursuing**
Congestion Pricing - Corridor Pricing (10 corridors)	$42,000,000,000	12-24 months	**Recommend Pursuing**
Shared Devices - Fee at $1 per device per day	$464,000,000	12-24 months	**Recommend Pursuing**
Levy a fee on TNC	$4,400,000,000	12-24 months	**Recommend Pursuing**

Metro

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

Board Report

File #: 2018-0655, **File Type:** Motion / Motion Response **Agenda Number:**

REGULAR BOARD MEETING
SEPTEMBER 27, 2018

Motion by:

SOLIS, GARCETTI, HAHN, AND BUTTS

Related to Item 4
28 by 2028 Transportation Investments

In September 2017, almost a year back, Metro Board endorsed the "Twenty-Eight by '28 Initiative" to highlight projects for completion by the 2028 Olympic and Paralympic Games. Following Board action, staff developed a draft candidate list of projects that included Measure R, Measure M, and other projects already slated for completion by 2028. This list also included "aspirational" project schedules that propose to be accelerated by 2028 ("aspirational" is defined as a project that has a current delivery date later than 2028).

In November 2017, the Board received and filed the draft list of projects. The Metro Board recognized that the initiative is helpful in articulating a vision for what Metro seeks to achieve by 2028, which facilitates obtaining needed support from Metro's many partners in delivering a transformative transportation investment program for Los Angeles County by the commencement of the 2028 Games. Investments on this list are distributed countywide, demonstrating proactive regional coordination. The 2028 Games presents an opportunity to advocate for accelerated resources, particularly from the state and federal government, to achieve early project delivery of the aspirational schedules.

With over 70 percent of transportation investments deriving from local sales tax revenues, LA County has aggressively accelerated the growth of its public transportation system as a means to address the environmental woes resulting from the freight and car complex. With a focus of entire world on Los Angeles, it is imperative that our commitment remains on the delivery of these 28 projects with meaningful endeavors specifically for the projects that are still noted as "aspirational". Our efforts to ensure that no stone is left unturned to make the accelerated delivery of this list will ensure a region wide success and delivery of these projects throughout the LA County that provide region wide seamless access to businesses, culture, food, and unique experiences that our 88 cities and unincorporated areas offer.

Metro Board Directors have repeatedly affirmed these accelerated projects are a way to accomplish Los Angeles as the best world destination with a new transit infrastructure that will connect our widespread cities offering unique experiences, the "aspirational" narrative fails to adequately address the

commitment and effort that we like to see as a region. While delivering these 28 mega projects by 2028 is challenging, and Metro staff and CEO have made remarkable efforts, and notwithstanding that undertaking this challenge is undoubtedly unsurmountable task, Metro has the ability to demonstrate itself as a leader to trail blaze innovative paths to accomplish these goals in line with American innovative spirit. It's imperative that we as a Board take the challenges head on and to reaffirm our commitments while sending right signal to the private sector for innovative partnership ideas to deliver these projects and support our CEO and staff to transform this vision to a reality.

SUBJECT: MOTION BY SOLIS, GARCETTI, HAHN AND BUTTS

WE, THEREFORE, MOVE that the Board direct the CEO to:

A. Adopt and approve as policy ~~and priority~~ the 28 by 2028 initiative;

B. Develop and report back on a 28 by 2028 financial and funding plan with details on the following:

1. Cash flow requirements;
2. Operations and State of Good Repair costs;
3. Public Private Partnership project assumptions;
4. State and Federal funding assumptions;
5. Potential Impact on Fares

~~C. Develop an amendment to the Measure M Ordinance and Expenditure Plan to advance the "Schedule of Funds Available" dates for the accelerated transit and highway projects to comply with the 28 by 2028 schedule; and~~

D. Report with an update to the above by the December 2018 Board meeting and report back with the full 28 by 2028 financial plan and policy for Board consideration in February 2019.

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

Metro

Board Report

File #: 2019-0083, **File Type:** Motion / Motion Response **Agenda Number:**

PLANNING AND PROGRAMMING COMMITTEE
FEBRUARY 20, 2019
EXECUTIVE MANAGEMENT COMMITTEE
FEBRUARY 21, 2019

SUBJECT: RESPONSE TO MOTION BY DIRECTOR BUTTS TO AMEND ITEM 43 WITH QUESTIONS AND INSTRUCTIONS

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE report in response to Board Motion 43.1 by Director Butts at the January 2019 Board meeting.

ISSUE

On January 24, 2019, the Board passed Motion 43.1 (Butts, Attachment A), which included questions and instructions for staff to return to the Board with responses in their February report. This Motion was provided in response to staff's continuing response to Motion 4.1, directing the CEO to present a comprehensive funding plan for the "28 x 2028" initiative. This Receive and File Board Report is in response to questions by Director Butts.

BACKGROUND

The Metro Board approved the Twenty-Eight by '28 Initiative project list in January 2018, which includes 28 highway and transit projects totaling $42.9 billion (YOE) in infrastructure investment, with the goal of completing the projects in time for the 2028 Olympic and Paralympic Games. In September 2018, Board Motion 4.1 (Solis, Garcetti, Hahn, Butts) directed the CEO to develop a Twenty-Eight by '28 Funding Plan.

In December 2018, Metro CEO Phillip Washington responded to Motion 4.1 by presenting a list of potential strategies that could provide funding to accelerate the delivery of the 28 projects. CEO Washington returned to the Board in January 2019 with staff recommendations on strategies to pursue from the list presented in December. At the January Board meeting, the Board approved Motion 43.1, directing staff to return in February with responses to the questions and instructions posed.

DISCUSSION

Response to Motion 43.1, Questions 1 - 7

1. On Attachment B of the Board Report [File #2019-0011, The Re-Imagining of LA County: Mobility, Equity, and the Environment (Twenty-Eight by '28 Motion Response)], it states that the earliest any revenue realization can happen is 12 to 24 months. Can you further explain in detail the planning and development process for this?

Revenue from congestion pricing cannot be realized until a feasibility study is conducted. The study is necessary to determine where in LA County might make the most sense to test this idea, and what form of pricing (Cordon, Corridor, or VMT) might work best. Given the controversial nature of this concept, a substantial outreach and consensus building period will also be required to build support for testing the idea. Once the feasibility study is completed and the outreach conducted, we will bring back to the Board a staff recommendation regarding where, how, and how long to pilot congestion pricing. Assuming Board approval, it would still take time to get the pilot program up and running. More detail on the anticipated feasibility study process is provided in Attachment B to this receive and file report.

2. Normally a plan like this requires careful planning, analysis and thorough outreach? Is this element part of your 12 to 24 month process?

Analysis, planning, and outreach are critical and essential components of the feasibility study and are included in the study timeline. We are asking the Board to approve moving forward with such a study. We expect the study to take a minimum of 12-24 months, inclusive of a comprehensive outreach component.

3. Is it an accurate assumption that you would want to hire consultant experts to lead a study of this magnitude-is the procurement process included as part of the 12 to 24 month process?
    a. Instruct the CEO to bring forward a schedule on the program approach that details the tasks to be performed during the 12-24 months

We would need to hire consultants to assist us with the feasibility study, but Metro would lead the study. The procurement process for this initial consultant is included as part of the 12-24 months timeline. Attachment B provides a draft initial scope of work highlighting the key tasks to be performed over the next 24 months.

We propose the following timeline and key activities to develop and implement congestion pricing in LA County, if the Board approves both the feasibility study and ultimately moves forward with a pilot. Note that these activities are not meant to be sequential as many of them will need to be undertaken simultaneously.

