

2019
UPDATE

NEXT 10

DELIVERY PLAN

2017-2026

DRAFT



UPDATED NOVEMBER 2019



On November 11, 2019 the Orange County Transportation Authority (OCTA) Board of Directors (Board) will consider adoption of the Draft 2019 Updated Next 10 Delivery Plan (Next 10). Original commitments from the adopted Next 10 Plan remain largely unchanged except for naming additional projects to be moved from environmentally cleared/shelf-ready to a commitment through construction. The 2019 update of the Next 10, includes revised revenue assumptions as well as updated project information including cost estimates, schedules and external funding.

Printed November 2019

**For the latest version of the Next 10 Plan,
including any edits or corrections,
please visit: www.octa.net/Next10**

**For status updates on M2 projects and programs,
including quarterly progress reports,
please visit: www.octa.net/m2**

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2019
UPDATE

NEXT 10

DELIVERY PLAN

Introduction

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2019 UPDATE NEXT 10 DELIVERY PLAN



Introduction

On November 7, 2006, Orange County voters, by a margin of 69.7 percent, approved the renewal of the Measure M one-half cent sales tax for transportation improvements. Voters initially endorsed Measure M in 1990 (M1) with a sunset in 2011. With the approval of Renewed Measure M (M2), the voters agreed to a continued investment of local tax dollars in Orange County's transportation infrastructure for another 30 years to 2041.

Since M2 (also branded externally as OC Go) approval, the Orange County Transportation Authority (OCTA) Board of Directors (Board) has continued to pursue the expeditious implementation of M2 through the adoption of a series of early delivery plans. These early delivery plans are designed to ensure the delivery of all projects and programs as promised to the voters. The goal is to bring transportation improvements earlier to residents and commuters of Orange County, and as appropriate, address changes in sales tax revenue projections through strategic financing and augmenting the program with external revenue. To date, there have been three early delivery plans. These include: an Early Action Plan (EAP) adopted in 2007, an M2020 Plan adopted in 2012 (intended to go through 2020), and the Next 10 Delivery Plan (Next 10 Plan). Due to changes in sales tax revenue projections, the M2020 Plan was replaced after four years with the Next 10 Plan that spans ten years through 2026. See the M2 Timeline on the following page.

On November 14, 2016 the Next 10 Plan was approved by the Board, providing a blueprint for continued advancement of M2 projects and programs from Fiscal Year (FY) 2016-17 through FY 2025-26. To ensure and reconfirm the ability to deliver the Next 10 Plan, annual reviews and updates have taken place incorporating changes in sales tax revenue forecast assumptions, external revenue, and project cost and schedule revisions.

A summary of the adopted plan and annual updates of the base assumptions follow:

- The 2016 adopted Next 10 Plan set M2 project and program priorities based on a revenue forecast of \$14.2 billion through 2041. The Next 10 Plan revenues were augmented by net excess 91 Express Lanes (EL) revenue, in an amount not to exceed the project costs for two eligible projects - Project I between State Route 55 (SR-55) and State Route 57 (SR-57), and Project J between State Route 241 (SR-241) and the Riverside County line. The supplemental funding is designated to improvements on the 91 Corridor.

- The 2017 update of the Next 10 Plan incorporated a revised \$13.5 billion revenue forecast and required bonding adjustments and inclusion of the full amount of eligible excess 91 EL revenue. The update also designated Project I as one of the priority projects for advancement and included plans to initiate construction by 2026.
- The 2018 update incorporated a revised \$13.1 billion revenue forecast offset by a nearly \$300 million increase in captured external revenue. The update also responded to construction market concerns of potential project cost increases in the freeway program by incorporating a program level line item for economic uncertainty to ensure OCTA could weather fluctuations in M2 revenue receipts. The 2018 update anticipated up to four bond issuances during the Next 10 plan period to accommodate market changes if necessary.

M2 Timeline



2019 Review

On October 28, 2019, the Board received the 2019 sales tax revenue forecast of \$13.4 billion. This increase from \$13.1 to \$13.4 represents a \$300 million gross increase from what was assumed in the 2018 Next 10 Plan and is the first increase in the M2 forecast since 2014. The increase is driven by the growing economy and the implementation of the Wayfair decision in California. The Wayfair related legislation enabled the collection of sales tax for out-of-state transactions. As a result of the decision, increased sales tax receipts were incorporated in the short-term forecast provided by MuniServices, LLC which increased the overall long-term forecast.

To ensure the delivery of the Next 10 Plan, staff reviewed and updated the cash flow for the complete M2 plan of projects and programs. The 2019 update incorporates the higher M2 sales tax revenue forecast, current programmed external revenue, and revised (lower amount needed) bonding assumptions while maintaining project delivery schedules. Original project delivery commitments remain unchanged, although the 2019 update

identifies a new group of projects (from the environmentally cleared shelf-ready list) to move forward through construction. In addition, refinements were made to account for updated project cost estimates and schedules. Through this process, staff confirmed once again that the Next 10 Plan remains deliverable.

Next 10 Plan Delivery Risks

The Next 10 Plan deliverables for projects and programs are not without risks. While the M2 Program continues to demonstrate financial viability and ability to deliver the complete M2 plan of projects and programs, OCTA remains cognizant of risks. These include financial, construction market, resource, and regulatory risks. A table of risks is included on pages 6 through 7 with two key risks highlighted below.

Sales Tax Revenues – OCTA has been challenged with actuals not aligning with revenue forecasts and annual forecast updates coming in lower year over year. For FY 2019, sales tax actuals grew at 3.4 percent versus the budgeted growth rate of 3.7 percent. However, this year's forecast by university economists and tax experts resulted in a higher forecast than the previous year. Although this is very positive, there are no assurances and, hence, the revenue outlook continues to be a risk item to watch.

OCTA regularly compares actual sales tax receipts with the forecast and provides updates to the Board quarterly.

Potential for Cost Increases Impacting Freeway Delivery – In September of 2017, a Next 10 Market Conditions Forecast and Risk Analysis Report was conducted by local economists Dr. Wallace Walrod and Dr. Marlon Boarnet and identified a strong potential that OCTA would experience an increasing-cost environment during delivery of the Next 10 Plan. Following Board direction, staff worked with the consultant team to create a construction cost pressure index providing a range of potential cost fluctuations. The 2018 index identified a potential that OCTA could experience a cost increase of between six to 11 percent during the 2018 through 2020 time period of construction activity. The most recent update suggests a tempering and reflects a two to six percent increase looking forward between 2020 and 2022. This is discussed further on page 20 in the section discussing Future Outlook.

In order to be successful, OCTA needs to be aware and prepared to manage risks in several areas. A summary table of the risks, explanations, and suggested management actions are identified on the following pages and are tracked and reported in the M2 Quarterly Progress Reports presented to the Board, following each fiscal year quarter.

Delivery Risk		Explanation	Planned Action
	On Track		One to Watch
Financial			
1	The 2019 M2 revenue forecast estimate is \$13.4 billion, which represents a 45 percent decrease in forecasted revenue compared to projections used to develop the expenditure plan. If sales tax revenue continues to be lower than projections, this will further challenge delivery.	Sales tax revenues were impacted by the recession and changes in consumer spending habits. However, the recent increase provides a positive indication that the forecast may have stabilized.	The 2019 higher forecast provides a positive change which gives relief to the reliance on external funding to deliver the Freeway Program. OCTA will continue to actively pursue available state and federal revenue, and work with Caltrans to identify cost effective freeway alternatives.
2	Inability to scale the M2 Freeway Program to available revenue and still deliver the promise.	The M2 Freeway Program includes set project scopes leaving very little flexibility in what is delivered.	OCTA will work closely with Caltrans to apply value engineering strategies on projects to manage costs.
3	Schedule and scope changes on critical capital projects impacting delivery and project costs.	Changes as a result of updated highway standards or issues identified in the field regularly impact scope and schedule and ultimately costs.	Continue tight rein on project delivery. Work closely with Caltrans and project contractors to keep changes in scope and schedule to a minimum.
4	Sustain Metrolink train service as an attractive alternative to driving in Orange County with the limits of available revenue.	Operational costs of Metrolink service continues to grow as the system ages, track-sharing arrangements with BNSF are revised, and new air quality requirements are implemented.	Staff will continue to work closely with Metrolink and our partners to ensure cost increases are minimized, while seeking external revenue.
5	The Next 10 Market Forecast and Risk Analysis identified strong potential for an increasing-cost environment during the Next 10 timeframe. While this continues to exist, recent bid openings indicated this may be tempering.	OCTA continues to monitor and track key early warning indicators. A construction cost pressure model was created providing insight on forecasting capital cost risks.	Continue with early delivery of projects providing opportunity for cost savings (reduces outyear escalation). The cash flow includes built in economic uncertainty funding and extremely conservative bonding assumptions which can be increased if needed. While bid items have increased, changes to overall project costs remain manageable.

Resource			
6	Extremely low unemployment and substantial work underway in the region, has resulted in significant demand for professional and skilled labor which can impact delivery given the scope of the M2 capital program.	External demand for key talent creates shortages which drive up project delivery costs. Timely capital project completion is key to reduce project delivery risk.	Expert and timely coordination between OCTA and Caltrans are imperative to manage risk. Staff is working with Caltrans to ensure resource needs are met. OCTA's Human Resources Division continues to implement programs to retain and attract internal talent.
7	New operational responsibilities with the OC Streetcar.	Implementation of the OC Streetcar expands OCTA's operational responsibilities. OCTA has a strong track record in operating transit systems including both a fixed and demand-based bus network.	To ensure success of the OC Streetcar, OCTA hired an operations manager with experience to oversee startup and daily operations.
Regulatory			
8	New federal and statewide directives create additional limitations for use of transportation dollars which could affect freeway projects.	New directives with greenhouse gas reductions, managed lane corridors focus, as well as an emphasis on transit provides new hurdles that eliminate some sources of funding for OC Go freeway improvements.	OCTA will monitor new directives and work closely with our partners including Caltrans to ensure that M2 projects stay true to the voter commitment and compete for funding as appropriate.

Guiding Principles

During the development of the EAP, guiding principles were established that set the direction for staff on establishing priorities for freeway project acceleration. These guiding principles continue to instruct us today and were used to identify projects to recommend moving from the environmentally cleared/shelf-ready list to early funding through construction.

- Project Readiness
- Congestion Relief and Demand
- External Funding Availability
- Public Opinion and Support
- Project Sequencing and Connectivity
- Project Duration

Updated Next 10 Plan Deliverables

The updated Next 10 Plan is based on ten deliverables intended to provide guidance on program and project delivery during the ten-year period 2017 through 2026. With three years of the ten-year plan complete, progress on the ten deliverables is significant and accomplishments to date are discussed in the following sections.

Freeways

1. Deliver ~\$3.5 billion of freeway improvements approved through construction (Projects A-M).

Status:

The M2 freeway program is currently made up of 30 projects or project segments (projects). While the total number of projects increased from 27 (2018) to 30 in 2019, the project delivery commitment remains the same. At the point of Next 10 adoption, nine of the 30 total projects were completed for a total cost of \$463 million. Deliverable 1, includes 12 of the 30 projects to be delivered (or underway) within the Next 10 timeframe including SR-91 between SR-57 to SR-55 (Project I) funded with 91 Express Lanes excess revenue. Together, the projects designated for completion or near completion) by 2026 currently make up a \$3.1 billion delivery promise. The \$3.5 billion deliverable commitment includes prior completed projects. See Appendix for a table of the completed projects.

During the Next 10 Plan, three projects on Interstate 5 (I-5) between Avenida Pico and San Juan Creek Road, opened to traffic, adding six miles of carpool lanes. The remaining nine projects are moving forward through project delivery process and are shown below.

Completed		Construction Complete	Cost
Nine Projects Completed Prior to Next 10		2008-2016	\$463.3
1. Project C	I-5 between Avenida Pico and Avenida Vista Hermosa	2018	\$83.5
2. Project C	I-5, Vista Hermosa to Pacific Coast Highway	2017	\$75.7
3. Project C	I-5 between Pacific Coast Highway and San Juan Creek Rd.	2018	\$75.5
In Construction			
4. Project A	I-5 between SR-55 and SR-57	2021	\$41.5
5. Project C, D	I-5 between Oso Pkwy and Alicia Pkwy/La Paz Interchange	2023	\$203.1
6. Project K	I-405 between SR-73 and I-605	2023	\$1,425.0
In Design			
7. Project C	I-5 between Alicia Parkway and El Toro Road	2024	\$182.0
8. Project C, D	I-5 between SR-73 and Oso Pkwy/Avery Pkwy Interchange	2025	\$196.1
9. Project F	SR-55 between I-405 and I-5	2025	\$410.9
In Environmental			
10. Project I	SR-91 between SR-55 to Lakeview Avenue	2027	\$102.5
11. Project I	SR-91 between La Palma Avenue to SR-55	2027	\$223.1
12. Project I	SR-91 between Acacia Street to La Palma Avenue	2028	\$109.7
Deliverable 1 Grand Total			\$3,591.9

2. Invest approximately \$715 million more in revenues, bringing the completed Freeway Program improvements to \$4.3 billion (Projects A-M).

Status: The nine remaining projects (of the 30 total) are environmentally cleared or on track to be cleared by 2026, making them shelf-ready for future advancement. Deliverable 2 includes approximately \$715 million in funding to move projects directly into design and construction. Using the Guiding Principles adopted by the Board (see page 6), projects 1 through 5 listed below are recommended for advancement through construction.

In all, during the Next 10 time-period, approximately \$4.3 billion in freeway improvements promised to the voters in M2 is committed to be completed or underway by 2026.

Advance to Construction			Environmental Complete	Construction Complete	Cost
1.	Project M	I-605 Katella Avenue Interchange	2018	2025	\$ 28.6
2.	Project G	SR-57 NB Oranewood Ave. to Katella Ave.	2019	2026	\$ 67.8
3.	Project B	I-5 between I-405 and Yale Avenue	2020	2028	\$234.4
4.	Project B	I-5 between Yale Avenue and SR-55	2020	2028	\$204.3
5.	Project F	SR-55 between I-5 and SR-91	2020	2028	\$122.4
Deliverable 2 Total					\$657.5

Next 10 Deliverable 1 and 2 Funding Commitment	\$4,300
2019 Update Deliverable 1 and 2 Included Projects	\$4,249
Deliverable 1 and 2 Balance of \$51 million	

The remaining four projects (projects 6 through 9 below) listed have specific reasons related to the application of the Guiding Principles that require additional time prior to these projects being recommended for advancement which are described below.

Remaining Projects			Environmentally Clear Shelf-Ready	Cost
6.	Project L	I-405 between I-5 and SR-55	2018	\$238.8
7.	Project D	I-5 El Toro Road Interchange	2020	\$112.3 ¹
8.	Project G	SR-57 NB Lambert Road to County Line	2026	\$167.5 ¹
9.	Project J	SR-91 between SR-241 and I-15	2026	<u>\$292.5¹</u>
Remaining M2 Freeway Projects Total				\$811.1²

M2 Freeway Program (all projects)	Total \$5,061³ billion
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¹ These cost estimates are preliminary and will be updated once the project alternative is selected at the completion of environmental clearance.

² The total will be revised once the three remaining projects (Project D, G, and J) complete environmental clearance and have a selected project alternative.

³ This total will be revised once the three remaining projects (Project D, G, and J) complete the environmental phase and have a selected project alternative.

- Project L – I-405 between I-5 and SR-55 is a parallel facility to the two Project B segments on I-5 listed above. Only one project can move forward at a time due to construction on both creating excessive inconvenience to the traveling public. Project B was determined to be a higher priority project than Project L at this time, based on the guiding principles Project Sequencing and Connectivity and Project Congestion Relief and Demand. Congestion levels on the I-5 are higher than in the Project L, I-405 improvement area. The I-5 project improvement areas are highly constrained due to tight right-of-way and is therefore technically challenging requiring design variations. The I-5 project is a high cost project and leads to high risk of cost escalation if delayed. Additionally, a significant Caltrans safety project is scheduled to take place within the Project L project limits and will require additional coordination.
- Project D – I-5 El Toro Road Interchange is in the environmental clearance phase and has faced challenges determining a build alternative that has local support and consensus with the three stakeholder cities. Using the guiding principles – Readiness and Public Support, this project needs additional time before it moves forward. Built into M2 was a promise that projects would be delivered in cooperation with local jurisdictions. The three stakeholder cities (cities of Laguna Hills, Laguna Woods and Lake Forest) have been asked to work together to come to consensus on a mutually acceptable and viable alternative at which time the project will be ready to be advanced.
- Project G – SR-57 Northbound Lambert Road to Los Angeles County Line is scheduled to begin the environmental phase in the Next 10 Plan time frame. Through the SB1 Trade Corridor Enhancement Program, an initial phase for interchange improvements at Lambert Road interchange with SR-57 is currently underway. The mainline project is a strong candidate for additional trade corridor funding and OCTA will apply to compete for these funds in the coming year. The project will require some coordination addressing connectivity with Los Angeles County. Reviewing the guiding principles – Readiness, External Funding and Project Sequencing and Connectivity, a decision for moving this project into design following environmental clearance will be reviewed during the Next 10 Plan update or brought to the Board as a separate item.
- Project J – SR-91 between SR-241 and I-15 is part of a bigger package of improvements underway between OCTA and Riverside County Transportation Commission (RCTC) with a planned sequencing of project improvements in the 91 Corridor jointly agreed to by both OCTA and RCTC's Board. RCTC, with OCTA's support, is advancing the westbound portion of this project (between SR-241 and Green River Road) and is planned for construction in 2021. The eastbound lane project has engineering challenges due to project area topography (Santa Ana Canyon) and natural constraints (Santa Ana River) and requires an engineering feasibility assessment. Reviewing the guiding principles – Readiness and Project Sequencing and Connectivity, this project will move forward following the completion of the engineering feasibility assessment which is planned to take place in 2020.

Streets and Roads

- 3. Allocate up to \$1 billion, with up to \$400 million in competitive funding to local jurisdictions to expand roadway capacity and synchronize signals (Project O and P) and \$600 million in flexible funding to local jurisdictions to help maintain aging streets or for use on other transportation needs, as appropriate (Project Q). In addition to above, this deliverable also includes completion of the seven grade separations included in the OC Bridges program.**

Status: Since the adoption of the Next 10 Plan in November 2016, OCTA has awarded approximately \$90 million in competitive funding through the Regional Capacity Program (Project O) and Regional Traffic Signal Synchronization Program (Project P) through annual calls for projects. Additionally, \$162.1⁴ million in Local Fair Share (Project Q) funds have been distributed to local agencies. This brings the total allocation during the Next 10 Plan period to \$244.5⁴ million. Additionally, all seven bridges included in the OC Bridges program are complete.

Transit

- 4. Extend Metrolink service from Orange County into Los Angeles County, contingent upon cooperation and funding participation from route partners, complete six rail station improvements (Project R).**

Status: OCTA extended service on four intracounty trips to Los Angeles in October 2019. Two northbound trips that previously operated between Laguna Niguel/Mission Viejo and Fullerton have been extended to Los Angeles and two southbound trips now begin in Los Angeles extending beyond Fullerton. Additional service enhancements and extensions are scheduled to be added in April 2020 providing more options for travel between Los Angeles and San Diego counties from Orange County.

