OCGO
Local Tax Dollars at Work

Measure M2 Taxpayer Oversight Committee

550 S. Main Street, Orange CA, Room 07
October 9, 2018 @ 5:00 p.m.

AGENDA

1. **Welcome**

2. **Pledge of Allegiance**

3. **Approval of Minutes/Attendance Report for August 14, 2018**

4. **Action Items**
   A. Annual Eligibility Review Subcommittee Report Fiscal Year 2018-19
      Matt McGuinness, Annual Eligibility Review Subcommittee

5. **Presentation Items**
   A. Measure M2 Next 10 Plan: Market Conditions Key Indicators Analysis and Forecast
      Tamara Warren, Measure M Program Manager

   B. Measure M2 2018 Update: Next 10 Delivery Plan
      Tamara Warren, Measure M Program Manager

6. **OCTA Staff Updates**
   A. OC Streetcar Project Update - Jim Beil, Executive Director, Capital Programs

   B. M2 Triennial Performance Assessment Update – Stephanie Chhan, Associate, Measure M Program

   C. I-405 Update – Christina Byrne, Department Manager, Public Outreach

7. **Annual Eligibility Review Subcommittee Report**

8. **Audit Subcommittee Report**

9. **Environmental Oversight Committee Report**

10. **Committee Member Reports**

11. **Public Comments***

12. **Adjournment**
    The next meeting will be held on December 11, 2018

*Public Comments: At this time, members of the public may address the Taxpayer Oversight Committee (TOC) regarding any items within the subject matter jurisdiction of the TOC, provided that no action may be taken on off-agenda items unless authorized by law. Comments shall be limited to three (3) minutes per person, unless different time limits are set by the Chairman, subject to the approval of the TOC.

Any person with a disability who requires a modification or accommodation in order to participate in this meeting should contact the OCTA Clerk of the Board, telephone (714) 560-5676, no less than two business days prior to this meeting to enable OCTA to make reasonable arrangements to assure accessibility to this meeting.

INFORMATION ITEMS

Staff Report Title	Board Meeting Date
1. Capital Programs Division - Fourth Quarter Fiscal Year 2017-18 and Planned Fiscal Year 2018-19 Capital Action Plan Performance Metrics	August 13, 2018
2. Measure M2 Comprehensive Transportation Funding Programs - 2019 Annual Call for Projects	August 13, 2018
3. Measure M2 Freeway Environmental Mitigation Program Update	August 13, 2018
4. Comprehensive Transportation Funding Programs - Measure M2 Environmental Cleanup Program Revised 2018 Tier 1 Projects	September 10, 2018
5. Interstate 405 Improvement Project Update	September 10, 2018
6. Environmental Mitigation Program Endowment Fund Investment Report For June 30, 2018	September 24, 2018

*Public Comments: At this time, members of the public may address the Taxpayers Oversight Committee (TOC) regarding any items within the subject matter jurisdiction of the TOC, provided that no action may be taken on off-agenda items unless authorized by law. Comments shall be limited to five (5) minutes per person and 20 minutes for all comments, unless different time limits are set by the Chairman, subject to the approval of the TOC.

Any person with a disability who requires a modification or accommodation in order to participate in this meeting should contact the OCTA Clerk of the Board, telephone (714) 560-5676, no less than two business days prior to this meeting to enable OCTA to make reasonable arrangements to assure accessibility to this meeting.

Measure M Taxpayer Oversight Committee
Orange County Transportation Authority
550 S. Main Street, Orange CA, Room 07
August 14, 2018 @ 5:00 p.m.