Immediate & Ongoing	**2019 - 2020**	**Late 2020**	**To Be Determined**

Community and public engagement	• Feasibility Study • Partnership and legislative authority	• Pilot Implementation • Initial Revenue Generation	• Expansion • Additional Revenue Generation

4. In Attachment B [File #2019-0011, The Re-Imagining of LA County: Mobility, Equity, and the Environment (Twenty-Eight by '28 Motion Response)] you propose that a ten-year estimate can generate up to $134 billion in revenues if you add up all the congestion pricing options. How did you arrive at the estimate for these revenues?

To clarify, each congestion pricing model in Attachment B included a 10-year estimate of potential revenue generation for each model. These models are not intended to be considered in total; Metro would likely choose one, not all of them. Moreover, these are initial estimates based on very rough assumptions. The 10-year estimates for cordon pricing and VMT pricing are based on scenarios from SCAG estimates. The 10-year estimate of revenue generation for corridor pricing is derived from annual VMT estimates. An objective of the feasibility study is to provide an in-depth analysis of revenue potential for a variety of timelines and congestion pricing models, including a ten-year estimate.

5. In the same attachment you state you can realize savings by exploring Public-Private Partnership opportunities. What other alternatives have you examined besides Public-Private Partnerships as a means to save project costs?

Metro is always looking for ways to reduce costs on major capital projects. Value engineering will always be a priority to keep projects within budget. Cost savings from P3 are largely based on innovations from the private sector and reduced operations and maintenance costs over the life of the assets. The cost certainty of a P3 arrangement allows us to better predict our operations and maintenance needs over time. However, any cost reductions or savings should not be regarded as a meaningful revenue stream to accelerate projects. Other ways to save project costs are to limit the addition of out-of-scope items, reduce project scope, and look at phasing of projects.

6. Will the Feasibility Studies include exploring new technology, such as monorail or other technology that can significantly reduce project costs and timelines compared to traditional 100 year-old technology like underground heavy rail or light rail?

The feasibility studies in this case are oriented towards congestion pricing and Transportation Network Company regulation. Any new transit services resulting from these studies would likely be shorter turn-around items such as buses to deploy in a given area on newly free-flowing lanes, or additional rail cars to supplement service. That said, new technologies such as monorail may be under consideration during corridor studies for Measure M projects. For example, this technology is being considered for the Sepulveda Transit Corridor.

7. How will the NextGen Program fit into the scenarios described in Item 43.

NextGen is a critical program that will seek to re-design our entire bus network. Congestion pricing, on the other hand, will initially be a pilot program in one specific area of LA County. New bus

services, in addition to NextGen, are likely to be a critical part of any congestion pricing pilot program. If and when such a program is implemented, this might create additional changes in the Metro bus network. Metro staff will work to integrate these changes with NextGen as it is rolled out.

Monitoring Other Congestion Pricing Activities in California
Motion 43.1 also asked Metro staff to monitor both the State of California's Road Charge Program for synergistic opportunities and the City of San Francisco's Congestion Pricing projects for lessons learned. As part of the research proposed for the Congestion Pricing Feasibility Study, these two efforts will be documented in addition to other pricing models around the world, including pricing approach, performance measures, outcomes, and trends over time.

FINANCIAL IMPACT

Congestion pricing offers a compelling mobility solution that can also generate substantial revenues that can be used for transit operations and capital construction. If the Board approves moving forward with a Feasibility Study to assess the potential mobility, equity, and environmental benefits of congestion pricing, the cost center manager will be responsible for budgeting the funds to conduct the full scope of the study as described in this Motion response.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

Goal 1.3 of the Metro Vision 2028 Strategic Plan conveys our agency's intentions to manage transportation demand in a fair and equitable manner by 1) developing simplified, sustainable and comprehensive pricing policies to support the provision of equitable, affordable, and high-quality transportation services and 2) testing and implementing pricing strategies to reduce traffic congestion. The initiation of a feasibility study and advisory board for congestion pricing, with the intention of creating a pilot program, is the first step in delivering on this goal.

NEXT STEPS

Metro staff will ask the Board to approve the recommended strategies to include in a funding plan to Re-Imagine LA County. If the Board approves the recommended strategies, which include conducting a congestion pricing feasibility study, staff will develop and issue a Request for Proposals for a congestion pricing feasibility study as described in Attachment B.

ATTACHMENTS

Attachment A - Motion 43.1
Attachment B - Preliminary Scope for Congestion Pricing Feasibility Study

Prepared by: Joshua Schank, Chief Innovation Officer, (213) 418-3345
Tham Nguyen, Interim Deputy Executive Officer, (213) 922-2606

Reviewed by: Phillip A. Washington, Chief Executive Officer, (213) 922-7555

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File #: 2019-0033, **File Type:** Motion / Motion Response **Agenda Number:**

REGULAR BOARD MEETING
JANUARY 24, 2019

Motion by:

BUTTS

Related to Item 43:The Re-Imagining of LA County: Mobility, Equity, and the Environment (Twenty-Eight by '28 Motion Response)

I have a number of questions related to the Board report and several instructions pertinent to the Issues before us and would like to amend Item 43 and would like to have staff return to the Board with their responses to the Questions in their February Report.

Questions

1. On Attachment B of the Board report, it states that the earliest any revenue realization can happen is 12 to 24 months. Can you further explain in detail the planning and development process for this?

2. Normally a plan like this requires careful planning, analysis and thorough outreach? Is this element part of your 12 to 24 month process?

3. Is it an accurate assumption that you would want to hire consultant experts to lead a study of this magnitude - is the procurement process included as part of the 12 to 24 month process?
   a) **Instruct** the CEO to bring forward a schedule on the program approach that details the tasks to be performed during the 12-24 months?

4. In Attachment B you propose that a ten-year estimate can generate **up to** $134 billion in revenues if you add up all the congestion pricing options. How did you arrive at the estimate for these revenues?

5. In the same attachment you state you can realize savings by exploring Public-Private-Partnership opportunities. What other alternatives have you examined besides Public-Private Partnerships as a means to save project costs?

6. Will the Feasibility Studies include exploring new technology, such as monorail or other technology that can significantly reduce project costs and timelines compared to traditional 100 year-old

technology like underground heavy rail or light rail? AND

7. How will the NexGen Program fit into the scenarios described in Item 43?

Instructions

A. Direct Metro Staff to return to the Board with information pertaining to the Scope, the proposed Budget and Study Timeline prior to conducting the Feasibility Studies for a Congestion Pricing Pilot strategy;

B. The CEO shall bring forward a schedule on the program approach that details the tasks to be performed during the 12-24 months?

C. Monitor the State's Road Charge Program for potential synergistic opportunities and monitor the City of San Francisco's Congestion Pricing projects for potential lessons learned.

D. The proposed "Sacred Items" for Approval before are subject to future Review and Revision if circumstances arise where the Board feels such Review and Revision is warranted; and

I, Therefore, Move that the Board submit these questions and approve the list of Instructions to the CEO and prepare specific responses to the questions for incorporation in their Report at the Executive Management Committee in February.

Attachment B: Initial Scope for Congestion Pricing Feasibility Study

Executive Summary

The current transportation system in Los Angeles is highly inequitable, provides limited mobility, and is damaging our environment. Congestion pricing, if implemented effectively, can be a method of dramatically improving **equity, mobility, and environmental** outcomes to achieve Metro's strategic goals in the near-term, while also providing revenues for long-term capital projects. The potential public policy benefits are shown in parentheses below and summarized in Table 1.