Within this program, funding is provided for rail corridor and station improvements to accommodate increased passenger train service - including station upgrades, parking expansions, and safety enhancements. The Next 10 Plan identifies six Metrolink station projects to be completed by 2026. Since adoption, four of the six projects have been completed. This includes improvements for passenger accessibility at the Laguna Niguel/Mission Viejo station, lighting and railing improvements for enhanced passenger safety at the San Clemente Pier station, elevator upgrades for increased passenger accessibility and reliability at the Fullerton Transportation Center station, and a new 600 space parking structure at the Orange Transportation Center station providing passengers with convenient and dependable parking. Two additional projects have completed design and are ready to move into construction. See progress on the next page.

⁴ Only includes disbursed funds. On May 13, 2019, the Board determined that the City of Santa Ana and the City of Stanton ineligible to receive M2 revenues. Disbursement of M2 funds have been suspended until the cities achieve compliance and the Board reconsiders the matter by May 2020.

Completed		Year
1.	Laguna Niguel/Mission Viejo Station American Disabilities Act Ramps	2017
2.	San Clemente Pier Metrolink/Amtrak Station Lighting	2017
3.	Fullerton Transportation Center Elevator Upgrades	2019
4.	Orange Station Parking Structure	2019
In Design		Anticipated Construction Complete
5.	Anaheim Canyon Metrolink Station	2021
6.	Placentia Metrolink Station	2021

Outside of the Next 10 Plan but important to Metrolink operations is the undertaking by Metrolink of a major systemwide rehabilitation program that, in addition to safety, will help improve system reliability and performance for commuters. This multi-year program needs to be funded over and above ongoing maintenance and operation costs. Analysis to date indicates that Orange County's share is manageable within the M2 funding limits as a result of past and present proactive efforts of OCTA. In addition, OCTA foresees the planned installation of the Metrolink Rail Maintenance Facility in Orange County will reduce ongoing operating costs and also allow for better efficiencies for future expansion.

5. Complete design and construction, secure vehicles, and begin operating the OC Streetcar (Project S) and work with local agencies to consider recommendations from planning studies to guide development of future transit connections (Project S).

Status: OC Streetcar - With strong FTA support for the project, a full-funding grant agreement (FFGA) was executed in November 2018 providing OCTA with \$149 million in federal funding to support the project. The OC Streetcar construction contract was executed and Notice to Proceed was issued on March 4, 2019 as well as the vehicle manufacturing contract. Construction activities are underway, including coordination with third parties on utility relocation, identifying the scope of services for the operations and maintenance contract and continued coordination with the Federal Transit Administration (FTA). Construction is anticipated to be complete with planned operations beginning in 2022.

6. Provide up to \$115 million in funding to expand mobility choices for seniors and persons with disabilities (Project U).

Status: Approximately \$31⁵ million has been provided for the Senior Mobility Program (SMP), the Senior Non-Emergency Medical Transportation Program (SNEMT), and the Fare Stabilization Program since the Next 10 Plan adoption.

⁵ Only includes disbursed funds. On May 13, 2019, the Board determined that the City of Santa Ana and the City of Stanton ineligible to receive M2 revenues. Disbursement of M2 funds have been suspended until the cities achieve compliance and the Board reconsiders the matter by May 2020.

The first of the three programs provided within Project U, is the SMP which provides funding for local transportation services to participating cities in Orange County. Participating agencies, design and implement transit service that best fits the needs of older adults (age 60 and above) in their communities. The second program, the SNEMT program provides funding to the County of Orange, Office on Aging for senior (60 and above) transportation to and from medical appointments, dentists, therapies, exercise programs, testing and other health related trips at a low cost to the rider then would otherwise be available. The third program is the Fare Stabilization program which provides stable discounted fares for seniors and persons with disabilities lowering the cost of riding transit.

7. Work with local agencies to develop a plan for the next community circulator projects to provide grant opportunities for local agencies to implement efficient local transit services (Project V).

Status: The Board has authorized four calls for projects in total with two occurring since the Next 10 adoption. Five projects for a total of \$5.1 million were funded through the 2018 call with another \$9 million available for the 2019 call underway, more projects are anticipated. Nineteen transit circulators are currently active. Staff continues to work with local jurisdictions through letters of interest requests and workshops to fine tune this program and seek successful projects for implementation.

8. Allocate up to \$7 million in funding to improve the top 100 busiest bus stops and support the modernization of the bus system to enhance the customer experience (Project W).

Status: Through two calls for projects in total, Board approval has resulted in 79 city-initiated improvements to busy bus stops on the OCTA transit system. Since the Next 10 adoption, the Board has made \$3 million available of which \$872,000 was allocated to the eligible local jurisdictions. The program is designed to ease transfers between bus lines and provide passenger amenities such as installation of bus benches or seating, shelters, improved lighting, and other passenger related amenities.

Environmental

9. Ensure the ongoing preservation of purchased open space which provides comprehensive mitigation of the environmental impacts of freeway improvements and higher-value environmental benefits in exchange for streamlined project approvals.

Status: In 2017, OCTA received biological resource permits after completing a state and federal Natural Community Conservation Plan/Habitat Conservation Plan (Conservation Plan) for the Environmental Mitigation Program (EMP), allowing streamlined project approvals for the freeway improvement projects. The Conservation Plan also includes a streamlined process for coordination for streambed alternation agreements. In January 2018, the OCTA secured programmatic permits and assurances for federal and state clean water permitting requirements. Receipt of these permits represent the culmination

of years of collaboration and support by the Board, environmental community, and regulatory agencies.

To ensure ongoing preservation of the open space, an endowment was established to pay for the long-term management of the conservation properties (Preserves). Approximately \$2.9 million will be deposited annually. The third deposit was made in July 2019 bringing the total endowment funding to approximately \$12.4 million including interest. The total endowment balance to date is performing above original projections due to higher investment earnings and lower fees.

10. Work with the Environmental Cleanup Allocation Committee (ECAC) to develop the next tiers of water quality programs with a goal of providing up to \$40 million in grants to prevent the flow of trash, pollutants and debris into waterways from transportation facilities. In addition, focus on improving water quality on a regional scale that encourages partnerships among the local agencies as part of the Environmental Cleanup Program (ECP) (Project X).

Status: Since adoption of the Next 10 Plan in November 2016, OCTA has issued three calls for Tier 1 ECP projects. The Board awarded approximately \$7.6 million to fund 39 Tier 1 projects. Staff anticipates the next Tier 2 call in 2021, dependent on projected cash flow and local jurisdictions' interest in potential viable Tier 2 projects.

In total, during the Next 10 time period (2017-2026) more than \$6 billion in transportation improvements promised to the voters in M2 will be completed or underway by 2026. The Next 10 Plan deliverables were designed to make improvements to Orange County freeways, streets and roads, transit systems and protect the environment. Despite revenue fluctuations, the \$6 billion plan to support the goals remains on track with significant accomplishments to date.

Oversight and Safeguards

The 2019 Next 10 Plan is taking place with the full oversight and regular reporting promised to the voters. Regular progress reports on implementing the Next 10 Plan are included in the M2 Quarterly Progress Reports that are prepared for the Board. These reports are included on the OCTA website, as well as other means, to ensure accessibility and transparency of the information. Contact information for the OCTA staff member responsible for each program or project is included.

Additionally, as specified in the M2 Ordinance No. 3, Section 10, there will be three performance assessments conducted during the Next 10 time period. Performance assessments are to be conducted at least once every three years to evaluate the efficiency, effectiveness, economy, and program results of OCTA in satisfying the provisions and requirements of the M2 Plan and Ordinance No. 3. These assessments will take place during years 2018, 2021, and 2024. The 2018 Performance Assessment

was extremely complimentary of OCTA's performance in efficiency, effectiveness and program results.

Also included in Ordinance No. 3, Section 11, the second ten-year comprehensive review of M2 programs and projects will be initiated at the end of the Next 10 time period. Due to the early initiation of project development activities prior to the start-up of revenue collection in 2011, the first review was completed in fiscal year 2015. The second review is planned to take place in fiscal year 2025 (or sooner if warranted) and will determine the basis for setting the direction of future refinements to the M2 Plan. The ten-year review includes a comprehensive review of all projects and programs implemented under the M2 Plan to evaluate the performance of the overall program and may result in revisions to further improve performance.

Sustainable Communities Strategy

It is important to note that M2 also supports and enhances the ability of OCTA to support the regional Sustainable Communities Strategy in Orange County. M2 projects and programs are part of a larger suite of transportation improvements included in the 30-year M2 Plan. More than 50 percent of M2 funds are intended to fulfill transit, system optimization, enhanced environmental elements and infrastructure preservation goals. In addition, the funding eligibility criteria encourages local agencies to consider accommodations for transit and non-motorized transportation.

M2 was publicly reviewed through a Program Environmental Impact Report prior to voters approving the ballot measure in November 2006. Since 2008, the M2 Program has been included in the Regional Transportation Plans, Sustainable Communities Strategies, and the associated Program Environmental Impact Reports prepared by the Southern California Association of Governments (SCAG).

In addition to funding freeway improvements, the M2 Program dedicates funding for many transit and local street improvement projects. These include improvements such as:

- New transit connections between major Orange County activity areas that reduce the need for short automobile trips;
- Enhanced convenience and reliability for bus services and Metrolink commuter rail to encourage transit as a dependable commute option;
- Local funding for development of multimodal corridors and roadway preservation that improves the quality of mobility for all users; and,
- Signal synchronization on 750 miles of roadways throughout Orange County to reduce congestion and tailpipe emissions.

The Freeway EMP has preserved 1,300 acres of wild lands that will be converted to the Preserves to enhance connectivity and wildlife movement between existing conservation areas - such as the Cleveland National Forest, the Chino Hills State Park, and the Irvine Ranch Conservancy lands - and to coastal areas. Furthermore, the program also provides critical habitat for endangered or listed species. Additionally, since M2 inception the ECP has funded nearly 200 projects totaling over \$51.8 million to treat storm water runoff and help keep waterways and beaches clean in Orange County. The aforementioned transit, local streets, and environmental programs collectively contribute to and enhance the

quality of life, as well as provide a sustainable future, and an efficient transportation system that benefits the region.

Brief summaries of the specific programs are listed below.

- ✓ Projects A through N – Freeway improvements and Freeway Service Patrol to provide emission reductions through congestion relief
- ✓ Projects O and P – Signal synchronization and street improvements that provide emission reductions through congestion relief and flexibility to accommodate bike and pedestrian project elements as appropriate
- ✓ Project Q – Local funding for city-selected transportation projects that provides for preservation of the streets and roads system and includes bike, pedestrian, water quality, and transit enhancements as eligible expenditures
- ✓ Project R – Expanded Metrolink train capacity including improvements to stations and parking to improve transit reliability and convenience and reduce reliance on highways while also supporting potential transit-oriented development
- ✓ Project S – Transit extensions to improve access between Metrolink stations and residential/employment centers, and provide an alternative to driving
- ✓ Project T – Station improvements to connect to planned future High-Speed Rail services
- ✓ Project U – Sustain mobility choices for seniors and persons with disabilities and provides an alternative to driving
- ✓ Project V – Community-based circulators to complement regional transit services with local communities and provides an alternative to driving
- ✓ Project W – Transit stop improvements to support transfers between major bus lines, and support the implementation of mobile ticketing to ensure ease of fare purchase and convenience for bus passengers
- ✓ Project X – Water quality improvement programs/projects to meet federal Clean Water Act standards for urban runoff, and augment required mitigations
- ✓ Freeway Mitigation Program – Natural resource protection strategy to provide for more comprehensive mitigation of environmental impacts from M2 freeway improvements

Updated Next 10 Plan Funding Assumptions

Funding assumptions are included in the 2019 Next 10 Plan. The revenue assumptions of \$13.4 billion are based on the latest 2019 M2 revenue forecast. While the 2019 revenue forecast results in a 44 percent reduction from the original 2005 sales tax projection of \$24.3 billion, the forecast is \$300 million higher than last year's forecast. The Next 10 cash flow incorporates the revised revenue forecast of \$13.4 billion with prior commitments in programmed local, state and federal external revenues.

Revenues and expenses are merged into a high-level cash flow model. Bond assumptions are also included to support the project delivery schedules in the Freeway Program. In this update, with the increase in the revenue forecast as well as refined project costs from completing higher level engineering studies, bond assumptions have been reduced to only one planned issuance in 2023 while maintaining project delivery schedules. While additional debt is not required to deliver the Next 10 Plan deliverables, in the event the market were to change, additional bonding capacity is available. OCTA's debt coverage ratios are well above the allowable amount at 1.3x. The minimum forecasted debt coverage ratio during this period is 5.6x which provides substantial bonding capacity. This offers significant financial protection against unforeseen economic changes, related to project delivery. The appendix on page 103 includes a more detailed discussion on assumed revenues, costs, and debt service.

For the 2019 Next 10 Plan review and update, forecasted revenues and costs through 2041 were tested. This effort was conducted to ensure the complete M2 Program could be delivered consistent with commitments provided to the voters as part of M2 approval in November 2006. In general, revenues fluctuate overtime. The M2 expenditure plan includes programmatic items with specific percentages, such as 32 percent for streets and roads, which adjusts according to available revenues. However, the freeway portion defines specific projects which cannot be easily adjusted according to revenue shifts.

The funding assumptions in the freeway mode assume \$8.7 billion in total revenue, with costs for the same period totaling \$8.6 billion. OCTA has been very successful through the years in capturing external funding to offset the reduction in sales tax revenue. The long-term M2 freeway plan relies on the total receipt of \$1.6 billion in state and federal revenues. This assumes \$1.5 billion in programming commitments (this number is inclusive of \$46 million from Caltrans committed to Project F, SR-55 between I-405 and I-5, \$153.9 million in Transportation Infrastructure Finance and Innovation Act proceeds a direct benefit to M2). Additionally, the program includes \$720.8 million in net excess 91 Express Lanes revenue, \$794 million in bond proceeds and \$150 million (a conservative amount of unprogrammed revenue) beginning in 2022 through 2036 in federal and/or state funds. Also, of note, \$75 million of the total \$150 million, is assumed to come from SB1 funding, to fully fund the carpool elements of the State Route 55 project between I-405 and I-5 (Project F).

As a result of the increase in the forecasted sales tax and interest revenue, the freeway program is anticipated to receive an additional \$183.6 million in net revenue through 2041. In addition, each project in the freeway program was reviewed and cost estimates updated. With the majority of the projects now either nearing completion of the environmental phase or in design, project cost estimates have a higher level of engineering and are therefore better defined. While some project costs increased, others decreased, which resulted in a net decrease of \$142.2 million. With sales tax revenue up and freeway project costs down, this has resulted in a net positive revenue in the freeway program of \$326.8 million. This net increase, allowed for more conservative bonding assumptions, which provided significant savings in the freeway program while maintaining project delivery schedules. This resulted in an increase in the economic uncertainty for

the freeway mode with most of it available between fiscal years 2028 and 2041. As noted earlier, should the freeway program require additional revenue to support project expenditures, there is significant bonding capacity available. This results in a delivery plan (through 2041) that remains solvent.

The funding assumptions in the streets and roads mode assume \$4.8 billion in total revenue, with costs for the same period totaling \$4.8 billion. The projects within the Streets and Roads Program are scaled to available revenue and are cash flowed on a pay-as-you-go basis. The Streets and Roads Program relies on the total receipt of \$600 million in external revenues (state, federal, and local) primarily for the OC Bridges grade separation projects. More detailed program assumptions for the Streets and Roads Program can be found in the Appendix on page 106.

For the transit mode, \$3.8 billion in total revenue is assumed, with costs for the same period totaling \$3.8 billion. The projects within the Transit Program are scaled to available revenue with the exception of one, Project U's Fare Stabilization Program. Ordinance No. 3 specifically requires that the Fare Stabilization Program subsidize fares for seniors and persons with disabilities to the extent of maintaining the reduced fare rate effective on July 24, 2006 through 2041. While this program is not scalable, it remains solvent. The remaining transit mode programs are assumed on a pay-as-you-go basis. The funding for the transit mode assumes the total receipt of \$527.2 million in local, state and federal revenues. This number is inclusive of \$148.96 million in Federal New Starts and \$25.52 million in State Cap-and-Trade revenues to partially fund the OC Streetcar project. More detailed program assumptions for the Transit Program can be found in the Appendix on page 106.

The ECP assumes \$268 million in total revenue, with costs for the same period totaling \$267 million. The projects within the ECP are scaled to available revenue and are reflected in the cash flow on a pay-as-you-go basis. More detailed program assumptions for the ECP can be found in the Appendix on page 106.

With careful management of the projects and use of financial resources, the full scope of the M2 Program can be delivered as promised.

Funding and Financing

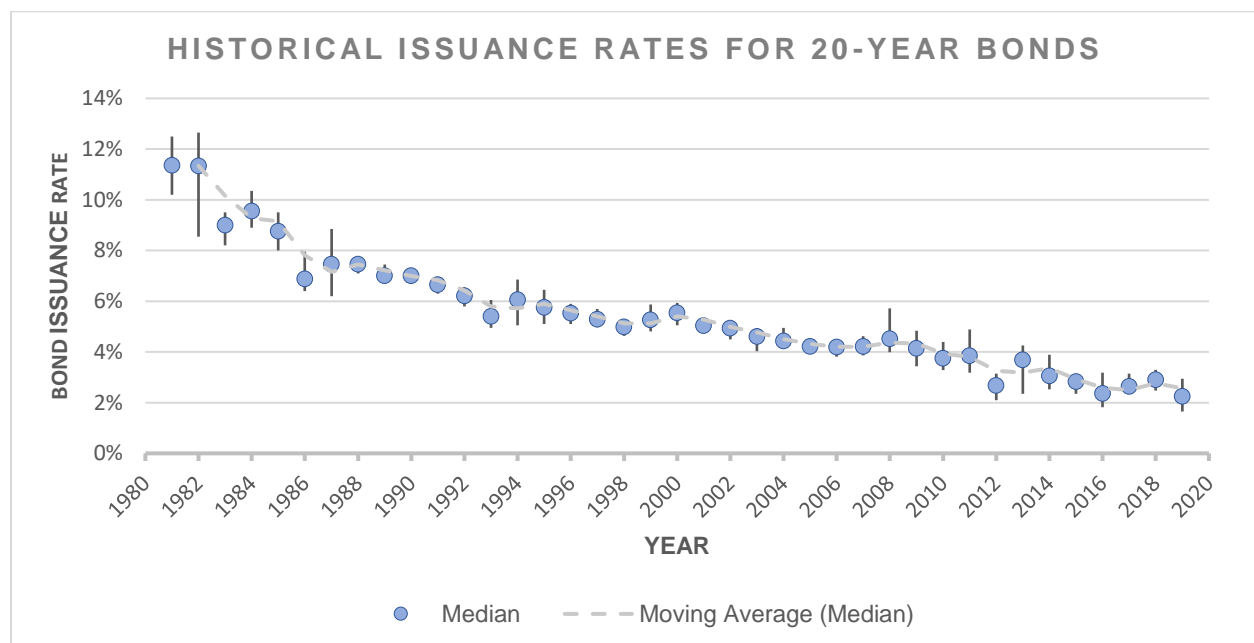
The Board's vision in developing the EAP created a great opportunity for the M2 Program. While the economy took a significant downturn due to the 2008 Great Recession, OCTA advanced projects years before revenue became available. Projects were accelerated, making them shelf-ready. This allowed OCTA to capture significant one-time external funding provided through State Proposition 1B and the American Recovery and Reinvestment Act. Using the revised forecasting methodology implemented in March 2016, the 2019 M2 sales tax revenue forecast is \$13.4 billion.