MEETING MINUTES

Committee Members Present:
Richie Kerwin Lim, First District Representative
Dale Soeffner, First District Representative, Co-Chairman
Mark Kizzar, Second District Representative
Larry Tekler, Second District Representative
Eugene Fields, Third District Representative
Andrew Lesko, Third District Representative
Stanley F. Counts, Fourth District Representative
Larry Lang, Fourth District Representative
Jeffery Kaplan, Fifth District Representative
Matt McGuinness, Fifth District Representative

Committee Member(s) Absent:
Eric Woolery, Orange County Auditor-Controller, Co-Chairman

Orange County Transportation Authority Staff Present:
Joe Alcock, Section Manager, M2 Local Programs
Julianne Brazeau, Public Reporter Specialist
Christine Byrne, Department Manager, Public Outreach
Stephanie Chhan, Associate, Measure M Program
Cleve Cleveland, Operations Manager
Marissa Espino, Community Relations Officer
Sam Kaur, Department Manager, Finance and Administration
Andrea Luca, Intern, Community Relations
Kia Mortazavi, Executive Director, Planning
Andrew Oftelie, Executive Director, Finance
Mary Shavalier, Program Manager, Capital Programs
David Simpson, Manager, Government Relations

1. **Welcome**
   Marissa Espino welcomed everyone to the Orange County Transportation Authority (OCTA) Taxpayer Oversight Committee (TOC) meeting at 5:09 p.m. Marissa then asked everyone to introduce themselves, since there are new committee members.

2. **Pledge of Allegiance**
   Andrew Lesko led the Pledge of Allegiance to the Flag.

3. Co-Chair Election

Marissa Espino opened the nominations for Co-Chairman of the TOC.

Richie Lim nominated Matt McGuinness to the position of Co-Chairman. Matt declined the position, and nominated Larry Tekler to the position of Co-Chairman. Larry accepted the nomination.

Andrew Lesko nominated Eugene Fields to the position of Co-Chairman. Eugene accepted the nomination.

Marissa called for a vote. Larry Tekler received 3 votes, Eugene Fields received 6 votes and there was one abstention.

A motion was made by Richie Lim, seconded by Matt McGuinness, and carried unanimously to elect Eugene Fields as Co-Chair of the TOC.

4. Approval of the Minutes/Attendance Report for June 12, 2018

Co-Chairman Eugene Fields asked if there are any corrections to the Minutes/Attendance Report for June 12, 2018. A motion was made by Matt McGuinness, seconded by Richie Lim, and carried unanimously to approve the June 12, 2018 TOC Minutes and the Attendance Report.

5. Presentation Items

A. OC Streetcar Project Update

Mary Shavalier provided an overview of the OC Streetcar Project and updated the committee on the project schedule. She said the original opening was scheduled for December 2020 and has now been delayed to September 2021. Mary said the project has been delayed due to waiting for Federal New Starts Funding. Also, after going out to bid, OCTA heard from contractors they would need additional time to complete the project.

Mary Shavalier also provided an update on the funding of the OC Streetcar Project. She said the project bids came in about $78 million over the initial estimates. Also, Southern California Edison and Southern California Gas are contesting the City of Santa Ana's Franchise Agreement which says public utilities have to relocate at their cost. Mary said there will be additional right of way costs and other costs associated with the delayed schedule. The updated estimate is now $108 million above the original estimates. On July 9, 2018 the OCTA Board approved the additional costs to be paid by Measure M/Project S, per the Federal Transit Administration (FTA) agreement. The funding breakdown for the project is now: 53% FTA, 6% state and 41% Measure M2.

Mary Shavalier discussed the FTA Full Funding Grant Agreement. She said this money is discretionary and the current administration is not advancing new funding agreements under the New Starts Program at this time. Mary said OCTA submitted the application for funding in May 2017 and thought it would be funded by October 2017. The FTA has appropriated a lot of money towards the project and OCTA perceives this as positive. Also, another positive is the contract with Siemens for the streetcar vehicles has been executed.

The TOC discussed the possibility of no federal funding for this project. Andrew Oftelie said Measure M2 has enough money to cover the entire OC Streetcar project. If OCTA is able get additional funding for this project, OCTA can then pursue additional projects in other corridors per the Measure M2 ordinance.