With a little encouragement from pricing, often less than we might think, people will find it more attractive to:

- Travel during less congested times (mobility)
- Use other modes, such as public transportation, walk, bicycle (environment)
- Consolidate their trips (mobility)
- Share rides/carpool (equity)

Those who continue to drive alone will be able to:

- Enjoy greater certainty and speed in their travel times (mobility)
- Pay less in total gasoline or other fuel (environment)
- Enjoy cleaner air and reduced contribution to climate change (environment)

Revenues from congestion pricing can:

- Offset cost for low income-drivers (equity)
- Be reinvested to improve the quality, reliability, safety, and convenience of transit service (equity, mobility)
- Provide free or low-cost transit fares (equity)
- Supplement funding gap of delivering 28x2028 projects (mobility)

We propose the following timeline and key activities to develop and implement congestion pricing in LA County. Note that these activities are not meant to be sequential as many of them will need to be undertaken simultaneously.

Immediate & Ongoing	2019 - 2020	Late 2020	To Be Determined
Community and public engagement	• Feasibility Study • Partnership and legislative authority	• Pilot Implementation • Initial Revenue Generation	• Expansion • Additional Revenue Generation

Next steps for exploring congestion pricing:

- Begin conducting genuine public and community engagement, starting with an equity lens at the beginning of the process, using Metro's Equity Platform as a guide and inviting a diverse range of participants to have a voice in this process.

- Procure consultant services to conduct a feasibility study to identify best locations for proof of concept.

Table 1. Anticipated Outcomes and Public Policy Benefits

Anticipated Outcomes	Equity	Mobility	Environment
Revenues are reinvested to improve the quality, reliability, safety, and convenience of transit service and walking and biking access.	x	x	
Revenues offset toll cost for low-income drivers.	x		
Reduction in road congestion leads to improved air quality along corridors.	x		x
Transit moves faster through less congested lanes, and transit customers pay no additional charge for better service.	x	x	
Revenues can pay for free or low-cost transit fares.	x		
Shared riders and carpoolers pay less than people who drive alone.	x		
Drivers in priced lanes pay less for fuel since they are not idling in traffic.			x
Revenues can supplement funding gap of delivering 28x2028 projects.		x	
Drivers enjoy greater certainty and speed in their travel times.		x	
Drivers are encouraged to drive during less congested times, or to mode shift to non-SOV driving (e.g. carpooling, public transportation, walking, bicycling), which enables the current system to accommodate more person throughput.		x	
Encourages consolidation and reduction of driving trips. This in turn reduces congestion.		x	

Background and Justification

The concept of congestion pricing has been around for decades. Simple supply and demand tells us that when something is provided for free, people use more of it than they would otherwise. Hence, we have significant roadway congestion when that space is provided with no out-of-pocket costs.

Currently, the price of road (usually zero) bears little relationship to demand for that road at that time. For example, it costs the same to use a road at 3am as it does in the peak of rush hour traffic, even though demand for roads is much lower at 3am. The net effect is that instead of paying for roadway space with money, everyone pays with their time.

People waste time sitting in traffic, essentially waiting in line, to use roads. This vastly inefficient method of allocating roadway space may seem very democratic, in the sense that all must pay with their time. However, it actually discriminates against the poorest and most vulnerable members of society. Transit riders, who have far lower incomes than non-riders in Los Angeles County, use buses that sit in the same slow traffic and face longer commute times on average. Moreover, low-income people typically have less flexible work schedules with hourly wages and face severe penalties for lateness. Whereas higher-income individuals may be able to shift their travel times or work from home to avoid congested periods, lower-income people often cannot.

Finally, many working class individuals depend on their vehicle for day labor and cannot use transit alternatives. When their vehicles sit in traffic they miss out on potential jobs and their earning potential drops dramatically. While they might have to pay to a fee during congested times if congestion pricing were to be implemented, they would likely more than make up for this fee through time savings and being able to perform more work. Under the current system, they are severely limited in the number of jobs they can perform in a day.

Congestion Pricing Today

Congestion pricing has proven challenging to implement for reasons such as lack of political viability, technical and privacy concerns, and equity concerns. Despite these challenges, a number of metropolitan areas have implemented various forms of congestion pricing. Once implemented, these schemes have had various degrees of success and, notably, none have ever been repealed. This includes the only congestion pricing pilot of any kind implemented to date in Los Angeles County, Metro's ExpressLanes Program.

More comprehensive congestion pricing schemes are currently in place in London, Stockholm, Singapore, and Milan. Each of these experiences offers lessons learned, but perhaps most notable is Stockholm. In this city, the congestion pricing scheme was widely opposed and was put in place on a pilot basis. After the trial period, the scheme proved so popular that it was accepted permanently. This demonstrates the value of a pilot period to test such a product, and to demonstrate its value, before casting judgment.

Congestion Pricing Models and Revenue Forecasts

UCLA analyzed eight active congestion programs in the United States and worldwide. In each case, the program generates surplus revenue. Across the eight programs, the operating cost-to-revenue ratio averaged 36 percent, suggesting that program revenues substantially exceed costs, as shown in Table 2.

Table 2. Congestion Pricing Programs: Cost and Revenue Estimates

City/Program	Status	Initial Investment	Annual Operating Costs	Annual Net Revenue	Efficiency (Costs/Revenue)
Oslo, Norway	*active*	USD $30M	USD $11M	USD $70M	16%
Singapore	*active*	USD $145M	USD $25M	USD $110M	23%
London, UK	*active*	USD $211M	USD $170M	USD $179M	95%
Stockholm, Sweden	*active*	USD $222M	USD $12M	USD $144M	8%
Dubai, UAE	*active*	n/a	n/a	USD $217M	n/a
Milan, Italy	*active*	€7M	€7M	€29.4M	24%
Gothemberg, Sweden	*active*	USD $84M	USD $12M	USD $89M	13%
San Francisco, USA	*active*	$56.3M	$944M	$1.3B	72%
Singapore	***active***	S $6.6M	S $5M	S $47M	11%
Manchester, UK	*proposed*	$195M	$55M	$140M	39%
Netherlands	*proposed*	n/a	n/a	n/a	n/a
New York City, USA - Variable Price	*proposed*	$265M	$150M		9%
New York City, USA - Variable Tolls	*proposed*	$282M	$110M	$2.2B	5%

Sources available upon request

In Los Angeles, there are three conceivable ways congestion pricing could be implemented. These are the following:

1) *Cordon Pricing*. This involves creating a boundary around a central district and then charging vehicles to cross that boundary. The fee can be variable, meaning it can go up or down based on demand. Alternatively it could be set at a specific rate for peak times. Either way, the idea is to reduce the number of vehicles entering a central area when demand is higher. This is the most common method of congestion pricing employed around the world.

   Cordon pricing is most effective when there is a strong Central Business District (CBD) with high quality mass transit options as alternatives to driving. Los Angeles County does not have a typical CBD, as job centers are more dispersed throughout the region. Preliminary average revenues from cordon pricing of all trips entering downtown LA have been estimated to be as high as $1.2 billion per year (in year of expenditure dollars). This form of pricing is among the easiest to implement and has the most history from which we can learn.

2) *VMT Pricing*. Charging drivers based on Vehicle Miles Traveled (VMT) has been floated for many years as a potential substitute for a gas tax. However, a VMT fee platform can potentially be used to charge variable prices based on location and time of day. The platform could conceivably charge zero when there is no traffic or in uncongested areas, but then charge high enough rates during peak times to deter overuse. There have been VMT-fee experiments in California, Oregon, and Iowa. While none of these pilots have attempted to include additional fees for congestion, the Oregon pilot tested the idea by calculating the number of miles driven in the “congestion zone”. In short, the technology

exists to use VMT as a method of alleviating congestion but it has not yet been attempted due to political challenges.