When it comes to the bidding environment, OCTA significantly benefited during the recession by capitalizing on a low-cost environment with early project development and

acceleration. When the M2020 Plan was adopted in late 2012, staff reported that freeway construction bids were consistently coming in between 10 to 20 percent below engineers' estimates. Since that time, construction bids have slowly risen to meet and in some cases exceed the engineers' estimates. However, the most recent bid opening for Project C, segment 1, on the I-5 between SR-73 to Oso Parkway on October 15, 2019 appears to be under the engineers estimate, indicating the possibility of a more predictable construction market.

In the 2018 update of the Next 10 plan, staff incorporated a 13 percent economic uncertainty allowance line item into the freeway program cash flow in FY 2019 and through 2029. In this year's update, the early years of the economic uncertainty have been removed as well as necessary bonding assumptions to support the line item. Instead, the cash flow demonstrates the ability to bond, providing assurances that if additional revenue is required to keep delivery as desired by the Board, additional bonding capacity is available to meet this future need. This provides continued financial stability in the event of a significant turn of events while projects within the Next 10 Plan move into and through construction.

Pay-as-you-go project funding is identified in Ordinance No. 3 as the preferred method of financing, while bond financing is an option that is within the purview of the Board. While the current cost of debt remains low and continues to be attractive, only one debt issuance is planned through 2041 to deliver the remaining program of projects promised to the voters. Current 20-year bond rates have declined to 1.73%. Although short-term rates have fallen as well, long-term rates remain near all-time lows of 1.65%, thus maintaining a relatively "flat" yield curve, allowing OCTA to take advantage of attractive mid- and long-term rates if and when needed. See the graph below showing historical issuance rates of 20-year bonds.



OCTA has a strong track record of successfully delivering projects early by utilizing bond financing, as seen in M1, as well as M2, under the EAP and M2020 Plan. The updated Next 10 Plan anticipates bond financing for the Freeway Program as a means to deliver the freeway projects early bringing relief to commuters sooner.

Future Outlook

As noted in the Risks section starting on page 5, major capital work is underway in the Southern California region that may impact OCTA's ability to secure resources needed for future project and program delivery. Competition for available resources for capital projects has increased with the major capital work currently underway in Los Angeles, Riverside, and San Bernardino counties. For future projects going forward, engineers, ROW experts, skilled labor, and materials will be in higher demand.

Following the original Next 10 Plan adoption, on September 11, 2017, the Board was presented with a Next 10 Market Conditions Forecast and Risk Analysis report conducted by economists Dr. Wallace Walrod and Dr. Marlon Boarnet through a contract with the Orange County Business Council (OCBC). The consultant's analysis identified strong potential for OCTA to experience an increasing-cost environment during the Next 10 delivery years. The Board directed staff to continue to work with the consultant team to monitor and track key early warning indicators and provide OCTA information on changes to the risk factors and potential cost impacts. The consultant team analyzed annual trends in material costs, labor costs, and general economic conditions to determine a range of potential cost increases. Looking out at a time horizon through 2022 the team tracked relevant market data and indicators and performed data analytics on this information.

The consultant team incorporates this analysis to provide OCTA with a range of potential cost fluctuations through the use of an Infrastructure Construction Cost Pressure (ICCP) Index. This index, combined with a detailed trend analysis of building permits, unemployment rates, localized labor costs, material costs and general economic conditions; the consultant estimates potential cost increases ranging from two percent to 6 percent between 2020 and 2022. This current range of two percent to six percent represents a tempering from the prior year's report which included the potential of a higher cost increase in the range of six percent to 11 percent.

OCBC OC Transportation ICCP Index Score, 2020-2022		
Year	Index Score	Range of Cost Fluctuation
2020	3	2%-6%
2021	3	2%-6%
2022	3	2%-6%

The consultant further shared that OCTA will need to be aware and ready to respond to two different cost pressure groupings which are described as systematic and idiosyncratic. Systematic risks have characteristics that are observable and more predictable. Systematic risks are captured in the ICCP Index through the cost pressure model. Cost pressures in this group are reflections of the construction/building

environment, the state's economy (which influences both the demand for construction services and the cost of construction labor and materials), and direct measures of material and labor costs.

Idiosyncratic risks are cost pressures which cannot be statistically modeled. These cost pressures are not related to historic or observable economic factors but are still real risks that may be important and warrant careful tracking. The consultant pointed to cost pressures in the idiosyncratic group as:

- Tariffs, and associated effects on cost of materials from the nation's changing trade policy,
- Regulatory requirements and changes that create additional hurdles during the bidding process.

In order to mitigate cost pressures, OCTA's Project Controls Department monitors and adjusts project cost escalation assumptions according to market trends. Project Controls' cost estimating process uses historical information, as well as current trends in the market, and follows a consistent and defined process. Looking back at the last 20 years, OCTA's cost estimates have included a 3.0 percent escalation, which, on average during this timeframe, provided the appropriate escalation to deliver projects successfully. Using 3.5 percent for construction escalation, as well as incorporating contingency based on the project type and complexity, is staff's best estimate using industry standards on cost estimating.

Additionally, to further protect against potential cost increases in our freeway capital program and conform to project controls' project estimating process, staff has identified significant bonding capacity that would be available at the Board's discretion if needed. This is intended to safeguard the program and ensure that OCTA does not over commit delivery during this time of uncertainty.

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2019
UPDATE

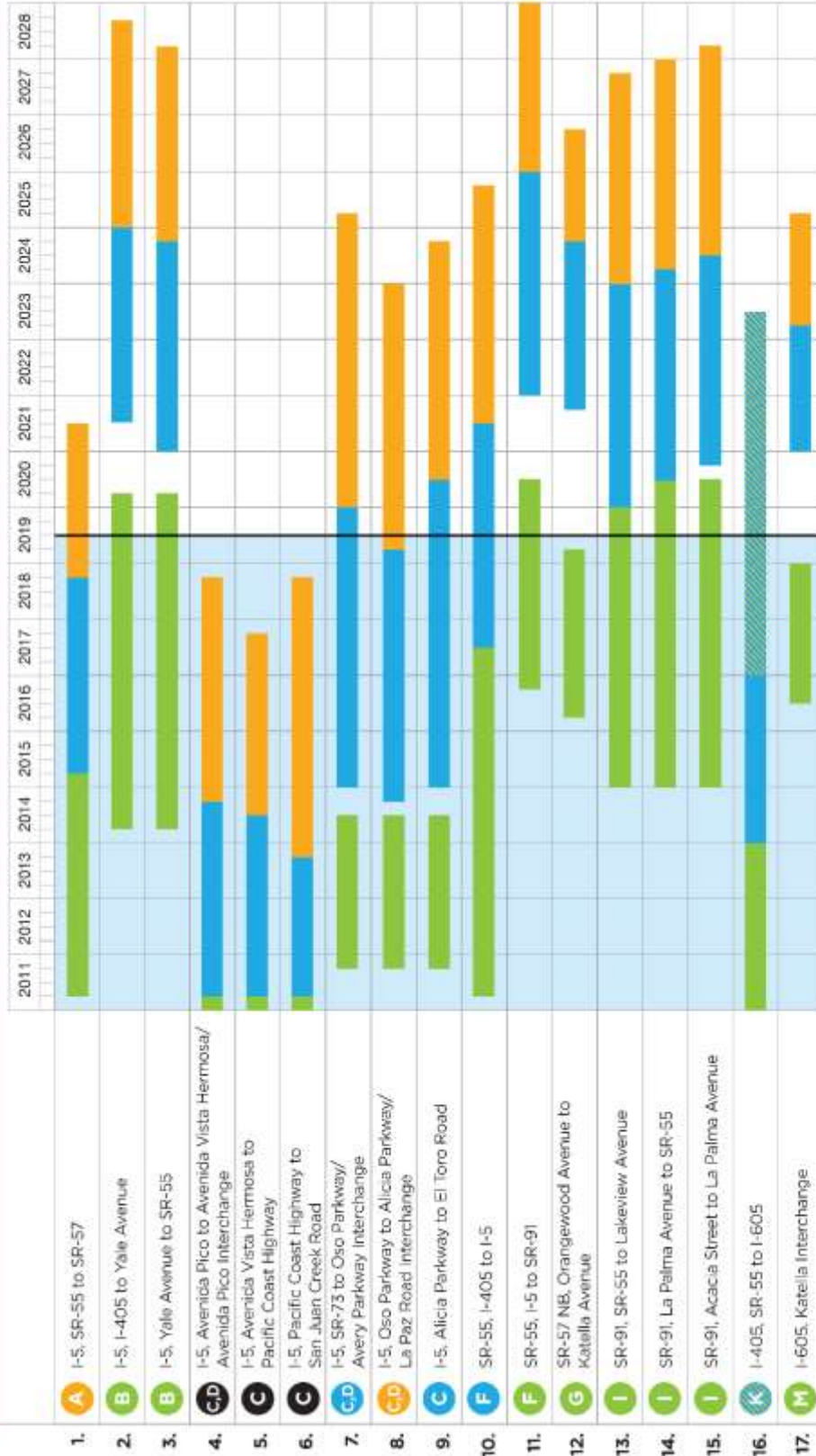
NEXT 10

DELIVERY PLAN

Freeway Program

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OC Go Freeway Projects Through Construction



Please note that schedules for projects in design and construction are updated as of June 30, 2019. Schedules for projects in environmental are preliminary. Shown schedules are subject to further refinement.

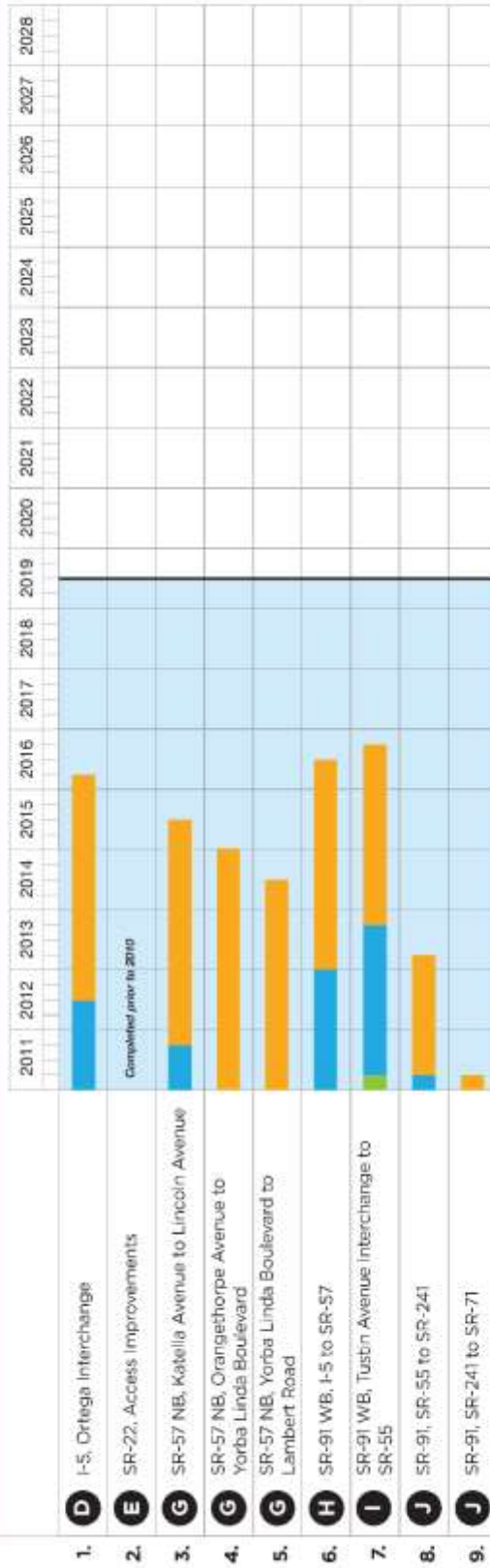
OC Go Freeway Projects Through Environmental Phase/Shelf Ready



Please note that schedules are updated as of June 30, 2019. Shown schedules are subject to change. Next 10 sets direction through 2026, as projects listed are completed, schedules and revenues will be reviewed, and the Board will adopt a new delivery plan providing direction on further advancement.

*Project environmentally reviewed as part of the Riverside County Transportation Commission's Corridor Improvement Project. Additional studies needed prior to construction.

OC Go Freeway Projects Completed Prior to Next 10 Adoption



Please note that schedules are updated as of June 30, 2019. Shown schedules are subject to change.

Freeway Program



Overview:

The Freeway Program accounts for 43 percent of the M2 Program. Over the life of M2, approximately \$5.1 billion is expected to be generated in sales tax revenues for freeway Projects A-N (not including the five percent of net revenues apportioned to the EMP). Improving Orange County freeways is the greatest investment of the M2 Program.

To ensure delivery of the Freeway Program, the Next 10 Plan includes the following framework:

- Bring congestion relief.
- Deliver projects using the guiding principles of congestion relief, cost escalation risk, and readiness.
- Continue to make M2 projects the priority for external funding.
- Work with Caltrans to seek cost effective measures on freeway projects through changes in scope and design parameters where possible.
- Tightly manage project scopes and schedule to reduce cost escalation risk.

Next 10 Deliverables:

When M2 originally passed, 13 freeway projects were highlighted in the M2 Transportation Investment Plan. Since then, these projects have been segmented into 30 projects or project segments. Of this amount, nine were completed prior to the adoption of Next 10. These along with the remaining 21 freeway projects are included in the Next 10 deliverable goals through 2026:

1. Deliver construction of seventeen freeway projects or project segments; nine along I-5 (three recently completed in 2018), one along I-405, two along SR-55, three along SR-91, one along SR-57, and one at the I-605 Interchange (Projects A, C, C/D, F, G, I, K, and M.). These projects along with the prior nine will be complete or near complete totaling \$4.3 billion worth of freeway improvements.
2. Complete the environmental phase for the remaining four project segments to be shelf-ready. This includes one on I-405, SR-91, SR-57; and one interchange project at I-5/EI Toro Road (Projects L, J, G, and D).
3. Complete or have construction underway 82 percent of the freeway program by 2026.

A. I-5 (SR-55 to SR-57)

Description:

Project A will reduce freeway congestion by adding a second High-Occupancy Vehicle (HOV) lane, northbound and southbound, on I-5 between SR-55 and SR-57. The project will generally be constructed within the existing ROW.

Cost:

\$41.49 million (Year of Expenditure [YOE]).

Status:

Design was completed in mid-2017. Construction began in early 2019 and the project is expected to be open to traffic in early 2021.

Present Day:

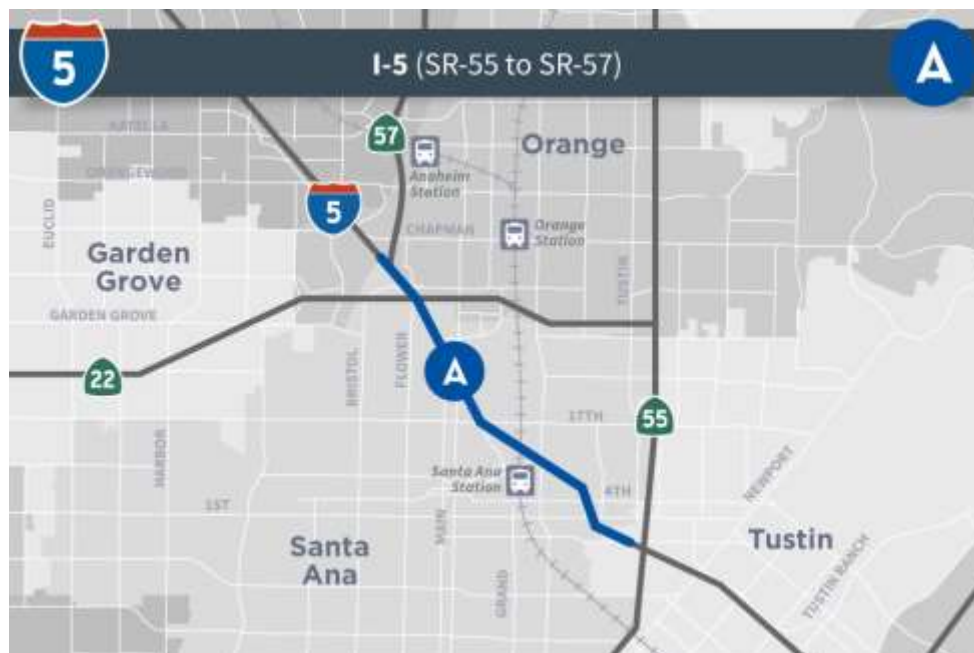
The current daily traffic volume on this segment of I-5 is about 380,000 vehicles and is severely congested. Traffic volumes are expected to increase nearly seven percent by 2035, bringing it up to 406,000 vehicles per

day. The HOV lanes experience more congestion in the peak period than the adjacent general purpose lanes, underscoring the need to add HOV capacity on this freeway segment.

Benefits:

This project will increase the capacity of the HOV facility on I-5 in Santa Ana to meet traffic demands and eliminate bottlenecks. Improvements are needed to accommodate HOV traffic from both the SR-55/I-5 and SR-57/I-5 direct HOV connectors.

Originally considered under this project, the extension of the auxiliary lane from southbound I-5 to southbound SR-55 through the McFadden Avenue exit ramp on SR-55 to Edinger Avenue, was instead studied as part of the SR-55 Project F.



A. I-5 (SR-55 to SR-57)

External Funding:

The Board has approved \$33.74 million in federal funds to support this project.

Risks:

Overall time, scope, and cost risks are moderate with this project. Some risk associated with buried drainage and utilities exist although the larger risks associated with the HOV drop ramp removal at Main Street and construction of the retaining wall under the railroad and Lincoln Avenue are largely reduced.

Related Projects:

Projects B and F.

Involved Agencies:

OCTA, City of Santa Ana, Caltrans, CTC, Federal Highways Administration (FHWA), and Southern California Regional Rail Authority (SCRRA).

Assumptions:

Costs based on June 2019 M2 Program Cash Flow.

References:

- OCTA 2018 Long Range Transportation Plan
- June 2019 Capital Action Plan
- Capital Funding Program Report – State Highway Project (September 2019)

B. I-5 (I-405 to SR-55)

Description:

Project B will increase I-5 freeway capacity and reduce congestion by constructing new northbound and southbound general purpose lanes and improving key interchanges in the area between SR-55 and State Route 133 (SR-133) (near the El Toro “Y”). This segment of I-5 is the major route serving activity areas in the Cities of Irvine, Tustin, Santa Ana, and north Orange County. The project will generally be constructed within the existing ROW. The project is divided into two segments as described below.

Segment 1:

This portion consists of the I-405 to Yale Avenue segment, which will add one general purpose lane in each direction between I-405 and Yale Avenue (approximately 4.5 miles), improve interchanges, and add auxiliary lanes where needed to increase freeway capacity and improve traffic operations in the Irvine area.

Segment 2:

This portion consists of the Yale Avenue to SR-55 segment, which will add one general purpose lane in each direction between Yale Avenue and SR-55 (approximately 4.5 miles), improve interchanges, and add auxiliary lanes where needed to increase freeway capacity and improve traffic operations in Irvine and Tustin areas.

Cost:

Segment 1: \$234.4 (YOE)

Segment 2: \$204.3 (YOE)

Status:

This project is currently in the environmental phase and is now planned to move forward into design and construction following environmental clearance scheduled for early 2020.



B. I-5 (I-405 to SR-55)

Present Day:

The current traffic volume on this segment of I-5 is about 358,000 vehicles per day and is expected to increase by nearly 16 percent by 2035, bringing it up to 416,000 vehicles per day.