The TOC discussed operating costs, fares, ridership, what happens when Measure M2 sunsets and funding from the cities involved in the project. Andrew Oftelie said fares will pay for about 20% of the operating costs, the City of Santa Ana will pay 10% of the operating costs and the remainder is paid by Measure M2. The City of Garden Grove will pay 1.5 % of the cost to operate the project. He said when Measure M2 sunsets, OCTA Board will most likely set up an endowment to operate the OC Streetcar like what was approved at the end of Measure M(1) for MetroLink service. Andrew said another option is to tap into monies used for transit services. OCTA currently uses these funds for bus service.

The TOC discussed the accuracy of the ridership projections and how it will affect bus routes. Mary Shavalier said the FTA looks at ridership meticulously and she is very confident they will be on target. She said bus service will actually be enhanced to service all the stops along the streetcar project.

The TOC discussed how all projects ultimately compete for funds and how that might affect the I-405 Project funding. Mary Shavalier said the funds come from different funding categories in Measure M - the streetcar funding comes from the transit program and the I-405 Project is funded through the highways program, so they don’t compete.

The TOC asked about the other corridor studies and ending of the current streetcar line. Kia Mortazavi said this streetcar line was awarded on a competitive basis as outlined in the Measure M2 Ordinance. The Cities of Santa Ana and Garden Grove competed together to get this project awarded. Kia said OCTA recently looked at the Harbor Corridor as a future high capacity corridor per the master plan of high capacity corridors. He said this study has concluded due to lack of local support.. Kia said OCTA is currently looking at the Bristol Corridor with a possible connection to the John Wayne Airport as a possible extension.

Eugene Fields expressed his concern for the OC Streetcar Project funding. He said he is happy to hear OCTA has contingencies and that OCTA is confident in the funding.

B. Project V Update

Joseph Alcock provided background information on Project V. He said Project V is the Measure M2 competitive program for capital and operations funding for community based transit circulators. Service has to meet minimum performance standards. Since the inception of Measure M2 there have been three calls for projects and OCTA has awarded $43 million in funding. He said there are currently 16 active services and included services are for special events, fixed route and demand responsive services. These services have provided 159,000 total boardings.

Joseph Alcock said in June OCTA issued a third call for projects and approved $6.8 million in project requests for 6 projects. The projects are in Dana Point, Laguna Beach, Newport Beach, San Clemente and San Juan Capistrano.

The TOC asked the financial impact of the programs that have failed and what happens when a program is discontinued. Joseph Alcock said agencies put up 10 percent of the cost of the program. If a program is discontinued the agencies pay OCTA back a prorated portion of the funding for the capital items. The unused operations funds go back into the pot of money for the next call for projects. Kia Mortazavi said OCTA only pays a maximum subsidy of $9 per rider. He said the incentive is on the city to market the program and make the program successful.

The TOC asked about the City of San Clemente's projects and asked about the use of on-demand services by cities. Joseph Alcock said there are two programs in the City of San Clemente. He said there is a trolley and a rideshare program provided by Lyft. Joseph said San Clemente is currently the only city in the county to use these funds for on-demand services. Kia Mortazavi said in order to apply for these funds, the service needs to be: ADA accessible, provide the opportunity to receive cash payments and be accessible to everyone in the community.

C. Measure M2 Sales Tax Forecast

Sam Kaur provided background and the current methodology for Forecasting Measure M2 Sales Tax. Sam said OCTA currently uses Muni Services to forecast the first five years out and then uses a combination of three local universities to forecast the remainder of Measure M2. The trend in growth of Measure M2 sales tax has increased on average since the recession of 2010. She said in September OCTA should receive a "true-up" numbers and sales tax revenue is projected to increase by 3.3% for 2018. Sam said based on the current forecasts OCTA is expected to receive about $400 million less revenue over the life of Measure M2 than was predicted last year. She said the trend is shifting down a bit. The reason for the decline, as outlined by the universities, is lower retail growth, more online purchases, less hardware purchases, lower automobile sales and new construction slowing down. In the long-term it is expected there will be lower: inflation, payroll, and population growth. Orange County has an aging population, higher cost of living and employees from other counties commuting in to work.