Preliminary average annual revenues from implementing VMT pricing have been estimated at $10.35 billion per year (in year of expenditure dollars) for the larger metropolitan area. While net revenues from Los Angeles County alone would be less, Los Angeles County is the most populous part of the region and accounts for more VMT than the rest of the region. This estimate provides a sense of the strong revenue potential of such a scheme.

3) *Corridor Pricing*. Corridor pricing is a new kind of congestion pricing that has not been implemented anywhere. The idea is to price all lanes on all roads within a specific corridor with high traffic congestion but a viable public transit alternative. Functioning similar to cordon pricing, anyone traveling within a designated corridor during peak times would pay a fee based on how many miles they travel within the corridor. The price for travel within the corridor would be set high enough to ensure free flow traffic within that entire corridor.

Absolute revenues vary greatly, largely because the tolled areas vary considerably in their size and the demand for the road space they allocate.

Detailed Plan

People widely perceive the biggest transportation problem in Los Angeles County to be congestion. And it is true that congestion is worse here than it is almost anyplace else.[1] Additionally, LA County today is hampered by deep income inequality.[2] Our current transportation system exacerbates economic inequity and disproportionately harms low-income people, such as in the following ways:

- Congestion exacerbates vehicular air pollution, which has been linked to health problems ranging from cancer to asthma to preterm birth, and it most affects people living near congested roads---who are disproportionally likely to have lower incomes.[3]
- Congestion slows down buses, increases trip time, and creates an inconvenient and unreliable trip experience for passengers. Buses serve over 70% of Metro's transit passengers. The average annual household income of bus passengers is $26,812, with 56% living below the poverty line.[4]
- Congestion creates transportation inefficiencies that limit access to the most basic needs in life, such as jobs, housing, education, and health care. Wealthy individuals have the means to overcome these inefficiencies to a much greater extent than low-income people.

[1] http://inrix.com/press-releases/scorecard-2017/
[2] PolicyLink and USC Program for Environmental and Regional Equity. "An Equity Profile of the Los Angeles Region". https://dornsife.usc.edu/assets/sites/242/docs/EquityProfile_LA_Region_2017_Summary_Final.pdf
[3] Manville, Michael. "Is congestion pricing fair to the poor?" 100 Hours. https://medium.com/100-hours/is-congestion-pricing-fair-to-the-poor-62e281924ca3
[4] Metro June 2018 On-Board Customer Satisfaction Survey: http://media.metro.net/projects_studies/research/images/annual_survey_results/bus_results_spring_2018.pdf

Access to high-quality transportation is directly related to our region's future and its long-term economic prosperity. Better access to high-quality transportation means safe and convenient access to the basic needs in people's lives, such as job opportunities, housing, education, and health services— all of which contribute to stronger communities.

Metro's Equity Platform is grounded in making access to opportunity a key objective in public decision-making, public investment, and public service. Researchers from the USC Program for Environmental and Regional Equity describe transportation equity as:

1. Equitable access to quality, affordable transportation options and, therefore, employment, services, amenities, and cultural destinations;
2. Shared distribution of the benefits (e.g., jobs) and burdens (e.g., pollution) of transportation systems and investments; and
3. Partnership in the planning process that results in shared decision-making and more equitable outcomes for disadvantaged communities, while also strengthening the entire region.[5]

We can provide faster and more equitable transportation options for everyone. To do so, we need to simultaneously address both the supply and demand sides of transportation: the need to supply more and better high-quality transportation alternatives to solo driving and the equally important need to manage the demand for more travel. A congestion pricing pilot program would be structured around this concept. The following outlines the recommended timeline and key activities for developing and implementing a pilot program, which if successful could be expanded to more areas of the County. Note that these activities are not meant to be sequential as many of them will need to be undertaken simultaneously.

Immediate and Ongoing: Community and Public Engagement

Throughout the development and implementation timeline, we will develop grass-roots support for this initiative through extensive community and public engagement and outreach. Outreach would mean going into some of the communities facing the greatest traffic congestion and working through potential solutions. This way, when a proposed pilot area emerges, there can be support for the project. During the feasibility study, we will establish multiple forums and methods for meaningfully engaging with communities, such as in-person and virtual meetings, pop-ups, social media platforms, surveys, and a variety of other methods specific to the context and needs of different communities. Outreach will also focus on understanding how best to implement equity programs to subsidize low-income drivers to provide fair access and to collect data on public perceptions and outcomes to inform the feasibility study and implementation.

2019 - 2020: Feasibility Study, Partnership and Legislative Authority

[5] Carter, Vanessa; Manuel, Pastor; Wander, Madeline. *An Agenda for Equity: A Framework for Building A Just Transportation System in Los Angeles County, Executive Summary*. USC Program for Environmental and Regional Equity, Nov. 2013.
https://dornsife.usc.edu/assets/sites/242/docs/Executive_Summary_Agenda_for_Equity_PERE_A.pdf

The Southern California Association of Governments (SCAG) has studied congestion pricing in the SCAG region extensively in the past. Metro can build off the knowledge and lessons learned from SCAG as well as explore new approaches through a feasibility study. The Metro study would be conducted with the goal of determining the best potential location and structure for a congestion pricing pilot in LA County.

A key component of the study is that it will not just propose an area where pricing could be piloted – it will propose all of the necessary public transit improvements that will need to accompany that pilot. New transportation options that can be implemented quickly and effectively, such as new local bus routes, transit priority features, express buses, microtransit, Transportation Network Company partnerships, bicycle or other shared mobility options, or other innovative strategies to provide high-quality mobility options would be developed with community input. The study would recommend a slate of transportation improvements specifically designed to provide an alternative to driving during congested times. These improvements would be considered as an essential component of the proposed pilot.

The study would include the impacts of free public transit in the same corridor to determine whether that is worth offering as an added benefit. Free transit would provide even greater incentive for people to avoid driving on roads through the priced area, potentially lowering the congestion fee and improving mobility. It would also bring a transportation subsidy to those who need it the most in our society, improving equity in accessibility.

The study would need to include analysis informed by community engagement to determine how best to compensate those who are potentially disadvantaged by pricing in the pilot area. Most travelers are likely to be better off. For those who can afford the fee, they will be able to travel much faster during peak times. For those who cannot afford or choose not to pay the fee, they will also be able to travel faster if they are able to travel at alternate times, take public transit that now flows faster, or use other transportation options.

The groups potentially negatively affected are those who must travel at peak times, are low-income, and for whom no viable transportation substitute exists. Our ongoing outreach efforts will work to identify the magnitude of these groups and how best to deliver equity programs to subsidize these drivers. These individuals could be compensated by revenues from congestion pricing. Compensation payouts can be delivered to qualifying individuals any number of ways, each of which would need to be explored in this study.

As the area for a potential pilot becomes clear, Metro will need to develop and solidify critical partnerships necessary for delivering the project. Government partners will include cities affected by the pilot (which may not be limited to the pilot area), SCAG, Caltrans, the California Transportation Commission (CTC), and the Federal Highway Administration. Other helpful partners could include new mobility providers such as Uber and Lyft (who are generally supportive of congestion pricing), local businesses that may be affected, auto clubs, the academic community, issue-based non-profits like Natural Resources Defense Council (NRDC), and community-based organizations. Together with these partners, we would need to seek legislative authority at the state level, and regulatory authority at the federal level, to conduct the pilot.

Metro would seek to establish an advisory group to provide input to the feasibility study as it moved forward, and to assist in developing legislative authority. This group would meet regularly to review progress of the study and develop action items to improve progress. The group would include academic experts in congestion pricing, community groups, non-profits, agency representatives, and business leaders.