Benefits:

Project improvements would alleviate congestion and reduce delay.

External Funding:

The Board has approved funding for Segments 1 and 2 through the environmental phase for \$8 million in federal funds.

The Board has approved funding that supports Segment 1, including \$47.88 million in federal funds and \$140.13 million in state funds.

Funding for Segment 2 is expected to be submitted for Board approval at a later time.

Risks:

The Design Standard Decision Document is currently on critical path and has caused schedule delays. Overall time, scope, and costs risks are high with this project due to tight ROW and need for design variations.

Related Projects:

Projects A and F.

Involved Agencies:

OCTA, Cities of Tustin and Irvine, Caltrans, and FHWA.

Assumptions:

Cost based on June 2019 M2 Program Cash Flow.

References:

- OCTA 2018 Long Range Transportation Plan
- June 2019 Project Status Report
- Capital Funding Program Report – State Highway Project (September 2019)

C. I-5 (SR-73 to El Toro Road includes Avery & La Paz Interchanges)

Description:

Project C will add new lanes to I-5 from El Toro Road in the City of Lake Forest to the vicinity of State Route 73 (SR-73) in the Cities of Mission Viejo, Laguna Niguel, Laguna Hills, Laguna Woods, and Lake Forest. Improvements include continuous HOV access completion and major improvements at the Avery Parkway and La Paz Road interchanges, as part of Project D. The project will generally be constructed within the existing ROW. This project is divided into three segments as described below.

Segment 1:

This portion consists of the SR-73 to Oso Parkway segment, which will add one general purpose lane in each direction between SR-73 and Oso Creek (approximately 2.2 miles), reconstruct Avery Parkway interchange, and add auxiliary lanes where needed to increase freeway capacity and reduce congestion in Laguna Niguel, Mission Viejo, and Laguna Hills areas.

Segment 2:

This portion consists of the Oso Parkway to Alicia Parkway segment, which will add one general purpose lane in each direction between Oso Creek and Alicia Parkway (approximately 2.6 miles), reconstruct La Paz Road interchange, and add auxiliary lanes where needed to increase freeway capacity and reduce congestion in Mission Viejo and Laguna Hills areas.

Segment 3:

This portion consists of the Alicia Parkway to El Toro Road segment, which will add one general purpose lane in the southbound direction between Alicia Parkway and El Toro Road (approximately 1.7 miles), continue the additional general purpose lane in the northbound direction through Alicia Parkway, extend the second HOV lane in both directions from El Toro Road to Alicia Parkway, and add auxiliary lanes where needed to increase freeway capacity and reduce congestion in Mission Viejo and Laguna Hills areas.



C. I-5 (SR-73 to El Toro Road includes Avery & La Paz Interchanges)

capacity and reduce congestion in Laguna Hills and Lake Forest areas.

Cost:

Segment 1: \$196.10 million (YOE)

Segment 2: \$203.07 million (YOE)

Segment 3: \$181.97 million (YOE)

Landscaping for all three segments: \$12.365 million (YOE)

Status:

The construction bid deadline was October 15, 2019 and five bids were received with the lowest two bidders coming in below the engineers estimate. Caltrans is reviewing the bids and will determine the lowest responsive bidder. Construction is anticipated to begin in early 2020 and complete in 2025.

Construction began for Segment 2 in May 2019 and is scheduled to be complete and open to traffic in late 2023.

Segment 3 is currently in Right of Way Certification, scheduled to be complete in February 2020, with construction beginning in late 2020 and completion anticipated in 2024.

Present Day:

The current traffic volume on I-5 near the El Toro “Y” is about 343,000 vehicles per day. This volume will increase in the future by 22 percent by 2035, bringing it up to 420,000 vehicles per day.

Benefits:

This project will help alleviate congestion and reduce traffic delays. The second HOV extension for Segment 3 will enable more efficient operation of general purpose lanes and increase capacity for future projected traffic volumes. Adding an additional general purpose lane in Segment 1 and 2 will increase capacity of the freeway to accommodate future projected traffic volumes. The I-5/La Paz Road and I-5/Avery Parkway interchange improvement projects called for in M2 Project D will reduce chokepoints and congestion, as well as accommodate future traffic demands on the local roads at each interchange.

External Funding:

The Board has approved funding that supports this project including:

Segment 1: \$34.60 million in federal funds and \$121.81 million in state funds.

Segment 2: \$55.60 million in federal funds.

Segment 3: \$49.90 million in federal funds and \$9.4 million in state funds.

Additionally, \$6.00 million in state funds have been approved for landscape planting across all three segments.

Risks:

Overall time, scope, and costs risks are medium with this project due to potential ROW impacts.

C. I-5 (SR-73 to El Toro Road includes Avery & La Paz Interchanges)

Related Projects:

Project C (Avenida Pico to San Juan Creek Road) and Project D (El Toro Road Interchange).

Involved Agencies:

OCTA, Cities of Mission Viejo, Laguna Hills, and Laguna Niguel, Transportation Corridor Agencies, Caltrans, CTC, and FHWA.

Assumptions:

Costs based on June 2019 M2 Program Cash Flow.

References:

- OCTA 2018 Long Range Transportation Plan
- June 2019 Project Status Report
- Capital Funding Program Report – State Highway Project (September 2019)

C. I-5 (Avenida Pico to San Juan Creek Road includes Pico Interchange)

Description:

Project C reduced freeway congestion on I-5 by extending the HOV lanes from Avenida Pico to San Juan Creek Road in the Cities of San Juan Capistrano, Dana Point, and San Clemente. Major interchange improvements were also included at Avenida Pico, as part of Project D. The project was generally constructed within the existing ROW. This project was divided into three segments as described below.

Segment 1:

This portion consists of the Avenida Pico to Avenida Vista Hermosa segment, which added new continuous-access HOV lanes in each direction between Avenida Vista Hermosa Overcrossing and Avenida Pico Undercrossing. The Avenida Pico Interchange was reconstructed to optimize traffic movements within the interchange and provided bicycle lanes in both directions of Avenida Pico.

Segment 2:

This portion consists of the Avenida Vista Hermosa to Pacific Coast Highway (PCH) segment, which added new continuous-access HOV lanes in each direction between Avenida Vista Hermosa Overcrossing and PCH Undercrossing. The project also reconstructed on- and off-ramps at Avenida Vista Hermosa and Camino de Estrella, and re-established existing auxiliary lanes. Avenida Vaquero Undercrossing was widened in both directions to accommodate the new HOV lanes.

Segment 3:

This portion consists of the PCH to San Juan Creek Road segment, which added new continuous-access HOV lanes in each direction between Camino Estrella Overcrossing and San Juan Creek Road Undercrossing. On- and off-ramps at Camino Las Ramblas/PCH were reconstructed. Additionally, the I-5/PCH northbound connector and



C. I-5 (Avenida Pico to San Juan Creek Road includes Pico Interchange)

I-5/Camino Las Ramblas Undercrossing were widened in both directions.

Cost:

Segment 1: \$83.46 million

Segment 2: \$75.68 million

Segment 3: \$75.53 million

Status:

All segments of Project C were opened to traffic at the same time in early 2018. Segment 2 was completed in July 2017 and Segment 3 in July 2018.

Present Day:

This portion of I-5 has high levels of traffic during the weekdays and weekends, as well as holidays, throughout the proposed project limits. The current traffic volume on this segment of I-5 is about 250,000 vehicles per day and is expected to increase by nearly six percent by 2035, bringing it up to 266,000 vehicles per day.

Benefits:

This project eliminated a southbound lane drop at PCH by extending the southbound HOV lane between Camino Capistrano and Avenida Pico, and the northbound HOV lane between Avenida Pico and PCH. Elimination of the lane drop enabled more efficient operation of general purpose lanes and serves projected traffic volumes for the year 2040.

External Funding:

The Board has approved funding that supports these projects including:

Segment 1: \$33.34 in federal funds and \$43.74 million in state funds.

Segment 2: \$13.47 million in federal funds and \$46.78 million in state funds.

Segment 3: \$11.80 million in federal funds and \$20.79 million in state funds.

Risks:

No risk to project delivery as the project is complete. Final claims remain pending in segment 3, however, cost risk is low.

Related Projects:

Project D.

Involved Agencies:

OCTA, Cities of San Clemente, Dana Point and San Juan Capistrano, Caltrans, CTC and FHWA.

Assumptions:

Costs based on June 2019 M2 Program Cash Flow.

References:

- OCTA 2018 Long Range Transportation Plan
- June 2019 Project Status Report
- Capital Funding Program Report - State Highway Project (September 2019)

D. I-5 (El Toro Road Interchange) Improvements

Description:

Proposed Project D improvements at I-5/El Toro Road Interchange include modifying entrance and exit ramps and modifying or replacing existing bridge structures.

Cost:

\$112.32 million (YOE) is currently included in the cash flow however, once the selected project alternative is determined this will need to be updated.

Status:

The environmental phase for this project began in April 2017. The Next 10 Plan includes funding this project through environmental, with environmental clearance expected in 2020 pending stakeholder consensus.

Present Day:

This portion of I-5 has high levels of traffic during the weekdays and weekends, as well as holidays,

throughout the proposed project limits. The current traffic volume on this segment of I-5 is about 355,000 vehicles per day and is expected to increase nearly nine percent by 2035, bringing it up to 388,000 vehicles per day.

Benefits:

This project would reduce the chokepoint and better accommodate forecasted traffic demands. Modification of the entrance and exit ramps would alleviate congestion at adjacent intersections.

External Funding:

The Board has approved providing \$4.40 million in federal funds for the environmental phase. Future phases are also eligible for state and federal funds. Any additional funding is expected to be submitted for Board approval at a later time.



D. I-5 (El Toro Road Interchange) Improvements

Risks:

Overall time, scope, and cost risks are high with this project due to the challenging project area with significant ROW impacts with study alternatives under consideration. Community concerns has resulted in a lack of consensus between the three stakeholder local jurisdictions. This project will need local jurisdiction consensus, before moving forward.

Related Projects:

Project C.

Involved Agencies:

OCTA, Cities of Laguna Hills, Laguna Woods, and Lake Forest, Caltrans, and FHWA.

Assumptions:

Cost based on June 2019 M2 Program Cash Flow.

References:

- OCTA 2018 Long Range Transportation Plan
- June 2019 Project Status Report
- Capital Funding Program Report - State Highway Project (September 2019)

D. I-5 (Ortega Highway Interchange) Improvements

Description:

Reconstruct the I-5 interchange at State Route 74 (SR-74) in south Orange County, including widening SR-74, modifying entrance and exit ramps, and replacing the existing bridge structure.

Cost:

The cost for this project was \$78.24 million.

Status:

The project was opened to traffic on September 4, 2015, and was officially completed on January 15, 2016.

Present Day:

Prior to completion of the project, the existing freeway overcrossing and on- and off-ramps did not accommodate existing and projected to-and-from street/freeway traffic.

Benefits:

This project alleviated a major chokepoint and reduced congestion by widening the Ortega Highway Bridge and improving local traffic flow through reconfigured streets and on- and off-ramps.

External Funding:

\$752,000 in federal funds, \$73.48 million in state funds, \$2.50 million in M1 funds from the regional interchange program, and \$5.01 million in other local funds were used for the project.

Risks:

No risk to project delivery as the project is complete. However, while final claims remain pending, the cost of covering any successful claims will be external funds and will not impact Measure M

Related Projects:

Project C.



D. I-5 (Ortega Highway Interchange) Improvements

Involved Agencies:

OCTA, City of San Juan Capistrano, Caltrans, and CTC.

Assumptions:

Cost based on June 2019 M2 Program Cash Flow.

References:

- OCTA 2018 Long Range Transportation Plan
- June 2019 Project Status Report
- Capital Funding Program Report - State Highway Project (September 2019)

E. SR-22 Access Improvements

Description:

Construct interchange improvements at Euclid Street, Brookhurst Street, and Harbor Boulevard to reduce freeway and street congestion near these interchanges.

Cost:

The cost for this project was \$25.8 million.

Status:

These projects were part of the SR-22 widening project completed in 2008 using M1 funds.

Present Day:

The project widened the streets at the interchanges and were designed to improve accommodation of existing and projected traffic.

Benefits:

The project reconstructed the freeway overcrossings to allow these streets to be widened through the interchange area. These improvements reduced congestion and delay at all three interchanges.

External Funding:

\$15.9 million of M1 funds and \$9.9 million of other non-M2 (federal, state and city) funds were used for the project.

Risks:

None – project completed.

Related Projects:

West County Connector (WCC) improvements at SR-22/I-405 and I-405/I-605 interchanges.

Involved Agencies:

OCTA, City of Garden Grove, and Caltrans.

Assumptions:

Completed as part of the M1 SR-22 Design Build project.

References:

- OCTA 2014 Long Range Transportation Plan



F. SR-55 (I-405 to SR-91)

Description:

Project F will increase freeway capacity and reduce congestion by adding lanes and operational improvements to SR-55 between I-405 and SR-91. This project is divided into two segments as described below.

Segment 1:

This portion will add one general purpose lane (approximately six miles) between I-405 and I-5, including merging lanes between interchanges to smooth traffic flow. The South Segment will generally be constructed within the existing ROW. The general purpose lane will be funded with M2, state, and federal funds. Concurrent with these efforts, an additional, second HOV lane will also be constructed between I-5 and I-405 with state and local funds.

Segment 2:

This future portion would add new lanes between I-5 and SR-22, including merging lanes between interchanges to smooth traffic flow. Operational improvements between SR-22 and SR-91 would also be incorporated. The North Segment is in the environmental phase and is now planned to advance into design and construction following environmental clearance. The North Segment will generally be constructed within the existing ROW.

Cost:

Segment 1: \$410.91 million (YOE) including cost for potential ROW risk.

Segment 2: \$122.43 million (YOE) including advancement of environmental phase.



F. SR-55 (I-405 to SR-91)

Status:

Segment 1 is currently in the design phase. This project was accelerated by two years and is working to begin construction in 2021. Segment 2 began the environmental phase in late 2016, with the environmental document expected to be complete by early 2020.

Present Day:

This freeway carries about 316,000 vehicles on a daily basis. This volume is expected to increase by nearly eight percent by 2035, bringing it up to 340,000 vehicles per day in the future.

Benefits:

This project will increase freeway capacity, improving mobility and reducing congestion in central Orange County areas by adding new lanes and making operational improvements for existing and forecasted traffic volumes (especially for weaving and lane efficiency at ramp junctions).

External Funding:

Segment 1: The Board has approved providing \$103.81 million in federal funds and \$80.00 million in state funds. As previously mentioned, Caltrans has also committed \$46.80 million in state (SHOPP) funds for this project. This project is eligible for future state and federal funds. The cash flow assumes \$75 million in future SB1 funding to fully fund the carpool elements of this project.

Segment 2: The Board has approved providing \$5.00 million in federal funds for this project to support the environmental phase. This project is eligible for future state and federal funds.

Risks:

Overall time, scope, and costs remain high on Segment 1 due to ROW impacts which rely on design variations, increased project cost, and delay in receipt of the state's share of funding.

Overall time, scope, costs, and risks are low on Segment 2.

Related Projects:

Projects A and B.

Involved Agencies:

OCTA, Cities of Orange and Santa Ana, Caltrans, and FHWA.

Assumptions:

Costs based on June 2019 M2 Program Cash Flow.

References:

- OCTA 2018 Long Range Transportation Plan
- June 2019 Project Status Report
- Capital Funding Program Report - State Highway Project (September 2019)

G. SR-57 Improvements

Description:

Project G will increase capacity and reduce congestion by adding one general purpose lane in the northbound direction from Orangewood Avenue in the City of Orange to approximately Tonner Canyon in the City of Brea. Select northbound undercrossings will also be widening and seismically retrofitted, as required. The project is divided into three segments as described below.

Segment 1:

This portion consists of three northbound sections including Katella Avenue to Lincoln Avenue, Orangethorpe to Yorba Linda Avenue, and Yorba Linda Boulevard to Lambert Road in the Cities of Anaheim, Placentia, Fullerton, and Brea. Projects in this segment are complete.

Segment 2:

This portion would include the addition of a northbound truck-climbing lane

from Lambert Road in the City of Brea to one-half mile south of the Los Angeles County line (approximately Tonner Canyon Road).

Segment 3:

This portion would include adding one northbound general purpose lane from approximately Orangewood Avenue in the City of Orange to Katella Avenue in the City of Anaheim. Segment improvements would maintain the existing auxiliary lane and address existing non-standard features between Orangewood Avenue and Katella Avenue.

Cost:

Segment 1: \$144.43 million.

Segment 2: \$167.55 million (YOE).

Segment 3: \$67.77 million (YOE).



G. SR-57 Improvements

Status:

Segment 1 was completed and opened to traffic in 2014. Segment 2 is planned to be environmentally cleared during the Next 10 timeframe. Segment 3 completed the environmental phase in March 2019 and is now planned to advance into design and construction.

Present Day:

This freeway carries about 302,000 vehicles on a daily basis. This volume is expected to increase by nearly 13 percent by 2035, bringing it up to 342,000 vehicles per day in the future.

Benefits:

This project will substantially improve existing and future mobility, reduce congestion, improve mainline weaving, and merge/diverge movements, which will improve both traffic operations and safety. Combined improvements from Orangethorpe Avenue to Tonner Canyon Road could achieve a 40 percent reduction in total delay through the SR-57 northbound corridor.

External Funding:

Segment 1: \$104.68 million in state funds were used for the project.

Segment 2: The Board has approved the use \$4.05 million in state funds for the project.

Segment 3: The Board has approved \$2.50 million in federal funds to support the environmental phase of this project. Segments 2 and 3 are eligible for future state and federal funds.

Risks:

Overall time, scope, costs, and quality risks are low to medium with this project due to construction within the existing ROW and relatively straightforward design issues. However, risks exist due to the potential need for seismic retrofitting of existing bridges.

Related Projects:

Project H.

Involved Agencies:

OCTA, CTC, FHWA, Caltrans, and the Cities of Orange, Anaheim, Placentia, Fullerton, and Brea.

Assumptions:

Costs based on June 2019 M2 Program Cash Flow.

References:

- OCTA 2018 Long Range Transportation Plan
- June 2019 Project Status Report
- Capital Funding Program Report - State Highway Project (September 2019)

H. SR-91 (I-5 to SR-57)

Description:

Widen westbound SR-91 by connecting existing auxiliary lanes through interchanges, thus forming a fourth continuous general purpose lane between I-5 and SR-57. Replace the existing auxiliary lanes on westbound SR-91 between State College Boulevard and Raymond Avenue, and between Euclid Street and Brookhurst Street, and add a new auxiliary lane between Raymond Avenue and Lemon Street.

Cost:

The cost for this project was \$59.23 million.

Status:

The project was opened to traffic in March 2016, and was officially completed in June 2016.

Present Day:

SR-91 serves as a major commuting route connecting Orange County with Riverside and Los Angeles counties.

SR-91 is also one of the most congested freeways in Southern California. This freeway carries about 290,000 vehicles on a daily basis. This volume is expected to increase by nearly 5 percent by 2035, bringing it up to 304,000 vehicles per day in the future.

Benefits:

This project alleviated congestion and increased mainline capacity by adding a continuous general purpose lane and replacing existing auxiliary lanes, which improved merging operations at each interchange.



H. SR-91 (I-5 to SR-57)

External Funding:

\$27.23 million in state funds were used for the project.

Risks:

None – project completed.

Related Projects:

Project I.

Involved Agencies:

OCTA, Cities of Fullerton and Anaheim, Caltrans, and CTC.