The TOC discussed the dip noted in the year 2021 and asked if there is a recession expected. Sam Kaur said the universities project the dip in 2021 and OCTA will be using Muni Services forecast for that year and they do not predict a dip. Sam said the universities average over a longer period and they have the reason in their forecast for the dip in 2021, but she is unsure of their reasoning for that particular year.

The TOC asked for clarification on online sales tax collection. Sam Kaur said Measure M2 does not receive revenue for online sales tax when items are purchased out of state.

The TOC asked about tax reform. Saur Kaur said the universities look at tax reform in their forecasts and it does affect sales tax collection in some ways.

7. OCTA Staff Updates

A. I-405 Update – Christina Byrne said the I-405 Project had its first bridge closure on August 7, 2018 at McFadden and demolition will occur over the next two weekends. She said there has been a robust community outreach program for this area to make everyone aware of the closure. Christina said the Slater Bridge is the next bridge to close.

The TOC discussed the removal of ice plant in the area. Christina Byrne said that could be used for a staging area for equipment or getting ready for work on sound walls.

The TOC asked about equipment on Beach Boulevard. Christina Byrne said it could be a cement plant for crushing concrete.

The TOC asked if Los Angeles County will be doing any work on the I-405 adjacent to this project to help alleviate traffic. Christina Byrne said Los Angeles has been studying the I-405, but nothing is close to construction.

B. M2 Triennial Performance Assessment Update – Stephanie Chhan said there have been three assessments to date. Larry Tekler assisted in the selection of a consultant for the fourth assessment for the period of 2015-2018. Currently the consultant is collecting contacts and conducting interviews.

7. Annual Eligibility Review Subcommittee Report

Matt McGuinness said there was nothing new to report.

8. Audit Subcommittee Report

Richie Lim said there was nothing new to report.

9. Environmental Oversight Committee (EOC) Report

Eugene Fields reported there will be a hike on August 18 at Trabuco Canyon's Wrens Preserve. Marissa Espino said the area for the hike and no other preserves have been affected by the Holy Fire. She said they are unsure at this point about how air quality will be affected. Marissa said if there are any health or safety issues the hike will be canceled.

The TOC asked for more information on the hike. Marissa Espino said she would forward the information to the committee.

10. Committee Member/Staff Reports

There were no committee member reports.

Eugene Fields asked the new members for the subcommittee assignments.

Larry Lang - Audit
Jeffery Kaplan – AER
Mark Kizzar – Audit
Dale Soeffner – AER

12. Public Comments

There were no public comments.

13. Adjournment

The Measure M Taxpayer Oversight Committee meeting adjourned at 6:28 p.m. The next meeting will be held on October 9, 2018.

Taxpayer Oversight Committee
Fiscal Year 2018-2019
Attendance Record

X = Present E = Excused Absence * = Absence Pending Approval U = Unexcused Absence -- = Resigned

Meeting Date	10-Jul	14-Aug	11-Sep	9-Oct	13-Nov	11-Dec	8-Jan	12-Feb	12-Mar	9-Apr	14-May	11-Jun
Stanley F. Counts		X										
Eugene Fields		X										
Jeffery Kaplan		X										
Richie Kerwin Lim		X										
Mark Kizzar		X										
Larry Lang		X										
Andrew Lesko		X										
Matt McGuinness		X										
Dale Soeffner		X										
Larry Tekler		X										

Absences Pending Approval

Meeting Date	Name	Reason

Action Items

October 9, 2018

To: Taxpayer Oversight Committee

From: Orange County Transportation Authority Staff

Subject: Fiscal Year 2018-19 Measure M2 Annual Eligibility Review Subcommittee Recommendations

Overview

The Measure M2 Ordinance requires all local jurisdictions in Orange County to annually satisfy eligibility requirements in order to receive Measure M2 net revenues. The Annual Eligibility Review Subcommittee's review of specific eligibility items for fiscal year 2018-19 has been completed.

Recommendations

A. Affirm Ordinance compliance regarding Pavement Management Plans, for applicable jurisdictions, and find 35 local jurisdictions conditionally eligible to receive Measure M2 net revenues for fiscal year 2018-19.