Late 2020: Pilot Implementation

With the area and form of congestion pricing selected, along with accompanying transit services, the next step would be to launch the pilot for a period of time that is sufficient to evaluate its effectiveness. Previous congestion pricing programs have generally proven to be unpopular prior to implementation, but popular following implementation. The pilot would need to be implemented with specific performance metrics that are agreed to by the affected populations, along with a promise to suspend the pilot if those metrics are not being met after a certain period of time.

Once the pilot program begins, revenues will be realized immediately. However, the associated transit improvements in the pilot area must be in place before or at the same time that pricing begins. This will likely require borrowing funds in anticipation of pricing revenues in order to purchase additional vehicles, create bus/bike lanes, or compensate/subsidize low-income individuals negatively affected by the pilot program. Some portion of realized revenue will need to be allocated towards repaying the debt incurred and the ongoing cost of supplemental transit operations, and some will need to be allocated towards keeping the roads in the pilot area in a state of good repair. The rest can be dedicated towards long-term transit projects in the pilot area.

To be determined as warranted: Expansion

If the pilot proves successful, other areas of the County will likely demand similar programs. With lessons learned from the existing pilot and infrastructure already in place for pricing, it will be possible to create new zones more rapidly. It will be easiest to expand outward from the initial pilot zone, though it may make sense to create other new zones as well. It is through expansion to new areas that the greatest revenue realization will occur. Areas that desire more long-term transit investment will likely be among the first to seek a congestion zone.

Conclusion

Metro's 10-year strategic plan, Vision 2028, was adopted by the Metro Board on June 28, 2018. Goal 1.3 of the strategic plan conveys our agency's intentions to manage transportation demand in a fair and equitable manner by 1) developing simplified, sustainable and comprehensive pricing policies to support the provision of equitable, affordable, and high-quality transportation services and 2) testing and implementing pricing strategies to reduce traffic congestion. The initiation of a feasibility study and advisory board for congestion pricing, with the intention of creating a pilot program, is the first step in delivering on this goal.

Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
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Los Angeles, CA

Metro

Board Report

File #: 2019-0055, **File Type:** Motion / Motion Response **Agenda Number:** 32.1

PLANNING AND PROGRAMMING COMMITTEE
FEBRUARY 20, 2019
EXECUTIVE MANAGEMENT COMMITTEE
FEBRUARY 21, 2019

SUBJECT: EQUITY STRATEGY FOR CONGESTION PRICING STUDY: RESPONSE TO MOTION

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE report on equity strategy for congestion pricing in response to Board Motion 43.2.

ISSUE

On January 24, 2019, the Board passed Motion No. 43.2 (Solis, Garcetti, Dupont-Walker, Butts and Hahn; Attachment A) that directed the CEO to "Develop an Equity Strategy that considers reinvesting congestion pricing revenue as a key source of funds to minimize economic impacts to low-income drivers", one of six provisions. This Motion was provided, in addition to Motion 43.1 (Butts), in response to staff's continuing response to Motion 4.1, directing the CEO to present a comprehensive funding plan for the "28 x 2028" initiative. This Receive and File Board Report provides the context for responding to Motion No. 43.2, including the specific points outlined therein.

BACKGROUND

Among many issues and recommendations outlined by staff in its response to the 28 x 2028 directive from September 2019, the central challenge has been identifying a range of potential funding sources robust enough to address the additional $26 billion operating and capital investment needed to accelerate the delivery of eight major projects in advance of the Olympic Games. To do so, it is evident that dramatically aggressive funding must come from either existing or new sources of revenue. In either instance, identifying, securing and applying revenues of such magnitude will raise significant equity questions - basically, where do those revenues come from, who benefits from using those funds for 28 x 2028, and who potentially "loses" by virtue of those revenues not being invested in other priorities. While these questions must be front and center in any final response to the 28 x 2028 question, Motion 43.2 was specifically concerned with the equity ramifications attached to one new revenue strategy: Congestion Pricing.

DISCUSSION

Staff's prior presentations in the lead-up to the January 24, 2019 Board presentation emphasized that congestion pricing as a comprehensive transportation *policy* has both challenge and promise far beyond funding a $26 billion capacity shortfall for 28 x 2028 accelerated projects. Implementing congestion pricing at a scale that would be effective, even for a portion of Los Angeles County, would exert tremendous change on the transportation network and the people who use it. Thus, staff was very clear that a comprehensive and thorough *feasibility study* of three different congestion pricing models - cordon, corridor, and vehicle miles traveled (VMT) - must be undertaken *before* any actions would be considered for implementation. This approach anticipated the important provision in **(D)** of the Motion, that no commitments to congestion pricing will be made until the feasibility study is completed, and front and center in that evaluation must be equity. The Board's adopted Equity Platform provides a valuable frame to design an Equity Strategy integral to the congestion pricing (CP) feasibility study.

With that understanding, staff recommends the following structure to address the motion's specific items:

A. Staff's recommendation for the CP feasibility study includes establishment of an Advisory Council.
   - As outlined in **(B)** of Motion 43.2, we agree that this Council must include subject matter experts in equity, and we will work with the Board to identify those candidates. The Southern California academic community has deep representation of national experts in this area, and such experts should be tapped in a variety of ways to support this effort.
   - In addition, we will pursue extensive community outreach, including engagement of community-based organizations and community members representing low-income and other vulnerable populations (see below); and local government at the city, subregional and county level. This addresses point **(C)** of the Motion, but will include an even wider circle of equity considerations.
   - The CP study will include a review of research done to date, and determination of any key gaps in that research that bear on the Equity issues listed below. It should be noted that a study on congestion pricing and equity was very recently released by Transform (an Equity coalition in the San Francisco Bay Area) and the Natural Resources Defense Council (NRDC), that aligns with much of staff's initial thinking contemplated for this study's scope. That report combined with other research will provide valuable insights to help launch this effort.

B. The scope of the Equity Strategy is key. The reach of a congestion pricing strategy is broad, and therefore demands an equity assessment that is equally comprehensive.

   - The Motion's opening provision **(A**) implies that equity be defined as minimizing the economic impact of congestion pricing on low-income drivers. This focus and associated analysis will be incorporated explicitly into the scope of the feasibility study.
   - However, congestion pricing will have a range of impacts over the entire transportation system, and by extension all those who use that system.
   - Equity defined in this broader context, consistent with the Equity Platform's intent to

carefully address equity-related issues over a wide spectrum, would assess the potential negative and positive impacts of a congestion pricing strategy on historically underserved populations, as it affects their mobility access to jobs, housing, and other opportunities. An equity-driven policy objective would be to improve such access for those populations, and data and metrics to evaluate that potential would be central to the Equity Strategy scope of work within the feasibility study.

Broadly, the scope of the feasibility study needs to evaluate the following as part of a comprehensive Equity Strategy for congestion pricing:

What are the equity-related questions we are trying to answer?

- What impacts, positive and negative, is congestion pricing anticipated to impose on
  - single auto drivers, and
  - other travelers in the multi-modal transport network?
- How might some populations and communities be impacted differently/disparately/disproportionately by the imposition of congestion pricing (evaluating all three models) compared to other populations?
- If there are undesirable/inequitable impacts, how could those be avoided/mitigated/otherwise addressed?

What (underserved) target populations and communities might be impacted positively and negatively by a congestion pricing paradigm?

- No-car households
- Low-income households
- People of Color
- Women
- Seniors
- Persons with Disabilities
- Potentially others, i.e., as might be suggested by the CP Advisory Council

We will use the core indicators identified in the developing Long Range Transportation Plan equity performance measures as benchmarks for identifying underserved populations.

What do we need to know to assess equity impacts?

- Where are target populations traveling?
- When are they traveling; and what flexibility is attached to that travel schedule?
- Why (for what purpose) are they traveling?
- What costs are associated with that travel (time and $, primarily)?

What impacts are we concerned with?