Assumptions:

Cost based on June 2019 M2 Program Cash Flow.

References:

- OCTA 2018 Long Range Transportation Plan
- June 2019 Project Status Report
- Capital Funding Program Report – State Highway Project (September 2019)

I. SR-91 (Tustin Avenue Interchange to SR-55)

Description:

Project I from Tustin Avenue Interchange to SR-55 added a westbound auxiliary lane, beginning at the northbound SR-55 to westbound SR-91 connector, through the Tustin Avenue interchange. The overall segment length was approximately two miles. Additional features of this project included widening the westbound Santa Ana River Bridge to accommodate the auxiliary lane.

Cost:

The cost for this project was \$42.47 million.

Status:

The project was completed and open to traffic in 2016.

Present Day:

SR-91 serves as a major commuting route connecting Orange County with Riverside and Los Angeles counties.

SR-91 is also one of the most congested freeways in Southern California. This freeway carries about 290,000 vehicles on a daily basis. This volume is expected to increase by nearly 5 percent by 2035, bringing it up to 304,000 vehicles per day in the future.

Benefits:

This project addressed chokepoint conditions and reduced operational problems, including weaving and merging maneuvers, which were primarily caused by extensive weaving between the northbound SR-55 to westbound SR-91 connector and the westbound SR-91 off-ramp to Tustin Avenue.

External Funding:

\$29.75 million in state funds were used for the project.

Risks:

None – project completed.



I. SR-91 (Tustin Avenue Interchange to SR-55)

Related Projects:

Projects H, I (SR-57 to SR-55) and J.

Involved Agencies:

OCTA, City of Anaheim, Caltrans, CTC, and FHWA.

Assumptions:

Costs based June 2019 M2 Program Cash Flow.

References:

- OCTA 2018 Long Range Transportation Plan
- June 2019 Project Status Report
- Capital Funding Program Report – State Highway Project (September 2019)

I. SR-91 (SR-57 to SR-55)

Description:

Project I from approximately SR-57 to SR-55 will add one westbound general purpose lane from northbound SR-57 connector to State College Boulevard, and one eastbound general purpose lane between SR-57 and SR-55. The project is divided into three segments as described below.

Segment 1:

This portion consists of the SR-55 to Lakeview Avenue segment, which will realign the westbound on-ramp to direct traffic to westbound SR-91 and replace the Lakeview Avenue Bridge that will feature a new on-ramp from the Lakeview Bridge connecting directly to southbound SR-55 to increase freeway capacity and improve traffic operations in the Anaheim area.

Segment 2:

This portion consists of the La Palma Avenue to SR-55 segment, which will add an eastbound general purpose lane on SR-91 between La Palma Avenue and SR-55 (approximately 2.3 miles) and include bridge replacements at Kramer Boulevard/Glassell Street and Tustin Avenue to increase freeway capacity and reduce congestion in the Fullerton and Anaheim areas.

Segment 3:

This portion consists of the Acacia Street to La Palma Avenue segment, which will add a fourth general purpose lane on westbound SR-91 from the northbound SR-57 to State College Boulevard (approximately 1 mile), make improvements to the weave from westbound SR-91 to northbound and southbound SR-57, and replace the bridge at La Palma Avenue to enhance westbound operations on SR-91, increase overall freeway capacity, and



I. SR-91 (SR-57 to SR-55)

reduce congestion in Fullerton and Anaheim areas.

Cost: Initial Segment: The cost for this segment was \$42.47 million.

Segment 1: \$102.47 (YOE)

Segment 2: \$223.14 (YOE)

Segment 3: \$109.68 (YOE)

Status:

Segment 1 is currently in the environmental phase. Environmental clearance is expected in mid- 2020.

Segment 2 is currently in the environmental phase. Environmental clearance is expected in mid- 2020.

Segment 3 is currently in the environmental phase. Environmental clearance is expected in mid- 2020.

Present Day:

Current freeway volume on this segment of the SR-91 is about 250,000 vehicles per day. This vehicular demand is expected to increase by 12 percent by 2035, bringing it up to 280,000 vehicles per day in the future.

Benefits:

Segment 1 improvements are expected to alleviate congestion and reduce delay by improving the connection from Lakeview Ave. to southbound SR-55.

Segment 2 improvements will increase freeway capacity and reduce traffic congestion overall.

Segment 3 improvements will enhance westbound operations and increase freeway capacity.

External Funding:

Segments 1, 2, and 3: Originally grouped together as the SR-91, SR-57 to SR-55 project, the Board approved \$7.00 million in federal funds to support the environmental phase which began in 2015. In 2016, the Board approved the use of SR-91 Express Lanes excess revenue to fund the remaining costs of project delivery. Segments 1, 2, and 3 are eligible for future state and federal funds if appropriate.

Risks:

Overall time, scope and costs risks are high with the remaining Segments 1, 2, and 3. High risk is the result of a design variation need that requires Caltrans concurrence, which remains under review.

Related Projects:

Projects H, Project I (Tustin Avenue Interchange to SR-55) and J.

Involved Agencies:

OCTA, Cities of Fullerton and Anaheim, Caltrans, CTC, and FHWA.

Assumptions:

Costs based June 2019 M2 Program Cash Flow.

References:

- OCTA 2018 Long Range Transportation Plan
- June 2019 Project Status Report
- Capital Funding Program Report – State Highway Project (September 2019)

J. SR-91 (SR-55 to I-15)

Description:

Project J adds capacity on the SR-91 beginning at SR-55 to I-15 in Riverside County. The project is divided into three segments as described below.

Segment 1:

This completed segment improved a 6-mile portion of SR-91 from one mile east of SR-241 by adding one eastbound lane from SR-241 to SR-71 in Riverside County. This project was led by the Riverside County Transportation Commission (RCTC) in coordination with Caltrans District 8.

Segment 2:

This completed segment improved the approximate 6-mile portion of SR-91 between SR-55 and SR-241 by adding one new lane in each direction and improving key interchanges. Additional improvements included the widening and seismic retrofitting for the Imperial Highway and Weir Canyon Road undercrossing bridges. This project was led by OCTA in coordination with Caltrans District 12.

Segment 3:

This segment would add one additional general purpose lane on SR-91 between SR-241 and I-15 in Riverside County. This project requires coordination and funding agreements with RCTC to deliver complementary improvements on SR-91 on both sides of the county line.

Cost:

Segment 1: \$57.77 million.

Segment 2: \$79.74 million.

Segment 3: \$292.53 million (YOE).

Status:

Segment 1 was completed in January 2011, and Segment 2 was completed in March 2013.

Segment 3 is contingent on the future widening in Riverside County to match the planned lanes in Orange County. The segment was environmentally reviewed as part of the RCTC's Corridor Improvement Project. RCTC and OCTA have agreed to accelerate the westbound direction of this segment by adding a general purpose lane (two miles in length) from Green



J. SR-91 (SR-55 to I-15)

River Road to SR-241. RCTC will be the lead and OCTA will contribute \$15 million towards the project. The eastbound lane is more challenging due to engineering constraints and an engineering feasibility assessment is planned to take place in 2020 to determine viable improvements in the eastbound direction.

Present Day:

Today, this freeway carries about 328,000 vehicles every day. This volume is expected to increase by 15 percent, bringing it up to 378,000 vehicles by 2035.

Benefits:

Segment 1 improvements added one general purpose lane, which improved weaving by reducing the volume of exiting vehicles in the SR-91 mainline through lanes that are exiting at Green River Road and SR-71.

Segment 2 improvements helped to alleviate congestion and reduce delay.

Segment 3 proposed improvements are expected to reduce congestion and delay and improve operational efficiency by increasing capacity and by reducing the existing chokepoints within the project limits.

External Funding:

Segment 1: \$45.91 million in federal funds and \$4.92 million in local funds were used for this project.

Segment 2: \$79.19 million in state funds were used for this project.

Segment 3: SR-91 Express Lanes excess revenue is Board approved for use in the Orange County portion of this segment.

Risks:

No risks for Segments 1 and 2, as they are complete.

Overall time, scope, and costs risks for Segment 3 are dependent upon required coordination with RCTC. Segment 3 eastbound direction has many engineering challenges due to project area topography (Santa Ana Canyon) and natural constraints (Santa Ana River) and requires an engineering feasibility assessment.

Related Projects:

Project I and the Riverside County Corridor Improvement Project.

Involved Agencies:

OCTA, Cities of Anaheim and Yorba Linda, County of Orange, Caltrans, CTC, and FHWA.

Assumptions:

Costs based on June 2019 M2 Program Cash Flow.

References:

- OCTA 2018 Long Range Transportation Plan
- June 2019 Project Status Report
- Capital Funding Program Report – State Highway Project (September 2019)

K. I-405 (SR-73 to I-605)

Description:

Project K will add new lanes to I-405 between SR-73 and I-605. The project will make the best use of available freeway property by staying generally within the freeway ROW and updating key local interchanges to current Master Plan of Arterial Highway standards. The project will add one general purpose lane in each direction of I-405 from Euclid Street to I-605.

Concurrently with Project K, an additional lane will be added in each direction that would combine with the existing HOV lane to provide dual express lanes in each direction on I-405 from SR-73 to I-605. The general purpose lanes will be funded with M2, state, and federal funds; the express lanes will be funded primarily with toll revenues.

Cost:

M2 Portion: \$1.425 billion (YOE).

Express Lanes Portion: \$475 million (YOE).

Status:

Project K is currently about one-third of the way through the design/build (D/B) contract phase. D/B is a project delivery method in which one team is hired to perform both the design and construction of the project. The project is expected to be open to traffic in 2023.

Present Day:

On average, I-405 carries between 392,000 vehicles daily. The volume is expected to increase by 20 percent by 2035, bringing it up to 472,000 vehicles daily. The project will increase freeway capacity, reduce congestion, enhance operations, increase mobility, improve trip reliability, and maximize throughput on I-405.



K. I-405 (SR-73 to I-605)

Benefits:

Project K includes the addition of auxiliary and general purpose lanes. These improvements would help reduce congestion and improve travel times. Additional improvements include interchange and local street improvements, and a direct Express Lanes connector at the I-405/SR-73 Interchange.

The express lanes will operate congestion-free throughout the day, due to toll rates that vary based on traffic demand. The express lanes provide commuters with a reliable travel option compared to the adjacent, general purpose lanes.

M2 improvements, in combination with express lanes improvements, will provide more throughput in the corridor. These improvements will add two additional freeway lanes to I-405 in both directions between Euclid Street to the I-605 interchange.

External Funding:

The Board has approved funding supporting this project, including \$89.77 million in a contribution of state funds, and \$45.65 million in federal funds. The project also successfully secured \$628.93 million from TIFIA, a low cost federal loan. The M2 cash flow will benefit from \$153.93 million in TIFIA revenues for this project. The entire TIFIA loan will be paid back solely with toll revenues.

Risks:

Overall time, scope, utility relocation and cost risks are high with this project due to the extensive project scope.

Related Projects:

Project L and WCC improvements at SR-22/I-405 and I-405/I-605 interchanges (mentioned under Project E).

Involved Agencies:

OCTA, cities of Costa Mesa, Fountain Valley, Huntington Beach, Westminster, Seal Beach, the Community of Rossmore, Caltrans, CTC, FHWA, and Build America Bureau TIFIA Office.

Assumptions:

Costs based on June 2019 M2 Program Cash Flow. Toll revenues will primarily pay for the 405 Express Lanes, and M2 will only pay for the addition of the general purpose lanes.

References:

- OCTA 2018 Long Range Transportation Plan
- June 2019 Project Status Report
- Capital Funding Program Report – State Highway Project (September 2019)

L. I-405 (I-5 to SR-55)

Description:

Project L will add new lanes to I-405 from the vicinity of I-5 to SR-55 to alleviate congestion and reduce delay. The project will generally be constructed within the existing ROW.

Cost:

\$238.76 million (YOE), including advancement to the environmental phase.

Status:

The environmental phase for this project was completed in August 2018 and is shelf-ready to begin the design Phase.

A parallel project, the I-5 (Project B, I-5, I-405 to SR-55) is designated for construction and as a result this project will follow to avoid excessive inconvenience to the traveling public.

Present Day:

This segment of the freeway carries 296,000 vehicles a day. This number will increase by nearly 22 percent, bringing it up to 362,000 vehicles per day by 2035.

Benefits:

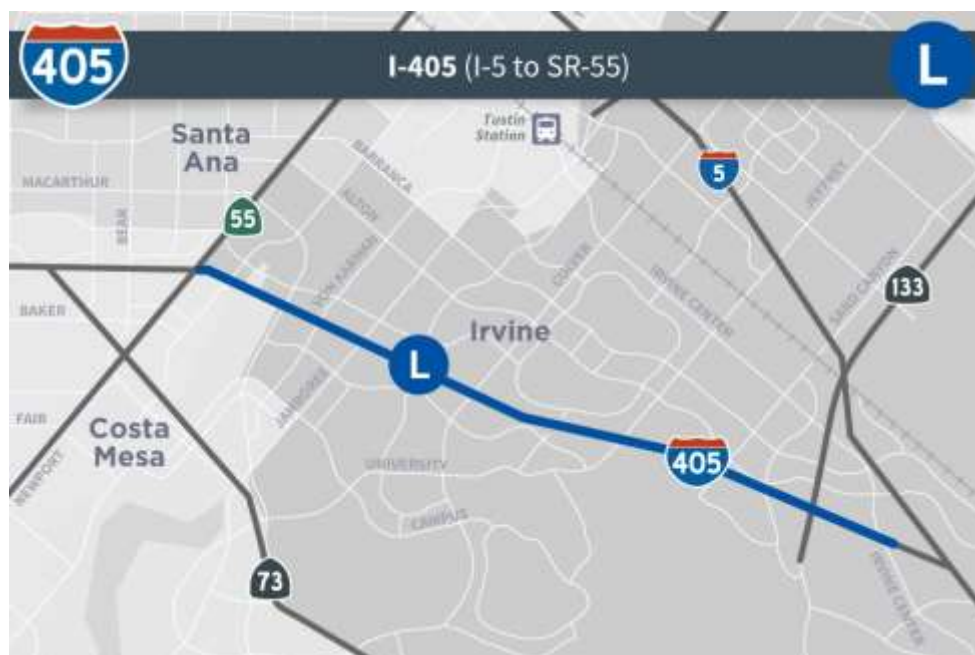
Improvements between I-5 and SR-55 would help alleviate congestion and reduce delay.

External Funding:

The Board approved providing \$8.00 million in federal funds to support the environmental phase of the project. This project is eligible for future state and federal funds.

Risks:

Overall time, scope, and costs risks are low with this project due to low ROW impacts and straightforward design.



L. I-405 (I-5 to SR-55)

Related Projects:

Projects B and K.

Involved Agencies:

OCTA, City of Irvine, Transportation Corridor Agencies, Caltrans, CTC, and FHWA.

Assumptions:

Costs based on June 2019 M2 Program Cash Flow.

References:

- OCTA 2018 Long Range Transportation Plan
- June 2019 Project Status Report
- Capital Funding Program Report – State Highway Project (September 2019)

M. I-605 (Katella Avenue Interchange) Improvements

Description:

Project M will improve freeway access and the arterial connection to I-605 at Katella Avenue, which serves the communities of Los Alamitos and Cypress.

Cost:

The cost for this project is estimated to be \$28.61 million (YOE).

Status:

The planning phase for this project is complete and was done in cooperation with the City of Los Alamitos. The environmental phase was completed in late 2018 and is now planned to advance into design and construction.

Present Day:

The existing interchange design is outdated and results in both arterial congestion and freeway queuing in the interchange area.

Benefits:

The I-605/Katella Avenue interchange project would include both freeway and arterial improvements that would improve interchange traffic operations and improve bicycle and pedestrian facilities while minimizing adjacent ROW and environmental impacts. Additionally, these improvements would reduce congestion, traffic queuing, and delay within the interchange area.

External Funding:

The Board approved providing \$3.00 million in state funds to support the PS&E phase for this project. This project is eligible for future state and federal funds.

Risks:

Overall time, scope, and costs risks are low with this project due to low ROW impacts and straightforward design.



M. I-605 (Katella Avenue Interchange) Improvements

Related Projects:

Project K and I-405/I-605/SR-22 HOV connector project (West County Connector).

Involved Agencies:

OCTA, City of Los Alamitos, and Caltrans.

Assumptions:

Costs based on June 2019 M2 Program Cash Flow.

References:

- June 2019 Project Status Report
- Capital Funding Program Report - State Highway Project (September 2019)

N. Freeway Service Patrol

Description:

The Freeway Service Patrol (FSP) provides competitively-bid, privately-contracted tow truck service to help stranded motorists quickly clear disabled vehicles and large debris from freeway lanes to minimize congestion caused by blocked traffic lanes and passing motorists rubbernecking. Currently FSP is available on various Orange County freeways, seven days a week. This project assures that this basic level of service will be continued through 2041.

Program Funding:

\$46.1 million in M2 revenue between 2017 and 2026.

Status:

FSP is primarily funded by State Highway Account (SHA) and Road Repair and Accountability Act of 2017 (SB1) funds. OCTA meets matching fund requirements by utilizing a portion of its share of Service Authority for Freeway Emergencies (SAFE) funds, which are collected by the Department of Motor Vehicles each year.

As demand, congestion levels, and costs increase, this project will permit the program to maintain existing service hours and allow service to be extended throughout the day and on weekends on additional freeway segments.

Measure M2 also helps support CHP as the partner responsible for field supervision. Currently, M2 funds a full-time dispatcher to ensure dispatcher coverage seven days a week.

Present Day:

As of June 2019, M2 and construction-funded Freeway Service Patrol has provided a total of 77,072 assists to motorists on the Orange County Freeway system.

Benefits:

To keep Orange County moving, FSP provides free limited roadside assistance to motorists whose vehicles have become disabled on an Orange County freeway. Assistance is limited to taping a hose, providing water for a radiator, a jump start, a gallon of gas, a tire change, or towing a disabled vehicle off the freeway to a designated drop zone where the motorist may seek additional assistance.

In FY 2017-18, for every dollar invested in the program, Orange County received approximately \$9 of congestion relief benefit. The result is the elimination of more than 2.8 million vehicle hours of delay and an estimated reduction of 4.8 million gallons of gasoline.

External Funding:

SHA allocation provided by Caltrans – approximately \$2.4 million annually.

SB1 allocation provided by Caltrans – approximately \$2.2 million annually.

SAFE (\$1 per vehicle registration fee) funds not allocated to the Freeway Call Box and 511 Motorist Assistance and Traveler Information programs are available for FSP program use, to meet local match fund requirements – approximately \$1.5 million annually.

N. Freeway Service Patrol

Risks:

Should the State of California stop funding FSP through the SHA and SB1, M2 will not be sufficient to maintain existing service levels.

Related Projects:

M2 Project N funds are designated to maintain existing service levels, provide midday and weekend service, and support FSP service for construction of Projects A-M.

Involved Agencies:

OCTA, Caltrans, and the California Highway Patrol

Assumptions:

Project N is assumed to be funded on a pay-as-you-go basis. Funding provided through the SHA and SB1 are allocated first, and then M2 funding is applied as needed.

References:

- Measure M2 Project N Guidelines Freeway Service Patrol Project, Approved on February 13, 2012

Environmental Mitigation Program



Overview:

The EMP provides for allocation of five percent of the total M2 freeway budget for comprehensive environmental mitigation related to impacts from freeway improvements. The EMP was approved by Orange County voters under the M2 half-cent sales tax for transportation improvements in 2006.