B. Direct Orange County Transportation Authority staff to send a letter to the City of Fullerton to acknowledge the improvement of their Pavement Condition Index.

Background

The Taxpayer Oversight Committee (TOC) is responsible for reviewing local jurisdictions' Local Signal Synchronization Plan (LSSP), Mitigation Fee Program, Expenditure Report, Congestion Management Plan (CMP), Annual Expenditure Reports, and Pavement Management Plan (PMP) for compliance with the Measure M2 (M2) Ordinance. The Annual Eligibility Review (AER) Subcommittee has been designated by the TOC to review eligibility submittals with support from Orange County Transportation Authority (OCTA) staff to ensure that required documents have been submitted.

For this eligibility cycle, only the PMP was due. Expenditure reports are reviewed later in the year. After its review, the findings of the TOC are presented to the OCTA Board of Directors (Board) for a conditional eligibility determination.

Discussion

Local jurisdictions are required to annually submit eligibility packages by June 30. For this cycle, OCTA staff reviewed the 21 PMP submittals that were required this cycle to ensure accuracy. Staff also worked closely with local jurisdictions to obtain additional information and/or back up materials as needed. For reference, the PMP submittal schedule is included as Attachment A.

The AER Subcommittee convened on September 20, 2018 to review and discuss the PMP submittals. The AER Subcommittee found these submittals to be in compliance with the Measure M2 Ordinance and recommended advancement to the TOC for consideration. A summary compliance table for PMP is included as Attachment B.

Upon TOC endorsement, staff will present the eligibility findings to the Regional Planning and Highways Committee and to the OCTA Board of Directors (Board) in December 2018. If approved by the Board, eligibility determination will remain conditional until review of the annual expenditure reports is completed in 2019.

At the AER Subcommittee meeting, members stated their desire to commend the City of Fullerton for improving its pavement conditions for this reporting period. Upon Board approval of eligibility findings later this year, and at the request of the AER subcommittee and the endorsement of the TOC, OCTA will send a letter to the City of Fullerton to compliment their efforts on improving pavement conditions.

Summary

All local jurisdictions in Orange County have submitted FY 2018-19 Measure M2 eligibility packages. The AER subcommittee reviewed the necessary PMP documentation, as required by the M2 Ordinance, and found that all local jurisdictions conditionally meet the eligibility requirements for FY 2018-19, pending review of expenditure reports for FY 2017-18. The AER Subcommittee also requested that OCTA send a letter to the City of Fullerton to acknowledge recent improvements in the City's pavement conditions.

Attachments

A. Local Jurisdiction Pavement Management Plan Submittal Schedule
B. 2018 M2 Eligibility Summary Table of Pavement Management Plan (PMP) Elements

ATTACHMENT A

Local Jurisdiction Pavement Management Plan (PMP) Submittal Schedule[1]

Local Jurisdiction	Updated PMP
Aliso Viejo	June Even Year
Anaheim	June Odd Year
Brea	June Odd Year
Buena Park	June Even Year
Costa Mesa	June Even Year
County of Orange	June Odd Year
Cypress	June Odd Year
Dana Point	June Odd Year
Fountain Valley	June Even Year
Fullerton	June Even Year
Garden Grove	June Even Year
Huntington Beach	June Even Year
Irvine	June Odd Year
Laguna Beach	June Even Year
Laguna Hills	June Even Year
Laguna Niguel	June Even Year
Laguna Woods	June Even Year
Lake Forest	June Odd Year
La Habra	June Odd Year
La Palma	June Even Year
Los Alamitos	June Odd Year
Mission Viejo	June Even Year
Newport Beach	June Odd Year
Orange	June Even Year
Placentia	June Even Year
Rancho Santa Margarita	June Even Year
San Clemente	June Odd Year
San Juan Capistrano	June Odd Year
Santa Ana	June Even Year
Seal Beach	June Even Year
Stanton	June Odd Year
Tustin	June Odd Year
Villa Park	June Even Year
Westminster	June Even Year
Yorba Linda	June Even Year

[1]Shaded local agencies submitted a PMP update during this eligibility review cycle.