- Affordability of the trip (SOV and other)
- Availability of options (and the viability and quality of those options, among them

increased public transit service) to SOV
- Location of congestion pricing boundaries, particularly relative to above
- Sequence and timing of congestion pricing, and SOV options

These are the core elements that would make up a comprehensive Equity Strategy aligned with the congestion pricing feasibility study; and will continue to be vetted by the CP Advisory Council and related discussions throughout the study's progress. A detailed scope must be developed as part of the overall feasibility study RFP. It is critical that it be integrated into, and not separate from, the larger CP analysis. One important consideration will be how this effort, and the larger Re-Imagine initiative aligns with the Vision 2028 strategic plan, and Long Range Transportation Plan (LRTP). A study of congestion pricing directly implements recommendations in Vision 2028 goal "to manage demand in a fair and equitable manner", wherein pricing strategies to reduce traffic congestion is explicitly listed as an objective. That said, the strategic plan was clear that simultaneously improving equity and capacity is sought at the outset. With respect to the LRTP, the CP feasibility study and the equity considerations woven into it must necessarily be evaluated within its larger context, which is built around investment trade-offs throughout the system over 40 years. The CP feasibility study would be one of several scenarios that staff is already anticipating to examine within the LRTP's mandate of balancing operations, maintenance and expansion of a multi-modal transport network-all of which would be viewed through an equity lens shaped by the principles of the Equity Platform.

Keeping the above in mind, and addressing the intent of (**E**) of the Motion, we recommend that provisions be made to adjust the feasibility scope based on feedback from equity experts on the Advisory Council, early input from the community engagement process, and lessons learned from other studies and best practices that will be reviewed as part of the feasibility study.

FINANCIAL IMPACT

The Equity Strategy will be funded as part of the Congestion Pricing Feasibility Study.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The Equity Strategy supports Vision 2028 goal #1: Provide high-quality mobility options that enable people to spend less time traveling, as discussed in detail above. As the Equity Strategy will focus on improving mobility access across all modes, the incorporation of this strategy specifically addresses initiative 1.1 to "target infrastructure and investments toward those with the greatest mobility needs."

NEXT STEPS

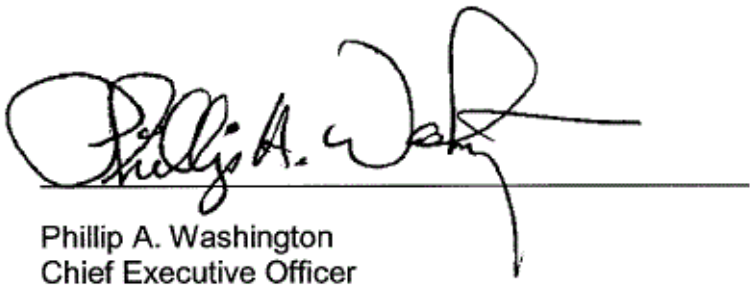
Staff will develop and issue a Request for Proposals for a congestion pricing study that includes an Equity Strategy scope as described in this Board report.

ATTACHMENTS

Attachment A - Motion 43.2

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

Reviewed by: Phillip A. Washington, Chief Executive Officer, (213) 922-7555



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File #: 2019-0034, **File Type:** Motion / Motion Response **Agenda Number:**

REGULAR BOARD MEETING
JANUARY 24, 2019

Motion by:

Solis, Garcetti, Dupont-Walker, Butts, and Hahn

Related to Item 43:Equity Strategy for Congestion Pricing

In response to the Twenty-Eight by ’28 Motion 4.1 from the September 2018 meeting, Metro staff has developed the “Re-Imagining of LA County” initiative, which proposes various funding/financing mechanisms to help construct all projects on the Twenty-Eight by ’28 project list by the 2028 Summer Olympics and Paralympics. The most impactful proposal in this initiative is the pursuit of a congestion pricing pilot, which would target traffic-clogged communities to implement demand-based pricing on roads and/or freeways along certain corridors or within specific areas in LA County.

Congestion pricing has been used in other parts of the world, including London, Stockholm, and Singapore, and has been shown to help relieve traffic and increase vehicle speeds. Congestion pricing also helps improve transit services as buses also benefit from increased vehicle speeds. However, despite improving transit that largely serves low-income residents, low-income drivers would be affected more by congestion pricing than households of other income levels. Low-income households already spend a greater proportion of their incomes on transportation and have less flexible work schedules as compared to other households. A congestion pricing pilot may improve traffic but could exacerbate problems for our poorest communities by forcing them to spend even more on transportation. It may also have effects on small and family-owned businesses in fields such as construction and landscaping which rely on vehicles for work.

To address this, equity should be made a cornerstone of the congestion pricing framework. It is crucial that the economic impacts of congestion pricing on low-income drivers be identified and analyzed in order to minimize hardship. Congestion pricing will generate significant revenues, some of which should be directed towards ensuring that low-income drivers are not disproportionately affected.

WE THEREFORE MOVE that the Board direct the CEO to:

A. Develop an Equity Strategy that considers reinvesting congestion pricing revenue as a key source of funds to minimize economic impacts to low-income drivers;

B. In partnership with the Board of Directors, nominate subject matter experts in equity as

members of the Advisory Council. The final number of subject matter experts would be dependent on the size of the Advisory Council and subject to approval of the Board;

C. Engage academia, community-based organizations, cities, subregions, and Los Angeles County during the development of the Equity Strategy and consider the effects of congestion pricing on drivers that rely on their vehicles for their livelihood;

D. Defer inclusion of congestion pricing revenue in any project acceleration financial plan until the completion of the congestion pricing feasibility study and Equity Strategy;

E. Revise the congestion pricing recommendation language contained in the Board Report to include the directives in this Motion for approval at the February 2019 Board of Directors meeting;

F. Report back on proposed components of the Equity Strategy at the February 2019 Board of Directors meeting.

LA Metro New Mobility Service Fee Plan

Executive Summary

New Mobility fees and regulations, if implemented effectively, can be used to improve **equity, mobility, and environmental** outcomes immediately, while also providing revenues for long-term capital projects. Anticipated public policy benefits include:

Ensure equity and fairness:

- New Mobility fees can improve transportation equity by influencing behavior. Fees can be applied to services, products and programs with goals such as ensuring geographic equity of service coverage, ensuring service is provided to the County's most vulnerable populations, and including customers who need extra assistance or wheelchair accessible service.[1] Revenues can also be used for these purposes.
- New Mobility service fees and regulations can level the playing field for private sector competition by setting standards for compliance across private companies and operations County-wide. This will create better and more stable mobility outcomes for LA County, and can potentially improve working conditions for drivers.

Improve mobility:

- New Mobility service fees and regulations can be used to manage congestion by discouraging single-use Transportation Network Company (TNC) rides and, instead, encouraging pooled rides and mode shift to transit services. This reduction of solo driving trips in turn reduces congestion.[2]
- Revenues can be re-invested to improve the quality, reliability, safety, and convenience of transit services and walking and biking access.[3]

Preserve the environment:

- New Mobility service fees can be used to reduce deadheading (circling empty TNC vehicles). Fees can be increased when vehicles fail to meet efficiency standards.

With these public policy benefits in mind, we propose the following timeline and key activities to develop and implement a New Mobility service fee in LA County. Note that these steps are not meant to be sequential as some of them will need to be undertaken simultaneously.

Immediate & Ongoing	2019 - 2020	2020	Late 2020
Build and grow a regional coalition to support fees	Study effects of New Mobility services	Pursue legislative authority	Pilot New Mobility service fees

Next steps for exploring New Mobility service fee in LA County:

[1] Editorial Board. Washington Post. "D.C. is raising taxes on Uber and Lyft. Good." July 20, 2018
[2] Ibid
[3] Kim, So Jung and Robert Puentes. Eno Center for Transportation. "Eno Brief: Taxing New Mobility Services. What's Right? What's Next?" July 2018.