A master agreement between OCTA, Caltrans, and state and federal resource agencies was approved in January 2010. This offers higher-value environmental benefits such as habitat protection, connectivity, and resource preservation in exchange for streamlined project approvals for the 13 (segmented into 30) M2 freeway projects.

To adhere to the promise of M2, the Next 10 Plan includes the following framework for the Mitigation Program as it relates to Projects A-M:

- Streamline freeway projects through the biological permitting process.
- Provide comprehensive environmental mitigation.
- Partner with state and federal resource and regulatory agencies.
- Provide higher-value environmental benefits such as habitat protection, connectivity, and resource preservation.

Next 10 Deliverables:

In 2009, the Board approved a policy to allocate approximately 80 percent of the revenues to acquisitions and 20 percent to fund restoration projects. This policy will need to be revisited periodically to ensure it continues to meet program needs. The Next 10 Plan recommends four major initiatives through 2026 consistent with the above framework:

1. Oversee and manage the Preserves while the endowment is being established and determine long term land manager(s) and endowment holder(s).
2. Focus environmental mitigation program resources funding as a first priority toward the establishment of the endowment for the Preserves.
3. Finalize the resource management plans on M2 Preserves including provisions for public access as appropriate (projects A-M).
4. Complete approximately 350 acres of restoration projects funded through M2 to fulfill the Conservation Plan commitments.

Environmental Mitigation Program

Description:

In July 2010, OCTA began preparing a Conservation Plan, which examines habitat resources within broad geographic areas and identifies conservation and mitigation measures to protect habitat and species. This analysis was completed in late 2016; in accordance with the master agreement “advance credit” provision, funds were allocated prior to completion of the Conservation Plan. In June 2017, the United States Fish and Wildlife Service, and the California Department of Fish and Wildlife (Wildlife Agencies) finalized the issuance of their respective biological opinion, findings, and associated permits, as well as signed the Conservation Plan Implementing Agreement. Receipt of these permits represent the culmination of years of collaboration and support by the Board, environmental community, and Wildlife Agencies.

Concurrent with efforts made toward completing the Conservation Plan and EIR/EIS, OCTA collaborated with the United States Army Corps of Engineers (USACE) and the State Water Resources Control Board (SWRCB) - regulatory agencies - to streamline the regulatory permitting process. In 2017, the USACE issued a programmatic permit to OCTA and Caltrans (as owner/operator of the state highway system). The SWRCB provided a letter to OCTA in 2018, which further secured assurances related to advanced mitigation and freeway project permit issuance.

Resource management plans (RMPs) for each of the seven Preserves were

finalized in September 2018. These RMPs guide the management of the Preserves as outlined within the Conservation Plan. Staff will continue to oversee and manage the Preserves until a long-term manager(s) is established.

Cost:

In summer 2007, the Board approved approximately \$55 million as part of the EAP. Accordingly, \$42 million and \$10.5 million were allocated for acquisition and restoration, respectively. An additional \$2.5 million was allocated for the Conservation Plan development and program support, including appraisals and biological surveys.

Status:

Since September 2010, a total of \$10 million has been allocated for 12 projects to restore approximately 350 acres of open space lands throughout Orange County.

On September 26, 2016, the Board approved the selection of the endowment fund manager, and the most recent endowment deposit was made in July 2019. Annual endowment deposits will continue to be made near the beginning of each fiscal year.

The Wildlife Agencies finalized the issuance of their respective permits, as well as executing the Implementing Agreement in June 2017. In January 2018, OCTA secured advance streamlined state and federal clean water permitting requirements.

Environmental Mitigation Program

All seven Preserves have finalized RMPs and are being managed and protected for an interim period by OCTA staff and consultants. Staff will continue to oversee and manage the Preserves until a long-term manager(s) is established.

Present Day:

In consultation with the local fire authority, staff has begun the preparation of fire management plans for the seven Preserves. The Plans will provide guidelines for decision-making at all stages including fire prevention, pre-fire vegetation management, suppression activities, and post-fire responses that are compatible with conservation and stewardship responsibilities. These Plans are a requirement of the Conservation Plan and will require approval by the Wildlife Agencies.

Benefits:

The completed Conservation Plan and regulatory permitting process are tools by which OCTA obtains biological and regulatory permits/assurances for the 13 (30 segmented) M2 freeway projects. This comprehensive process enables OCTA to streamline future M2 freeway improvement projects.

External Funding:

Examples of external funding available for this program include:

- USFWS contribution toward the acquisition of open space land in the Trabuco Canyon area.
- USFWS Habitat Conservation Planning Assistant Grant to help fund the completion of the Conservation Plan.

- Restoration project sponsors utilize external funds and resources to implement their projects.

Risks:

The success of the restoration projects will support OCTA's Conservation Plan and regulatory permitting processes. However, recent wildfires occurring in short intervals may require plant reestablishment to ensure successful implementation of the restoration project, if Wildlife Agencies have not signed off on the project.

OCTA will need to establish the endowment over a ten to twelve-year period. OCTA currently holds the title and interim land management responsibility of the Preserves, but will eventually need to secure a long-term land manager(s).

Related Projects:

Projects A-M.

Involved Agencies:

CDFW, USFWS, Caltrans, USACE, SWRCB and the environmental community.

Assumptions:

This program is assumed to be funded primarily on a pay-as-you-go basis in the future, in addition to prior bonding issuances. More detailed assumptions are included in the appendices.

References:

- Final Conservation Plan and EIR/EIS
- Additional resources can be found online: www.octa.net/environmental

2019
UPDATE

NEXT 10

DELIVERY PLAN

Streets & Roads Program

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- R Regional Capacity Program** (not mapped)
 - Up to 300 miles of roadway improvements
 - Competitive Program with annual call for projects
 - OC Bridges Grade Separation Projects (R)

- L Local Fair Share Program** (not mapped)
 - Street maintenance and improvements

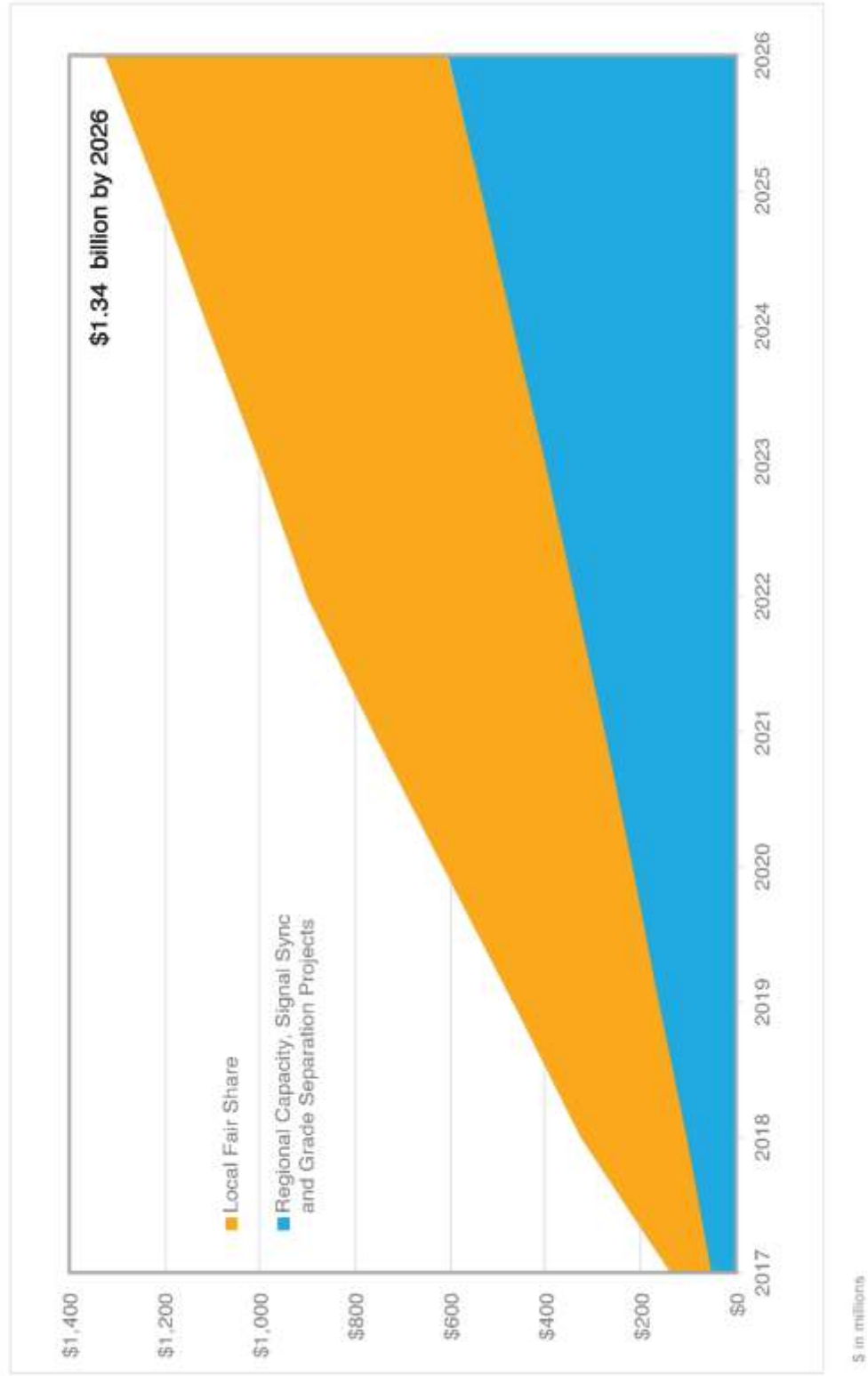
- P Regional traffic Signal Synchronization Program**
(see grid above)
 - Over 2,000 coordinated signals

OC Go Grade Separation Projects



Please note that schedules are updated as of June 30, 2019. Shown schedules are subject to change.

OC Go Streets and Roads Cumulative Expenditures



Streets and Roads



Overview:

Local streets provide the capacity for the movement of people and goods which is essential to Orange County's commerce and vitality. Streets carry approximately half of Orange County's car and truck traffic and nearly all of Orange County's bicycle and pedestrian traffic. Keeping people moving on local streets is an essential function of the M2 funding programs for local streets. To meet this broad mobility goal, the Next 10 Plan includes the following framework for the Streets and Roads Program:

- Target M2 competitive program funds for streets with the worst traffic congestion.
- Maintain the value of investments in streets by synchronizing traffic signals and keeping pavement in good condition.
- Keep traffic moving on Orange County streets by completing key grade separations along the BNSF corridor in north Orange County.
- Consider all modes of travel when planning for added street capacity.

Next 10 Deliverables:

Allocate nearly \$1 billion in funding to improve the countywide network of streets and roads making them safer and more efficient. The Next 10 Plan for streets and roads recommends three major initiatives through 2026, consistent with the above framework:

1. Provide \$400 million in competitive funding to local jurisdictions to expand roadway capacity and synchronize signals (Project O and P).
2. Complete the remaining OC Bridges grade separation projects.⁶
3. Provide approximately \$600 million in flexible funding to local jurisdictions to help maintain aging streets or for use on other transportation needs as appropriate (Project Q).

⁶ All seven OC Bridges grade separation projects have been opened to traffic and a closing ceremony was held in October 2017.

O. Regional Capacity Program

Description:

Project O provides funding through a competitive process to local jurisdictions for recommended streets and roads projects which complete the Orange County Master Plan of Arterial Highways (MPAH), relieve congestion, are cost effective, and can proceed to construction quickly. These projects fall into one of two categories as described below.

Regional Capacity Program (RCP):

This portion of Project O provides a funding source to complete the Orange County MPAH, a plan for future roadway improvements throughout Orange County, that includes considerations for bicycle and pedestrian components as part of each project as applicable to local conditions. This includes intersection improvements and other projects that help improve street operations and reduce congestion. The M2 goal for these projects is to complete roughly 1,000 miles of new street lanes, mostly in the form of widening existing streets to their ultimate planned width. Matching local funds are required for these projects.

OC Bridges:

This portion of Project O includes funding for completion of seven over- or underpass grade separations that will eliminate car and train conflicts along the BNSF Railway (Orangethorpe corridor) in northern Orange County. These grade separations increase safety for everyone traveling through the intersections and eliminate the delays caused by trains.

Program Funding:

Project O and P: \$400 million for new competitive RCP and Regional Traffic Signal Synchronization Program (RTSSP) calls for projects between 2017 and 2026.

OC Bridges: The current program funding is \$218.05 million in federal funds and \$261.30 million in state funds.

Status:

To date, OCTA has awarded \$296 million to 147 projects through nine competitive RCP calls for projects. Annual calls are planned for projects between 2017 and 2026.

Since Next 10 Plan adoption in November 2016, OCTA has awarded approximately \$65 million.

To date, all seven planned grade separation projects are complete (Placentia, Kraemer, Orangethorpe, Tustin/Rose, Lakeview, Raymond and State College).

Present Day:

Currently, annual calls for projects take place providing local agencies the opportunity to request funding in street improvements.

Benefits:

Completion of the MPAH system, including grade separations and traffic signal synchronization, will result in better traffic flow and a more efficient transportation system.

O. Regional Capacity Program

External Funding:

RCP: Local agencies are required to provide a 50 percent local match. Matching funds may be reduced contingent on participation in pavement and signal programs, as well as use of non-M2 funds for local match. While other external state and federal funding are not typically used for RCP projects, there have been eight projects to date which qualified for and received SLPP state funds, amounting to approximately \$24 million.

OC Bridges:

The Board approved the use of \$218.05 in federal funds and \$261.30 million in state funds for this project. Additionally, local agencies provided \$39.30 million in funding. OC Bridges funding includes 78 percent in external local, state, and federal funds.

Risks:

Local agencies must meet and maintain eligibility requirements to receive net M2 funds. Local agencies also must meet timely use of funds provisions included in M2.

Related Projects:

Project P and Project Q.

Involved Agencies:

All local agencies (cities and County of Orange).

Assumptions:

Project O is assumed to be funded primarily on a pay-as-you-go basis with bonding for the seven OC Bridges projects. More detailed assumptions are included in the appendices.

References:

- Orange County Master Plan of Arterial Highways Guidelines
- Commuter Bikeways Strategic Plan
- Capital Funding Program Report – Local Road Project (June 2019)

P. Regional Traffic Signal Synchronization Program

Description:

Project P provides funds to local agencies to implement new signal timing on a 750-mile regional network that covers most of Orange County. Optimizing traffic signal timing is a low-cost, high-benefit approach to reducing congestion and improving traffic flow. Better signal timing results in fewer traffic stops, delays, and pollution, and saves commuters gas and money.

Program Funding:

Project O and P: \$400 million for new competitive RCP and RTSSP calls for projects between 2017 and 2026.

Status:

To date, OCTA has awarded more than \$106 million, including \$13.6 million in external funding, to 111 projects.

Since Next 10 Plan adoption in November 2016, OCTA has awarded \$25.7 million, including \$6.6 million in external funding.

Including early efforts, OCTA and local agencies have implemented 78 corridor-based signal synchronization projects since 2008 for a cost of approximately \$53 million (including non-M2 funds). Another 30 projects are planned or underway. From 2017-2026, the entire network of signals is anticipated to have been retimed or optimized at least two times. This equates to more than 4,000 intersections retimed over a 10-year period (2017 to 2026).

Present Day:

In the past, many traffic signal synchronization projects were limited to

segments of roads in individual cities. M2 provides funds to expand these projects to benefit neighboring cities and regional corridors.

Benefits:

Optimizing signal timing offers substantial benefits in reducing traffic delays and improving air quality. To date, OCTA has implemented optimized signal timing on 78 corridors with 2,742 intersections covering 702 miles of roadway. On the average, each project resulted in a 13 percent travel time savings for corridor end-to-end travel, saving commuters time and money for a relatively low investment. Future projects may see comparable benefits when combined with capital improvements to reduce physical bottlenecks where appropriate.

External Funding:

Local agencies are required to provide a 20 percent local match. Matching funds may be in-kind services. There may be future needs for more capital-intensive investments as systems age. Projects started prior to the 2011 call for projects were funded with M1, federal Congestion Mitigation and Air Quality Improvement (CMAQ), and Prop 1B funds. The 2013 call for projects was partially funded with MSRC grant money. The 2018 call was able to leverage \$6.85 million in SB 1 Local Partnership Program competitive grant funds. In all, external funding (not including funds provided by local agencies) contributed is approximately \$18.65 million.

P. Regional Traffic Signal Synchronization Program

Risks:

Local agencies must meet eligibility requirements and timely-use-of-funds provisions to receive M2 funding.

Related Projects:

Project O (RCP) and Project Q.

Involved Agencies:

All local agencies (cities and County of Orange) and Caltrans.

Assumptions:

Project P is assumed to be funded on a pay-as-you-go basis.

References:

- M2 Eligibility Guidelines
- OCTA's Comprehensive Business Plan
- Capital Funding Program Report – Local Road Project (June 2019)

Q. Local Fair Share Program

Description:

Project Q provides formula “Local Fair Share” funds that local jurisdictions may use for a variety of purposes and needs, including repairing aging streets, residential street projects, bicycle lanes, and pedestrian safety (plus other transportation uses).

Key among these needs includes pavement preservation, which involves extending the useful life of pavement and avoiding costly street reconstruction. Preserving and maintaining roads in good condition is a key goal of M2 and Project Q in particular.

Program Funding:

Approximately \$600 million will be provided between 2017 and 2026.

Status:

Orange County streets are in generally good condition on average (with a pavement condition index of 78 based on the 2016 statewide report). As roadway pavement conditions deteriorate, however, the cost for repairs increases exponentially. For example, it costs as much as 14 times more to reconstruct pavement than to preserve it when it is in good condition.

Present Day:

The cost of street rehabilitation has increased substantially in recent years, and gas tax revenues have not kept pace with these increases which has a direct impact on the ability to fund street maintenance and rehabilitation. As of June 2019, approximately \$162.1⁷ million in Local Fair Share payments have been provided to local agencies and the County since Next 10 Plan adoption in November 2016.

Benefits:

Investments in streets and roads save future costs, keep traffic moving, and offer expanded travel choices.

Local Fair Share funds are also flexible and can be used as matching funds for capacity and safety projects, bike and pedestrian facilities, as well as local transit services.

External Funding:

This program is not externally funded.

⁷ Only includes disbursed funds. On May 13, 2019, the Board determined that the City of Santa Ana and the City of Stanton ineligible to receive M2 revenues. Disbursement of M2 funds have been suspended until the

cities achieve compliance and the Board reconsiders the matter by May 2020.

Q. Local Fair Share Program

Risks:

Local jurisdictions must meet eligibility requirements and timely-use-of-funds provisions to receive M2 funding.

Related Projects:

Project O (RCP) and Project P.

Involved Agencies:

All local jurisdictions (cities and County of Orange).

Assumptions:

Project Q is assumed to be funded on a pay-as-you-go basis.