Presentation Items

September 10, 2018

To: Members of the Board of Directors

From: Darrell E. Johnson, Chief Executive Officer

Subject: Measure M2 Next 10 Plan: Market Conditions Key Indicators Analysis and Forecast

Overview

On September 7, 2017, a Market Conditions Forecast and Risk Analysis was conducted and presented to the Board of Directors providing insight into delivery of the Measure M2 Next 10 Plan. At the request of the Board of Directors, continued monitoring of market conditions and potential risks of project delivery has taken place and a forecast has been developed. A presentation on the results of this effort is provided.

Recommendation

Continue to monitor market conditions and their effects on the advancement of the Next 10 Delivery Plan, and provide updates to the Board of Directors as appropriate.

Background

On November 7, 2006, Orange County voters approved the renewal of Measure M (M2), the one-half cent sales tax for transportation improvements. Since approval, the Orange County Transportation Authority (OCTA) Board of Directors (Board) has continued to advance implementation of M2 commitments through the adoption of a series of early delivery plans. These delivery plans are designed to streamline implementation of all projects and programs through 2041 as promised to the voters, bring transportation improvements earlier to residents and commuters of Orange County, and as appropriate, address slower growth in sales tax revenue projections through strategic financing and successfully capturing and augmenting the program with external revenue. To date there have been three early delivery plans, with the most recent being the Next 10 Plan (Next 10). The Next 10 provides a framework to accelerate the delivery of M2 freeway, streets and roads, transit, and environmental projects through the year 2026.

Following Board adoption of the Next 10 in November 2016, the Board directed staff to conduct a market analysis to analyze current resource demands and provide information on the impact on OCTA's delivery of M2 projects. Following OCTA's procurement policies, the contract was awarded to the Orange County Business Council (OCBC) with Dr. Wallace Walrod, Chief Economic Advisor to the OCBC, and Dr. Marlon Boarnet, Professor and Chair of the Department of Urban Planning and Spatial Analysis at the University of Southern California. The results of the analysis were presented to the Board in September 2017. In summary, this effort reviewed seven risk factors which led to the identification of four near-term cost risks that were expected to be particularly impactful: neighboring county transportation construction programs, construction wage pressures, sustained low statewide unemployment, and residential construction demand and the effect on the public works construction market. A brief summary of the identified risks in the 2017 report is included in Attachment A.

Overall, the consultant's analysis identified a strong potential that during the Next 10 delivery years, OCTA will experience an increasing cost environment. Following the presentation, the Board discussed the benefit of receiving annual sales tax revenue forecasts providing insight on the M2 revenue picture and that equally important would be for the Board to be aware of what is taking place from a market/cost side of delivering the M2 Program. The Board directed staff to continue to work with the consultant to monitor and track early warning indicators and provide the Board with updates to cost risk factors on project delivery.

Discussion

To better anticipate cost pressures during a rapidly changing construction market, staff looked to our consultant team for insight. The consultant team analyzed annual trends in material costs, labor costs, and general economic conditions to determine a range of potential cost impacts. Looking out at a time horizon through 2020 the team tracked relevant market data and indicators and performed data analytics on this information. This analysis resulted in the creation of a cost pressure index which provides a range of potential cost fluctuations.

Consultant Findings

Using a series of regression analyses and forward-looking projections, the consultant team created an Infrastructure Construction Cost Pressure (ICCP) Index. The ICCP Index provides a ranking from 0-5, with each rank corresponding to a range of percent changes in overall construction costs.

The consultant provided a forecast looking out to the year 2020 and provided a range of cost fluctuation for OCTA to be aware of when reviewing the M2 cash flow to support successful delivery of M2 freeway capital projects. The consultant prepared a memo (Attachment B) sharing the basis for the forecast and the methodology supporting their findings.

According to the consultant, the ranges developed are built to be forecasting tools, with scores indicating public construction forecast cost increase. Index scores of two and three indicate somewhat normal inflationary environments. A value of four is a high inflation environment. A value of one is a low inflation/deflationary environment. Values of zero and five correspond to the most extreme conditions observed in Orange County immediately prior to and during the Great Recession and the high cost inflation environment that occurred in the building boom years of the early 2000s.