- Conduct a study to better understand the effects and impacts of New Mobility services (private companies/operations) in LA County
- Build and grow a regional coalition to support New Mobility service fees
- Pursue legislative authority to institute New Mobility service fees
- Pilot New Mobility service fees in tandem with congestion pricing

Background and Justification

New Mobility companies, such as Uber, Lyft, Bird, and Lime, have been able to grow market share and value from unchecked consumption of public investments in roads and infrastructure. Across the Country, private companies have put shared bicycles, scooters, and cars on the streets with the expectation of using public rights of way to generate private benefit.

This approach has resulted in numerous mobility benefits, but also many negative externalities. In terms of improved mobility, TNCs have become the emergency ride home for regular transit customers, and shared e-scooters and e-bikes have become a popular, efficient form of first and last mile access to transit stations and stops. However, some net negatives include additional congestion on our roadways and curbside, space taken from pedestrians on sidewalks, increased emissions, and labor market disruption due to inconsistencies in regulatory practices. In some markets, TNC services may have also contributed to ridership declines on transit and jeopardized the sustainability of current services for all.[4]

In response, some jurisdictions (cities and states) have begun to institute fees on TNCs to raise revenue for public goods and services, manage demand, and address the impact of private companies, thus minimizing externalities. The table below illustrates the various taxes and fees that jurisdictions have levied on private companies.[5]

Location	TNC Tax/Fee	Disposition of Funds	Estimated Revenues
Chicago, IL	$0.67 per trip	$0.02 to Business Affairs and Consumer Protection $0.10 to Vehicle Accessibility Fund $0.55 to City General Fund	$16M in 2018 $30M in 2019
New York, NY	8.875% of total fare $2.75 per trip or $0.75 if pooled	51% to City General Fund 45% to State General Fund 4% to Metropolitan Transportation Authority 100% to Metropolitan Transportation Authority	$400M per year
Washington, D.C.	6% of total fare	17% to Department For-Hire Vehicles 83% to WMATA	$23M per year
California	0.33% of total TNC revenue	100% to CPUC Transportation Reimbursement Account	Estimates show $67M since 2013
Rhode Island	7% of total fare	General Fund	N/A

While these taxes and fees are raising revenue for the jurisdiction, they are not necessarily improving the public's mobility. For example, some fees above have been earmarked towards cities' general funds. This amounts to little more than a sales tax, and does not allow revenues to be re-invested to improve the quality, reliability, safety, and convenience of transit services

[4] https://www.scag.ca.gov/Documents/ITS_SCAG_Transit_Ridership.pdf

[5] Kim, So Jung and Robert Puentes. Eno Center for Transportation. "Eno Brief: Taxing New Mobility Services. What's Right? What's Next?" July 2018.

and walking and biking access. Even where revenue is dedicated to transportation, how a tax is collected can be just as important as how the money is spent. When taxes from New Mobility providers are simple flat fees, they might suppress demand but accomplish little else from a mobility perspective.

On the other hand, innovative approaches, such as a tiered tax or a dynamic tax, can be used to encourage preferred travel behaviors such as shared rides.[6] Reduced or waived fees could be used as a mechanism to encourage services to be deployed in underserved areas of the County, such as low-income neighborhoods, which are not the top choice of operations for private companies. Fees could be increased at times of high congestion or poor air quality. Instituting service fees offer revenue generation; however, this is also an opportunity for Metro to be deliberate and lead with the desired public policy outcomes and avoid a patchwork approach.[7]

Detailed Plan

The following outlines the recommended timeline and key activities for developing and implementing a New Mobility service fee in LA County. Note that these activities are not meant to be sequential as many of them will need to be undertaken simultaneously.

Immediate and Ongoing: Build and Grow a Regional Coalition to support New Mobility service fees

Despite their profound impact on mobility in LA County, Metro lacks regulatory oversight authority for ride-hail, scooter-share, and other new mobility services.[8] The California Public Utilities Commission (CPUC) currently regulates TNCs in California, but their approach has been relatively hands-off and not at all focused on mobility, equity, or environmental outcomes. Some jurisdictions within LA County have begun to develop their own regulatory structures for shared devices, which includes piloting permit programs. Other jurisdictions have decided to ban private sector mobility devices altogether. This piecemeal approach creates a poor transportation experience, since users who cross city boundaries can be subject to different regulations. This approach also impacts equity in the distribution of these services and limits Metro's ability to improve access to our transit stations. Ensuring that 89 jurisdictions and their different regulatory policies are being followed surely creates a headache for private companies as well. As the county transportation authority and congestion management agency, Metro is best positioned to take on this oversight role.

Metro will need to begin by developing regional support from its city and local transit partners and other relevant stakeholders in advance of stepping into this role. Securing city buy-in will be critical, given that certain cities such as Santa Monica and the City of Los Angeles have already begun pilot programs that include revenue collection. Extensive communication and coalition building with our local government partners and other stakeholders will help to ensure success. In line with the values articulated in Goal 4.1 of Vision 2028, Metro plans to

[6] Adams, Sam. City Lab. "Don't Enact a 'Lazy' Ride-Hailing Tax," July 2018.
[7] SFCTA. "The TNC Regulatory Landscape: An Overview of Current TNC Regulation in California and Across the Country." December 2017.
[8] SFCTA. "The TNC Regulatory Landscape: An Overview of Current TNC Regulation in California and Across the Country." December 2017.

establish multiple forums and methods for meaningfully engaging with stakeholders to establish a consistent line of communication, build trust, and foster transparent, inclusive decision-making. This will include engaging the various private companies to provide input on the agency's approach.

2019-2020: Study effects of New Mobility services (private companies/operations) in LA County

To be effective at achieving the above-referenced public policy goals, and to help Metro fulfill its role as the congestion management agency for LA County, Metro needs to better understand the impacts of New Mobility services (private companies/operations).

The extent and impact of these private companies on the transportation system in LA County is not yet fully understood. This is in part because service providers are reluctant to share their data with public transit agencies and departments of transportation and will not do so willingly. Although TNCs in California are regulated at the state level by the CPUC, which does require TNCs to report an extensive amount of data to them, the CPUC does not share this information publicly. In contrast, non-TNC New Mobility companies, such as Bird and Lime, are not regulated at the state level, and regulation is generally managed by cities that regulate sidewalks and streets rather than transit agencies. Over the past year, some cities within LA County have developed their own regulatory structures that include data sharing requirements. However, these programs are still in their infancy.

Despite this lack of data sharing, the City and County of San Francisco were able to produce reliable estimates on TNC ridership. They worked with researchers from Northeastern University who were able to acquire data on TNC activity that was gathered through Uber's and Lyft's public-facing application program interface (API).

Metro would commission reports that analyze and evaluate the current state of New Mobility in LA County. The report would 1) provide an inventory of emerging mobility services and technologies in the region and should include a profile of usage in LA County, 2) include an evaluation of the near-term impacts on publicly operated services and systems and 3) identify and articulate potential longer-term effects on core transit operations, congestion, equity and mobility. An additional report should provide an overview of existing state and local regulatory frameworks within California and globally. These reports would inform the Metro Board on potential near term policy and legislative options. Reports should build upon findings and operational insights collected and produced from the research project (Mobility on Demand) and Metro's direct operations of the MicroTransit Pilot Project.