References:

- M2 Eligibility Guidelines
- 2016 California Statewide Local Streets and Roads Needs Assessment
- OCTA's Comprehensive Business Plan
- Capital Funding Program Report – Local Road Project (June 2019)

2019
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NEXT 10

DELIVERY PLAN

Transit Programs

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last updated 10.3.19

R High Frequency Metrolink Service

- Metrolink Grade Crossing Improvements
- Station Improvement Project
- Planned Metrolink Station
- Laguna Niguel-San Juan Capistrano Passing Siding Project
- Sand Canyon Grade Separation Project

S Transit Extensions to Metrolink

- OC Streetcar

T Metrolink Gateways

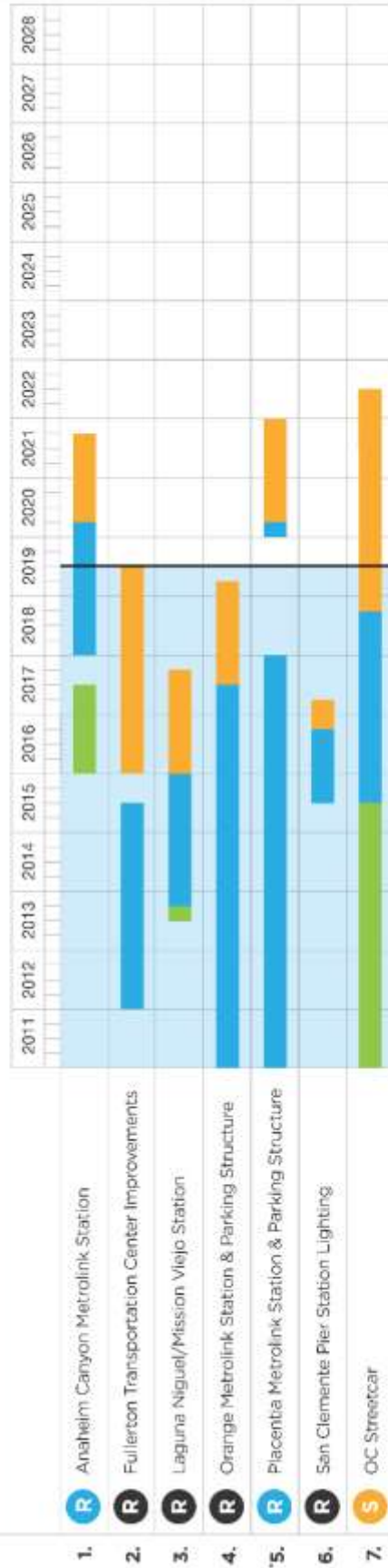
- Anaheim Regional Transportation Intermodal Center (ARTIC)

U Expand Mobility Choices for Seniors and Persons with Disabilities (countywide, not mapped)

V Community Based Transit/Circulators (countywide, not mapped)

W Safe Transit Stops (countywide, not mapped)

OC Go Transit Projects Through Construction



Please note that schedules are updated as of June 30, 2019. Shown schedules are subject to change.

* The Placentia Metrolink Station's ability to move into construction is subject to a track sharing agreement with Burlington Northern Santa Fe Railway

Transit Program



Overview:

The goal of the Transit Program is to build a visionary transit system that is safe, clean, and convenient, with a focus on Orange County's transportation future. Providing mobility choices and connectivity for Orange County residents and workers are key components of the overall M2 Plan. To meet this broad mobility goal, the Next 10 Plan includes the following framework for the Transit Program:

- Ensure efficient and integrated Metrolink service for Orange County residents.
- Assess and deliver transit options providing commuters last mile connections and alternatives to driving.
- Provide services and programs to meet the growing transportation needs of seniors and persons with disabilities.
- Support local agency efforts to deliver Board-approved community-based transit projects.
- Advance improvements to the busiest transit stops across the County to provide passenger amenities that ease transfers between bus lines.

Next 10 Deliverables:

The Next 10 Plan for transit recommends nine major initiatives through 2026, consistent with the above framework.

1. Complete six rail station improvements.⁸
2. Maintain existing Metrolink service levels.
3. Expand Metrolink service from Orange County into Los Angeles County, contingent upon cooperation and funding participation from route partners.
4. Complete design, construction and begin operating the OC Streetcar.
5. Incorporate recommendations from planning studies to guide development of future transit connections.
6. Provide \$49 million to stabilize OCTA's bus fares for seniors and persons with disabilities, provide \$33 million for senior community transportation programs and \$33 million for senior non-emergency medical transportation services.
7. Support and provide grant opportunities for local agencies to implement effective local transit services.
8. Allocate up to \$7 million in funding to improve the top 100 busiest bus stops in Orange County.
9. Support the modernization of the OC Bus system to enhance the customer experience.

⁸ As mentioned in the Updated Next 10 Deliverables section and the High Frequency

Metrolink Service section, four of six rail station improvements have been completed.

R. High Frequency Metrolink Service

Description:

Project R provides for sustained and expanded rail service into Los Angeles and Orange Counties along the three Metrolink lines serving Orange County (Orange County, Inland Empire-Orange County, and 91/Perris Valley Lines). Project R also provides for safety and operational improvements to the railroad infrastructure necessary to support existing and expanded train service, including grade crossing improvements, track improvements, signal and communications system improvements, as well as other projects as necessary to support the rail system. Grade separation projects will be considered as available funding permits.

Program Funding:

Approximately \$358 million between 2017 and 2026 in M2 sales tax revenue.

Status:

Metrolink is currently operating 54 weekday trains in Orange County. To date, rail safety enhancements at 50 at-grade rail-highway crossings have been completed. As a result, quiet zones have been established in Anaheim, Dana Point, Irvine, Orange, San Clemente, Santa Ana, San Juan Capistrano, and Tustin.

Station improvements completed during the Early Action Plan include parking expansion projects at the Fullerton Transportation Center, Tustin Station, and Laguna Niguel/Mission Viejo Station, and safety repairs to the San Clemente Pier Station platform.

The San Clemente Pier Metrolink/Amtrak Station lighting was completed in March 2017, the Laguna Niguel/Mission Viejo Metrolink Station Americans with Disabilities Act (ADA) ramps was completed in September 2017, the Orange Transportation Center Parking Structure was completed in February 2019, and the Fullerton Transportation Center elevator upgrades project was completed in May 2019. Two other rail station improvements are currently underway: Placentia Metrolink Station and Anaheim Canyon Metrolink Station improvement projects. Both projects are expected to be completed by 2022.

Completed rail corridor improvements include Control Point Stadium, the San Clemente Beach Trail Audible Warning System, and six Project Study Reports for potential grade separations along the Los Angeles-San Diego-San Luis Obispo Rail (LOSSAN) corridor, including: Santa Ana Boulevard, Ball Road, Orangethorpe Avenue, Main Street, Grand Avenue, 17th Street, and Control Point at 4th Street. Rail corridor improvements underway include: the Laguna Niguel to San Juan Capistrano Passing Siding project, San Juan Creek Railroad Bridge Replacement, Railroad ROW Slope Stabilization Project, Metrolink Preventive Maintenance Capitalized Operation, Metrolink Rehabilitation/ Renovation, and ongoing operation of Positive Train Control.

R. High Frequency Metrolink Service

Present Day:

Most capital improvements required for expansion of Metrolink service during mid-day are complete. OCTA and partner agencies are working together with Metrolink and BNSF to implement improvements allowing expansion of service to Los Angeles. OCTA is coordinating with LOSSAN and its member agencies to continue to support improved service integration and coordination within the corridor.

In two phases beginning October 2019 and April 2020, four intracounty trips operating between Laguna Niguel/ Mission Viejo and Fullerton will be extended to Los Angeles.

Benefits:

Project R allows for sustained operation and enhanced capacity of Metrolink trains serving Orange County, providing a viable alternative to single-occupant vehicle travel, thereby reducing congestion on crowded roadways and freeways. During the peak hour, Metrolink carries the equivalent number of passengers that would fill one freeway lane on I-5.

External Funding:

State: STIP, Propositions 1A, 1B, and 116, and Transit and Intercity Rail Capital Program (TIRCP) totaling \$285.80 million.

Federal: CMAQ, the Surface Transportation Block Grant (STBG) Program, and Federal Transit Administration (FTA) Sections 5307, 5309, and 5337, totaling \$423.26 million.

Other Local: Local funding from the cities as well as other entities is programmed for \$83.95 million.

M1 also provided \$136.58 million.

Risks:

The current sales tax revenue projections limit the ability to expand Metrolink service to Los Angeles. Future expansion plans are contingent upon the cooperation and participation of route partner agencies.

Outside of the Next 10 Plan but important to Metrolink operations is the undertaking by Metrolink of a major multi-year \$443.5 million systemwide rehabilitation program that, in addition to safety, will help improve system reliability and performance for commuters. This program needs to be funded over and above ongoing maintenance and operation costs. Analysis to date indicates that Orange County's share is manageable within the M2 funding limits and share of federal 5337 funding as a result of past and present proactive efforts of OCTA. In addition, OCTA foresees the planned installation of the Metrolink Rail Maintenance Facility in Orange County will reduce ongoing operating costs and allow for better efficiencies for future expansion.

Related Projects:

Project S, Project T, and Project V.

R. High Frequency Metrolink Service

Involved Agencies:

Metrolink, Caltrans, CTC, California State Transportation Agency (CalSTA), FTA, Los Angeles County Metropolitan Transportation Authority, RCTC, San Bernardino County Transportation Authority, Ventura County Transportation Commission, BNSF, California Public Utilities Commission (CPUC), California Office of Emergency Services, and all corridor agencies.

Assumptions:

Funding and operating agreements with partner agencies will be successfully implemented.

References:

- OCTA Comprehensive Business Plan
- Capital Funding Program Report - Rail Project (September 2019)

S. Transit Extensions to Metrolink

Description:

Project S establishes a competitive program for local jurisdictions to broaden the reach of Metrolink to other Orange County cities, communities, and activity centers via transit, to connect passengers to their final destinations. With approximately 60 percent of Orange County's population and employment centers located within a four-mile radius of Metrolink stations, the emphasis of Project S is on expanding access to the core rail system and establishing connections to destinations that are not immediately adjacent to the Metrolink corridor, within the central core, north and south of Orange County. These connections may include a variety of transit technologies such as conventional bus or vanpool (Rubber Tire), bus rapid transit or high capacity rail transit systems (Fixed Guideways), as long as they can be fully integrated and provide seamless transition for the users.

Program Funding:

Approximately \$306 million between 2017 and 2026 (for fixed guideways and rubber tire) in sales tax revenue.

Status:

Fixed Guideway: Through a competitive process, one project (OC Streetcar) advanced beyond initial study. The OC Streetcar is in construction and will operate in the Cities of Santa Ana and Garden Grove.

Rubber Tire: One call for projects has been issued since 2012, providing approximately \$732,000 for four projects in the Cities of Anaheim and

Lake Forest. One project is in service and three have been cancelled.

Present Day:

Maintaining and growing Metrolink ridership relies on convenient and seamless bus and rail connections. Currently, OCTA fixed bus service and company shuttles are the prime providers of transit connections. However, more recently Uber/Lyft paid-ridesharing services have been a growing presence.

Benefits:

Project S will provide expanded transit access to the centralized Metrolink system, thereby allowing Metrolink commuters to connect to other parts of the County without using an automobile.

External Funding:

Fixed Guideways: External funds for two preliminary studies for the Cities of Anaheim and Santa Ana were funded with \$4.12 million in federal FTA Section 5307 and city local funds. M1 also provided \$18.71 million for preliminary studies.

The Board has approved funding supporting the OC Streetcar project, including \$25.52 million in contribution of state funds, and \$218.54 million in federal funds from state Cap and Trade, federal CMAQ, FTA Section 5307 and New Starts funding totaling \$242.2 million.

Rubber Tire: None. These projects are funded by M2 and local city matching funds.

S. Transit Extensions to Metrolink

Risks:

Overall time, scope, and cost risks are high with this project due to the extensive project scope.

Related Projects:

Project R (High Frequency Metrolink Service), Project T, and Project V.

Involved Agencies:

Local jurisdictions, CTC, Caltrans, CalSTA, CPUC, and FTA.

Assumptions:

OC Streetcar: Cities of Santa Ana and Garden Grove will provide their required match for operations.

Funding for a future call for additional project(s) will be at the Board's discretion.

Rubber Tire: Future calls for projects will be at the Board's discretion based on the level of interest from local jurisdictions, but will likely be transitioned to Project V which provides for greater flexibility.

References:

- M2 Eligibility Guidelines
- Federal 5309 Funding Guidelines
- OCTA's Comprehensive Business Plan
- Capital Funding Program Report - Rail Project (September 2019)
- OC Streetcar Project Revised Funding Plan (July 2018)

T. Convert Metrolink Stations to Regional Gateways that Connect Orange County with High-Speed Rail Systems

Description:

Provide funding for local improvements to stations along the LOSSAN corridor in Orange County to facilitate connections to future high-speed rail systems, thereby ensuring Orange County's presence in the development and implementation of high-speed rail systems that will serve Orange County. One project, the Anaheim Regional Transportation Intermodal Center (ARTIC), moved forward to completion.

Cost:

M2 contributed \$35.29 million of the \$225.53 million cost of the ARTIC project.

Status:

As part of EAP efforts, OCTA held a competitive call for projects in 2009 for eligible station cities for the development and implementation of station projects in preparation of future high-speed rail systems. The Cities of Anaheim, Fullerton, Irvine, and Santa Ana were awarded funding for planning of major expansions of their Metrolink Stations. The City of Anaheim received environmental clearance for the ARTIC project in early 2012. The completed facility opened to rail and bus service on December 6, 2014.

On December 14, 2015, the Board of Directors amended the M2 Ordinance No. 3 and Transportation Investment Plan to officially close out Project T by considering the completion of ARTIC as fulfilling the intent of Project T, as the only Orange County station on the planned High-Speed Rail route. The remaining balance of M2 funds were then transferred to two projects in need: the

Metrolink Service Expansion Program (part of Project R), and the Fare Stabilization Program for Seniors and Persons with Disabilities (part of Project U).

Present Day:

In partnership with transportation agencies, corridor cities, and stakeholders, the California High-Speed Rail Authority (CAHSRA) in 2008 planned a High-Speed Rail (HSR) system that was envisioned to extend as far north as Sacramento and as far south as San Diego with a connection in Anaheim. Work on the Central Valley segment from Bakersfield to Merced continues, however other areas of the system have been postponed.

Benefits:

Early completion of Project T allowed for investment in Orange County's rail system to facilitate the planned ultimate integration of various high-speed rail systems within the County. The project relocated the prior rail station from leased land in the Los Angeles Angels of Anaheim parking lot, to its new permanent location as a multi-modal station for all transit riders.

External Funding:

State: STIP totaling \$29.22 million.

Federal: CMAQ, Regional Surface Transportation Program (RSTP), FTA Sections 5309 and 5337, FTA Bus Livability, and Highway Safety Improvement Program, totaling \$74.00 million.

T. Convert Metrolink Stations to Regional Gateways that Connect Orange County with High-Speed Rail Systems

M1 also provided \$87.02 million of which \$32.50 million for ROW will be repaid plus interest by the City of Anaheim by 2025.

Risks:

None – project completed.

Related Projects:

California High-Speed Rail System

Involved Agencies:

CTC, Caltrans, FTA, CAHSR, Metrolink and the Cities of Anaheim, Fullerton, Irvine, and Santa Ana.

Assumptions:

The California High-Speed Rail System will extend to the City of Anaheim as identified in their 2016 Business Plan.

References:

- M2 Eligibility Guidelines
- California High-Speed Rail 2016 Business Plan
- Capital Funding Program Report - Rail Project (September 2019)

U. Expand Mobility Choices for Seniors and Persons with Disabilities

Description:

Project U provides funding for three programs to support mobility choices for seniors and persons with disabilities. Each of these programs support OCTA's effort to expand mobility options for seniors.

The Fare Stabilization Program ensures that fares for seniors and persons with disabilities continue to be discounted at the same percentage as 2006 levels.

The SMP, administered by OCTA, was first established in 2001. For the first ten years, this program was supported with Transit Development Act (TDA) funds. The allocation of M2 Project U funding ensures the continuation of dedicated resources to sustain this program for the next 25 years.

The SNEMT Program was established by the County of Orange in 2003, utilizing Tobacco Settlement Revenue (TSR) to fund the program. M2 Project U funding supplements existing TSR resources to expand the capacity of the program and increase the number of available SNEMT trips.

Program Funding:

Approximately \$126 million on a pay-as-you-go basis between 2017 through 2026.

Status:

Fare Stabilization: In December 2015, the Board approved an amendment to

the M2 Ordinance No. 3 and Transportation Investment Plan that backfilled a funding shortfall identified in this program with remaining Project T funds. Effective January 2016, an amendment to the M2 Ordinance No. 3 adjusted this amount to 1.47 percent of net M2 revenues. With the amendment, projected Fare Stabilization revenues are expected to be solvent through the life of the M2 Program.

SMP: This program offers a variety of senior transportation resources for medical, nutrition, shopping, and social trips to participating cities. Currently, there are 31 cities which participate.

SNEMT: This program is administered by the County of Orange Office on Aging and is carried out by two transportation contractors. This program provides approximately 140,000 annual trips under Project U for non-emergency services such as trips to doctor and dental appointments, therapy, dialysis, and pharmacy visits.

Present Day:

Studies of senior mobility needs have identified seniors' preference for utilizing local, community-based transportation services rather than countywide or regional services.

As of June 2019, more than \$27 million has supported over 109 million trips through the Fare Stabilization, \$20.39⁹ million provided 2.23 million trips

⁹ Only includes disbursed funds. On May 13, 2019, the Board determined that the City of Santa Ana and the City of Stanton ineligible to receive M2 revenues.

Disbursement of M2 funds have been suspended until the cities achieve compliance and the Board reconsiders the matter by May 2020

U. Expand Mobility Choices for Seniors and Persons with Disabilities

through SMP, and \$22.2 million provided 857,875 trips through SNEMT.

The SMP allows participating cities to identify the specific mobility needs of the seniors in their communities and develop transportation programs to best meet those needs with available funding.

The SNEMT fills a gap in senior transportation services, as trips are often provided to seniors who do not qualify for OCTA ACCESS service, or to seniors whose advanced age or disposition make it difficult to use ACCESS service. Contracting with social service agencies to provide SNEMT services allows this program to provide enhanced service elements beyond the requirements of ACCESS, a paratransit service that complements OCTA's fixed route bus service and is provided to comply with ADA.

Benefits:

M2 funding of these programs, combined with OCTA ACCESS service and other senior transportation services funded with public and private resources, provide a menu of mobility options for Orange County seniors, allowing them to select the service that most appropriately meets their transportation need.

External Funding:

Cities contribute a 20 percent match to their SMP services. A variety of funding sources are used by cities for their SMP

match requirement, including general fund, Community Development Block Grants, sponsorships, advertising revenue, and administrative in-kind resources. The County of Orange utilizes primarily TSR funds to meet their maintenance of effort (MOE) requirement.

Risks:

Cities must provide matching funds for SMP.

Related Projects:

Not Applicable

Involved Agencies:

Nearly all local agencies – Participating SMP cities include: Aliso Viejo, Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Dana Point, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, Laguna Hills, Laguna Niguel, Laguna Woods, La Habra, Lake Forest, Mission Viejo, Newport Beach, Orange, Placentia, Rancho Santa Margarita, San Clemente, San Juan Capistrano, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda. The Orange County Office on Aging administers the SNEMT Program.

Assumptions:

Project U is assumed to be funded on a pay-as-you-go basis.

References:

- Project U Funding and Policy Guidelines
- OCTA's Comprehensive Business Plan

V. Community Based Circulators

Description:

Project V provides funding to local jurisdictions through a competitive process to develop local bus transit services, such as community-based circulators, shuttles, and bus trolleys that complement regional bus and rail services, and meet local needs in areas not adequately served by regional transit. Projects will need to meet performance criteria for ridership, connection to bus and rail services, and financial viability to be considered for funding.