2020: Pursue legislative authority

For Metro to be able to institute New Mobility service fees, the state of California needs to affirm the County's authority to dedicate a tax on privately operated services.[9] San Francisco

[9] Norman, Hannah. San Francisco Business Times. "Uber, Lyft agree to proposed ridehail tax in San Francisco." August 1, 2018.

recently successfully went through this process under three years, and their experience serves as a framework and precedent for Metro. See appendix for more detailed information.

Late 2020: Pilot New Mobility service fees in tandem with congestion pricing pilot
Once Metro receives the support of the state and local jurisdictions and secures legislative authority, Metro can launch a pilot program to test regulating private companies. Metro should pilot this program in parallel with any congestion pricing pilot and in alignment with other New Mobility pilots throughout the County. Criticism against TNC fees is that they are penalizing TNCs while single occupancy vehicle (SOV) driving still makes up most of traffic congestion and other negative externalities. Ideally, TNC fees should be part of the overall mobility, equity, and environmental solution along with congestion pricing.

Once the pilot begins, revenues will be realized immediately. There will likely be modest costs associated with setting up a regulatory program. As part of the permitting program, Metro should require private companies to share data, which will enable Metro to understand how these services are being used and allow for appropriate monitoring of the services in conjunction with transit and other transportation services.

Conclusion
Goal 1.3 of Metro's 10-year strategic plan, Vision 2028, sets forth our agency's intentions to manage transportation demand in a fair and equitable manner. It identifies pursuing regulatory strategies of New Mobility services as a way to 1) level the playing field to ensure access to a variety of transportation options for everyone, 2) preserve competition, and 3) reduce negative impacts. The initiation of a study of the effects new mobility providers, the pursuit of legislative authority, and an analysis of how to pilot new mobility fees and regulations, are the first steps in delivering on this goal.

Wray, Sarah. Smart Cities World, "San Francisco reaches ride-sharing tax agreement with Uber and Lyft." August 6, 2018.

Appendix: San Francisco's Legislative Experience Regulating TNCs

Between June 2017 and October 2018, San Francisco County Transportation Authority (SFCTA) published three reports on the status of TNCs in San Francisco. Findings included how many trips TNCs make on a typical weekday, where in the city TNC trips are concentrated, the amount of vehicle miles driven daily, and how TNCs contribute to the rise of congestion in the San Francisco area.[10]

In response to these findings, in April of 2018, San Francisco County Supervisor and chair of SFCTA Aaron Peskin introduced a ballot measure that would put a gross receipts tax levied on ride-hailing companies on the November 2018 ballot. By end of July 2018, San Francisco's Mayor's Office, Supervisor Peskin, Uber, and Lyft had all reached agreement to allow San Francisco to levy a tax on a per-ride basis instead. A tax on gross receipts would have included taxes on drivers' tips, tolls, and other accumulated fees. After the City, County and private mobility partners were in alignment, Assembly member Phil Ting and State Senator Scott Wiener then authored state legislation to confirm San Francisco's authority to levy a local tax on TNC and future autonomous vehicle trips and have the dedicated funding be remitted to the SFCTA. Governor Brown signed this bill in September of 2018.[11]

AB1184 allows the City and County of San Francisco to impose a tax on each ride originating in the City and County of San Francisco provided by a TNC or autonomous vehicle. The tax is tiered in that shared rides are taxed at 1.5 percent per-ride, while single-seat rides are taxed at 3.25 percent per-ride. Late-night trips, trips made in hybrid vehicles, and trips that originate from low income neighborhoods and communities of color will have a reduced per-ride tax. Paratransit trips and fully electric vehicles will not be taxed. Revenues go to SFCTA. The bill will require voter approval at the November 2019 ballot, and it is expected to go into implementation in 2020, and will bring in $30M in the first few years.[12]

[10] SFCTA. "The TNC Regulatory Landscape: An Overview of Current TNC Regulation in California and Across the Country." December 2017.
SFCTA. "TNCs and Congestion." October 2018.
SFCTA. "TNCs Today: A Profile of San Francisco Transportation Network Company Activity." June 2017.
[11] Wray, Sarah. Smart Cities World, "San Francisco reaches ride-sharing tax agreement with Uber and Lyft." August 6, 2018.
[12] Norman, Hannah. San Francisco Business Times. "Uber, Lyft agree to proposed ridehail tax in San Francisco." August 1, 2018.
Wray, Sarah. Smart Cities World, "San Francisco reaches ride-sharing tax agreement with Uber and Lyft." August 6, 2018.

The Re-Imagining of LA County:
Mobility, Equity, and the Environment

February 28, 2019

Metro

Trends in LA County

- Population and economic growth increase travel demand on a system that is already congested.
- As travel demand grows, greenhouse gas emissions and environmental impacts of transportation grow.
- Transportation inefficiencies limit regional and individual prosperity.
- Lack of high-quality mobility perpetuates inequities
- We must focus on quality alternatives to driving alone.

Recommended Actions

Request approval to

- Pursue the Transformational Initiatives
- Continue work on the Twenty-Eight by ’28 goal and accelerate projects in every feasible way; report progress on a quarterly basis.
- Develop proposed funding and financing plans for the accelerated projects; report back in September 2019.

Transformational Initiatives

Recommend pursuit of

- Feasibility study to pilot congestion pricing
- Feasibility study to levy fees on shared devices (e.g. scooters) and transportation network companies (TNCs)

Metro

Congestion Pricing Feasibility Study

Study will look at how pricing can reduce congestion, improve equity, and cut emissions:

- Equity Strategy to specifically address impacts to vulnerable populations
- Research and analysis of three pricing models, including projected revenues and policy implications
- Selection criteria and process to identify potential pilot locations (Diverse areas are a consideration)
- Identification of transit service and improvements to provide mobility options in congestion pricing pilot

Congestion Pricing Feasibility Study

Study goals include:

- Improving mobility by reducing congestion, enabling existing infrastructure to move vastly more people much faster
- Improving equity by freeing mass transit users from being stuck in traffic at no cost to them
- Cleaning the air by cutting idling/driving times and reducing single-occupancy vehicle use

Metro

Equity Strategy for Congestion Pricing Study

Equity Strategy will identify

- Effects of congestion pricing on all travelers in the multimodal transport network
- Potentially disproportionate impacts to vulnerable populations (drivers and non-drivers)
- Opportunities to avoid or address identified impacts
- Availability of options to the single-occupancy vehicle
- Location of congestion pricing boundaries (related to available alternate modes)
- Sequencing and timing of congestion pricing

Re-Imagining LA County

"The mission of the Los Angeles County MTA is to design, construct, procure, operate, and maintain a safe, reliable, affordable and efficient transportation system ***that increases mobility, relieves congestion and improves air quality***, and meets the needs of all Los Angeles County residents."

– Metro Board Retreat, February 1994

"To manage transportation demand in fair and equitable manner, ***Metro will test and implement pricing strategies to reduce traffic congestion***."

– Metro Vision 2028, June 2018

Re-Imagining LA County

The Transformational Initiatives can deliver unprecedented regional benefits and outcomes

- Dramatically improve equity through mobility
- Eradicate congestion in LA County
- Reduce the region's carbon footprint and combat climate change
- Consideration of free transit

Recap of Recommended Actions

Request approval to

- Pursue the Transformational Initiatives
- Continue work on the Twenty-Eight by ’28 goal and accelerate projects in every feasible way; report progress on a quarterly basis.
- Develop proposed funding and financing plans for the accelerated projects; report back in September 2019.

Next Steps

- April 2019 – Review scope for Congestion Pricing Feasibility Study
- June 2019 – Award contract for Congestion Pricing Feasibility Study
- September 2019 – Report on financing/funding plans for the accelerated projects
- Quarterly – Progress reports on efforts to accelerate projects in Twenty-Eight by ‘28

Discussion