Program Funding:

\$69.9 million on a pay-as-you-go basis between 2017 through 2026.

Status:

To date, the Board has approved four rounds of funding for a total of \$51 million. Two of these rounds (one of which is currently underway) have occurred since Next 10 adoption, totaling \$21 million. The three completed rounds awarded 28 projects (service expansions from the 2018 call are counted as separate projects). Staff recommendations for the current round of funding will be prioritized for Board consideration in spring 2020.

Out of the 28 projects awarded by OCTA: 19 are currently active; seven have been cancelled; one is planned and one has been completed.

Present Day:

Project V helps address the regularly-expressed need for local community-

based transit service by Orange County communities.

Benefits:

Community based circulators can provide relief to arterials in high traffic areas, and provide non-auto based mobility options that meet specific local needs.

External Funding:

The local match requirement for both capital and any operating funds authorized by the Board is a minimum of 10 percent.

Risks:

Local agencies must meet eligibility requirements to receive funding. Ability to sustain service will be key to moving projects forward.

Related Projects:

Project S (some Project S and V routes could serve dual purposes).

Involved Agencies:

OCTA and participating local agencies.

Assumptions:

Project V is assumed to be funded on a pay-as-you-go basis.

References:

- M2 Eligibility Guidelines
- Project V Guidelines (under development)
- OCTA's Comprehensive Business Plan

W. Safe Transit Stops

Description:

Project W provides funding for passenger amenities at the 100 busiest transit stops across Orange County. The intent is to assist bus riders in the ease of transfer between bus lines and provide passenger amenities.

Program Funding:

\$7.6 million on a pay-as-you-go basis between 2017 through 2026.

Status:

Project W provides funds to construct and improve local bus stop amenities implemented by eligible local agencies.

To date, there have been a total of two rounds of funding totaling just under \$2 million with one oc. Since Next 10 adoption, one of the rounds of funding was issued following the completion of the first round taking place in 2014. The first round, on July 14, 2014, the OCTA Board approved funding for seven local agencies in an amount not to exceed \$1.2 million for 51 stop improvements. Of the 51 stop improvements, 43 stop improvements have been completed, with the remaining eight postponed by the City of Anaheim.

On June 24, 2019, a second round of funding recommendations were approved by the Board providing just under \$1 million to support improvements at 36 stops within seven eligible local jurisdictions and OCTA.

Present Day:

High volume stops are eligible for funding providing needed passenger amenities commensurate with the volume of riders.

Benefits:

To date, 36 stop improvements are underway with 43 stop improvements completed, which has enhanced the overall passenger experience at the busiest bus stopped within Orange County. Eligible improvements in locations where such amenities do not exist, include enhancements such as sun/rain protection, passenger seating, improved lighting etc.

External Funding:

Minimal local match provided for design requests; the rest is 100% M2 funded up to the Project W funding caps. If over cap, then additional local agency funds would be required.

Risks:

Local jurisdiction-initiated: Local jurisdictions are responsible for amenities at bus stops. Depending on the amenities selected, long-term maintenance and costs could be required.

Related Projects:

Not Applicable.

Involved Agencies:

Local agencies (eligible cities and OCTA) with a top 100 busiest stop are eligible to receive these funds.

Assumptions:

Project W is assumed to be funded on a pay-as-you-go basis

References:

- M2 Eligibility Guidelines
- Project W Guidelines
- OCTA's Comprehensive Business Plan

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UPDATE

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DELIVERY PLAN

Environmental Cleanup Program







































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2019 UPDATE
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Call for Projects  Call for Projects to be determined based on revenue flow 

OC Go Environmental Cleanup Grants and Call for Projects

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1.  M2 Water Quality Call for Projects - Tier I																		
2.  M2 Water Quality Call for Projects - Tier II																		

Tier 1 grants program consists of funding for equipment purchases and upgrades to existing storm drains and related best management practices.
 Tier 2 grants program consists of funding for regional, potentially multi-jurisdictional, capital-intensive projects.

Environmental Cleanup Program



Overview:

The ECP (Project X) allocates approximately \$268 million toward improving overall water quality in Orange County from transportation-related pollution. Project X was approved by Orange County voters under the M2 half-cent sales tax for transportation improvements in 2006.

To adhere to the promise of M2, the Next 10 Plan includes the following framework for Project X:

- Provide supplemental funds (not supplant) for existing transportation related water quality programs
- Allocate funds on a competitive basis to improve water quality standards in Orange County
- Reduce transportation-generated pollutants along Orange County's streets, roads and freeways
- Implement best management practices to improve runoff from streets, roads and freeways

Additionally, as part of the overall M2 Plan, all M2 capital projects (freeway, street, and transit) must include water quality mitigation as part of their respective project scope and cost. Therefore, this source of funding is not eligible for environmental mitigation efforts.

Next 10 Deliverables:

The Next 10 Plan for Project X recommends two major initiatives through 2026 consistent with the above framework:

1. Protect Orange County beaches by removing 25 tons¹⁰ of trash (during the ten-year period) from entering waterways and inlets that ultimately lead to the ocean.
2. Work with the Environmental Cleanup Allocation Committee to develop the next tiers of water quality funding programs with a goal of providing up to \$40 million of grants to prevent the flow of trash, pollutants and debris into waterways from transportation facilities. In addition, focus on improving water quality on a regional scale that encourages partnerships among the local agencies as part of Project X.

¹⁰ Trash removal achieved by funded projects will be additive with each new call for projects

and will continue yielding greater benefits as equipment is in operation over time.

X. Environmental Cleanup Program

Description:

Project X implements street- and highway-related water quality improvement programs and projects that assist Orange County cities, the County of Orange and special districts in meeting federal Clean Water Act standards for urban runoff. Project X is intended to augment, not replace existing transportation-related water quality expenditures and to emphasize high-impact capital improvements over local operations and maintenance costs.

In May 2010, the Board approved a two-tiered approach to fund Project X. The Tier 1 grant program is designed to mitigate the more visible forms of pollutants, such as litter and debris that collect on roadways and in storm drains. Tier 1 consists of funding equipment purchases and upgrades to existing catch basins and related best management practices, such as screens and other low-flow diversion devices.

The Tier 2 Grant Program consists of funding regional, potentially multi-jurisdictional, and capital-intensive projects. Examples include constructed wetlands, detention/infiltration basins, and bioswales which mitigate pollutants such as heavy metals, organic chemicals, and sediment and nutrients.

Program Funding:

Up to \$40 million will be available for the Tier 1 and Tier 2 grants funding programs over a ten-year period between 2017 and 2026, on a pay-as-you-go basis.

Status:

To date, the Board has awarded approximately \$24 million to fund 177 Tier 1 projects across the County through

nine rounds of funding. A tenth call for projects is anticipated to be released in March 2020 in the amount of approximately \$2.8 million and programming recommendations are anticipated for late summer. The Board has also awarded approximately \$28 million for 22 Tier 2 projects in 12 cities and the County of Orange.

Since adoption of the Next 10 Plan in November 2016, OCTA has issued three calls for Tier 1 ECP projects. The Board awarded approximately \$7.6 million to fund 39 Tier 1 projects.

Annual Tier 1 calls for projects are anticipated moving forward. The timing and amount of the next Tier 2 call for projects will be determined based on funding availability and project readiness.

Present Day:

Staff has estimated that over a 6.2 million cubic feet of trash has been captured as a result of the installation of Tier 1 devices since the inception of the Tier 1 program in 2011. This is equivalent to over 2,600 forty-foot shipping containers (or 5,200 twenty-foot equivalent units). As the equipment is in service over time, the volume of trash captured is expected to increase. The funded Tier 2 projects have the potential to recharge 157 million gallons of groundwater annually.

Benefits:

Improvements funded through this program will improve overall water quality in Orange County. Funds allocated on a countywide competitive basis will assist jurisdictions in meeting federal Clean Water Act requirements for controlling transportation-generated pollution.

X. Environmental Cleanup Program

External Funding:

Local agencies are required to provide a 20 percent (Tier 1) and 50 percent (Tier 2) minimum local cash match. Tier 2 matching funds may be reduced, depending on project readiness and operations and maintenance above the ten-year minimum requirement.

Risks:

Local agencies must meet eligibility requirements and timely-use-of-funds provisions to M2 receive funding.

Related Projects:

Not Applicable.

Involved Agencies:

All local agencies (cities and County of Orange). Third parties such as water and wastewater public entities, environmental organizations, non-profit groups, and homeowner's associations cannot be a lead agency applicant; however, they could jointly apply with an eligible applicant.

Assumptions:

Funds will be allocated on a countywide competitive basis to assist jurisdictions with improving water quality related to transportation pollution.

References:

- Tier 2 Grant Program Planning Study
- OCTA's Comprehensive Business Plan

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Appendix

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To determine the status of the M2 Program, staff reviewed and updated cash flows for the Next 10 Plan for each of the program elements to test whether commitments provided to the voters as part of the M2 approval in November 2006 remain achievable. The revenue assumptions are based on the 2019 M2 revenue forecast of \$13.4 billion using the latest M2 revenue forecast methodology approved by the Board. The Next 10 Plan assumes approved TIFIA proceeds, the Full Funding Grant Agreement, and net excess 91 Express Lanes revenues for eligible projects as well as the availability of a viable amount of discretionary federal and/or state funds from 2019 to 2041. Revenues and expenses were merged into a high-level cash flow model that will be refined through the Plan of Finance. Bonding assumptions were updated to determine the need to address projected negative ending balances by year (compared to a pay-as-you-go scenario) and are constrained to minimum debt coverage ratios.

Freeway Program

Revenues for the M2 Freeway Program assumed a proportional share (43 percent) of net M2 revenue. From inception to 2026, the Freeway Program would receive approximately \$2.08 billion in M2 revenue, \$794.4 billion in bond proceeds (includes \$495.4 million in prior bond proceeds), and \$1.33 billion in state/federal grants (\$1.28 billion of which is already programmed), \$153.9 million in committed proceeds, \$241.4 million in net excess 91 Express Lanes revenue for eligible projects, \$21.7 million in interest, and \$20 million transferred in from M1 for a total of \$4.65 billion in total revenue. Costs for the same period total \$4.543 billion.

With an increase in sales tax revenues coupled with the prior local funding commitments from 91 Express Lanes, significant external revenues captured, along with additional project scope refinements, the freeway program cash flow is healthy. This supports OCTA's commitment to accelerate additional projects as planned in Deliverable 2. Accelerating projects results in lower project cost escalation and significantly lowered bonding needs.

For the Next 10 Plan Freeway Program update, forecasted revenues and costs through 2041 were also tested. This effort was conducted to ensure the complete M2 Freeway Program could be delivered consistent with commitments provided to the voters as part of M2 approval in November 2006. For projects currently in environmental or final design, project schedules and costs were based on data provided by OCTA's Project Controls Department. For projects that have not yet entered the environmental phase, conceptual estimates were prepared based on a scoring of congestion relief, project readiness, and cost escalation risks (associated with project delays). Bond issuances for the 2019 update reduced to just one during the 2026 timeframe and includes no others looking out to 2041. As always, bonding is constrained to legal debt coverage ratios, and a Plan of Finance is brought separately to the Board for approval as needed with refined bond assumptions.

Next 10 Plan Funding Assumptions



The Next 10 Plan freeway deliverables funding commitment includes nine projects completed prior to plan adoption. See table below for project listing.

Completed Prior to Next 10 Plan		Construction Complete	Cost
1. Project D	I-5, Ortega Highway Interchange	2016	\$79.7
2. Project E	SR-22 Access Improv., Euclid St., Brookhurst St., Harbor Blvd.	2008	M1\$'s
3. Project G	SR-57 Northbound, Katella Ave. to Lincoln Ave.	2015	\$38.0
4. Project G	SR-57 Northbound, Orangethorpe Ave. to Yorba Linda Blvd.	2014	\$52.3
5. Project G	SR-57 Northbound, Yorba Linda Blvd. to Lambert Rd.	2014	\$54.1
6. Project H	SR-91 Westbound, I-5 to SR-57	2016	\$59.2
7. Project I	SR-91 Westbound, Tustin Ave. Interchange to SR-55	2016	\$42.5
8. Project J	SR-91 SR-55 to SR-241	2013	\$79.7
9. Project J	SR-91 Eastbound, SR-241 to SR-71	2011	\$57.8
Prior Project Completion Total			\$463.3

Next 10 Plan Funding Assumptions

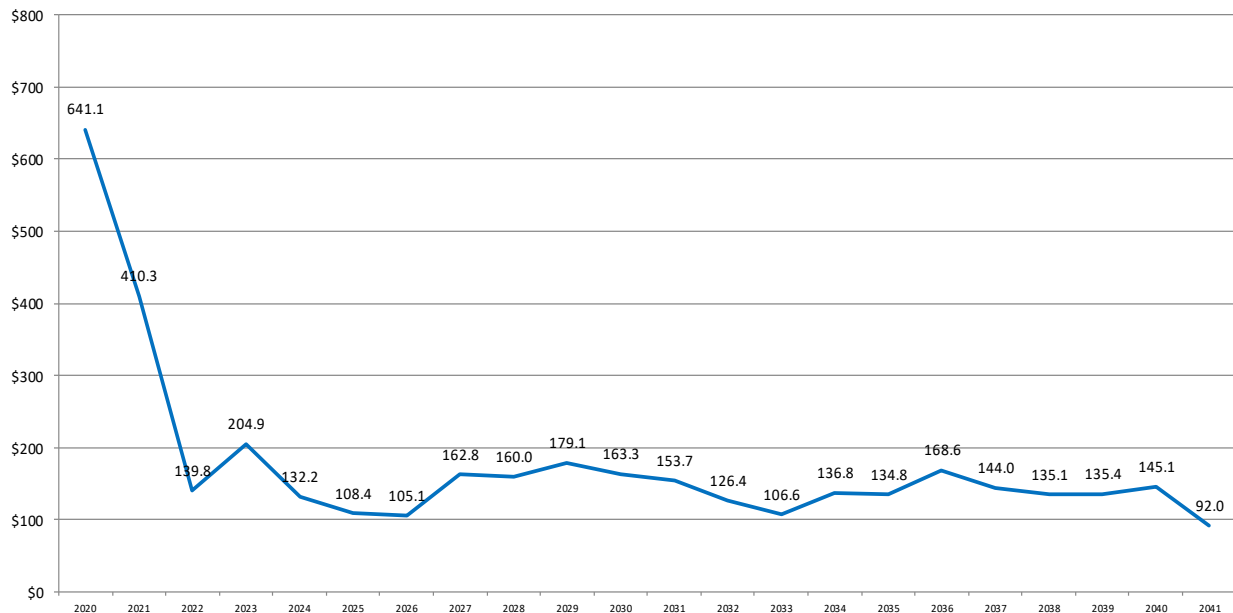


Projected M2 Freeway Program Revenues, Estimated Costs, and Ending Balances

(Millions of Dollars; Year of Expenditure)

	M2 Projected Revenue	Other Revenue	Estimated Costs (YOE)	Project Revenues - Costs
M2 Freeway Project	A	B	C	D = A + B - C
Project A (I-5, SR-55 to SR-57)	\$505.4	\$33.7	\$41.5	\$497.6
Project B (I-5, SR-55 to "Y")	\$322.8	\$28.0	\$438.7	(\$87.9)
Project C (I-5, South of "Y")	\$674.2	\$471.5	\$828.2	\$317.5
Project D (I-5 interchanges)	\$277.4	\$86.1	\$190.6	\$173.0
Project E (SR-22 access improvements)	\$129.0	\$0.0	\$0.0	\$129.0
Project F (SR-55 improvements)	\$393.6	\$235.6	\$533.3	\$95.8
Project G (SR-57 improvements)	\$278.2	\$111.2	\$379.7	\$9.7
Project H (SR-91, I-5 to SR-57)	\$150.5	\$27.2	\$59.2	\$118.5
Project I (SR-91, SR-57 to SR-55) ¹	\$447.9	\$465.0	\$477.8	\$435.1
Project J (SR-91, SR-55 to OC/RC line) ¹	\$378.7	\$422.6	\$430.0	\$371.2
Project K (I-405, I-605 to SR-55) ²	\$1,153.6	\$289.3	\$1,425.0	\$17.9
Project L (I-405, SR-55 to I-5)	\$343.8	\$8.0	\$238.8	\$113.0
Project M (I-605 access improvements)	\$21.5		\$28.6	(\$7.1)
Project N (Freeway Service Patrol)	\$161.3		\$161.4	(\$0.1)
Mitigation Program @ 5%	\$275.7		\$227.8	\$47.9
Transfer from M1 Savings		\$20.0		\$20.0
Interest Earnings		\$21.7		\$21.7
Bond Interest Costs ³			\$471.1	(\$471.1)
Other Non-Programmed Revenue		\$150.0		\$150.0
Freeway Program Economic Uncertainties ⁴			\$1,860.0	(\$1,860.0)
Subtotal M2 Revenues and Costs:	\$5,513.6	\$2,370.1	\$7,791.7	
2041 Projected Balance:				\$92.0

M2 Freeway Ending Balances By Year



¹\$720.8 million in SR-91 Express Lanes excess revenue has been incorporated into Other Revenues for portions of Project I (currently assumed at \$435.3 million) and Project J (currently assumed at \$292.5 million).

²\$153.9 million has been incorporated into Other Revenues for Project K. This is a direct benefit to the M2 portion of the I-405 Improvement Project, as the loan will be repaid with toll revenues and not with M2.

³Total debt service less bond proceeds and investment earnings.

⁴The plan allocates funds for economic uncertainties programmed in 2028 through 2041.

Next 10 Plan Funding Assumptions



Streets and Roads

The M2 Streets and Roads Program consists of Project O (RCP), Project P (RTSSP), and Project Q (Local Fair Share Program). Combined M2 revenues for these programs assume a proportional share (32 percent) of net M2 revenue. From inception to 2026, the Streets and Roads Program would receive approximately \$1.550 billion in M2 revenue, \$27.7 million in interest, \$121.6 million in prior bond proceeds, and \$606.9 million in M1 and state/federal grants (primarily for the OC Bridges Program), for a total of \$2.306 billion in total revenue. This includes \$6.9 million in SB 1 funding leveraged for Project P. Costs for the same period would total approximately \$2.368 billion (including debt service payments against prior bonding).

Transit Program

The M2 Transit Program consists of Project R (High Frequency Metrolink Service), Project S (Transit Extensions to Metrolink), Project T (Metrolink Gateways), Project U (Seniors/Disabled Persons Mobility Programs), Project V (Community Based Transit/Circulators), and Project W (Safe Transit Stops). Revenues for the M2 Transit Program assume a proportional share (approximately 25.0 percent) of net M2 revenue. From inception to 2026, the Transit Program would receive approximately \$1.211 billion in M2 revenue, \$51.7 million in prior bond proceeds, \$531.2 million in external revenue, and \$10.5 million in interest for a total of \$1.804 billion. Expenses for this same time period total \$1.507 billion. The cash flow includes \$148.96 million in Federal New Starts funding, \$85.47 million in federal CMAQ, and \$25.52 million in State Cap-and-Trade for the OC Streetcar project. The un-programmed balance for Project S allows for the option of an additional future transit connection project.

Environmental Cleanup Program

The M2 ECP consists of Project X (Cleanup Highway and Street Runoff that Pollutes Beaches). Revenues for the M2 ECP assume two percent of gross annual M2 sales tax revenue. From inception to 2026, the ECP would receive approximately \$99.5 million in M2 revenue. Expenses for this same time period total \$95.7 million.