Using the ICCP Index described above, combined with a detailed trend analysis of building permits, unemployment rates, localized labor costs, material costs and general economic conditions; the consultant estimates an ICCP Index ranking of "four" in 2018, "three" in 2019, and "three" in 2020. This suggests potential cost increases ranging from six percent to 11 percent in 2018, two percent to six percent in 2019, and two percent to six percent in 2020.

OCBC OC Transportation ICCP Index Score, 2018-2020		
Year	Index Score	Range of Cost Fluctuation
2018	4	6%-11%
2019	3	2%-6%
2020	3	2%-6%

The consultant further shares 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.

Overall, the consultant's analysis identifies a strong potential that during the next few years of delivering Next 10, OCTA will experience an increasing cost environment. The Market Conditions Key Indicators Analysis and Forecast concludes OCTA may experience a cost increase of between six and 11 percent during the next two years of construction activity. OCTA's current assumptions developed by OCTA's Capital Programs Project Controls Department, assumes a four percent escalation in the near term (next three years), and then three and one-half percent escalation for projects beyond 2022. Project cost estimates also include a prudent contingency specifically developed for the project based on the individual project risks.

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 three percent escalation, which on average during this timeframe provided the appropriate escalation to deliver projects successfully. Using four percent for construction escalation in the short-term and three and one-half percent in the longer term is staff's best estimate using industry standards on cost estimating.

OCTA is not alone in being concerned over the potential of experiencing bid prices above engineers' estimates. The Los Angeles County Metropolitan Transportation Authority (Metro) conducted a construction market analysis focused on Southern California (May 2018) and concluded similarly that construction costs are rising. The report mentions that, "A perfect storm of conditions is occurring in the construction industry with a construction labor shortage, low unemployment, and large amount of ongoing and planned work in the region." This is coupled with rising material pricing with subcontractors and suppliers not being able to guarantee pricing beyond a few months resulting in contractors including large contingencies to cover material price risk. For the Board's reference, the Metro report is included as Attachment C.

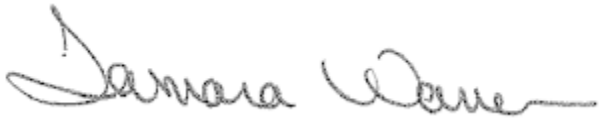
Summary

The Market Conditions Key Indicators Analysis and Forecast concludes that OCTA may experience a cost increase of between six percent and 11 percent during the 2018 through 2020 time period of construction activity. To reduce the potential risk of cost pressure and project delivery slowdowns due to unanticipated cost increases, staff has incorporated information from this analysis into the cash flow for the 2018 updated Next 10, which will be presented to the Executive Committee and Board on this same agenda following this item.

Attachments

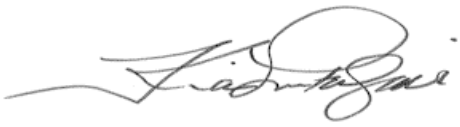
A. Orange County Business Council, Summary of Risks Identified in 2017 Market Conditions Analysis and Risk Forecast
B. Orange County Business Council, Orange County Transportation Infrastructure Construction Cost Pressure Index, Prepared for the Orange County Transportation Authority
C. 2018 Los Angeles Construction Market Analysis, May 2018

Prepared by:



Tamara Warren
Manager, Program Management Office
(714) 560-5590

Approved by:



Kia Mortazavi
Executive Director, Planning
(714) 560-5741

ATTACHMENT A

Orange County Business Council
Summary of Risks Identified in 2017 Market Conditions Analysis and Risk Forecast

Risk Factor	Impact on Costs	Likelihood	Comments
Sustained low unemployment	Increases costs	Likely in the next two to five years	Wage pressure is still low, suggests that the economy has continued room to expand without necessitating policy efforts (i.e. interest rate increases) that would induce a recession.
Increased Building Permitting (hence residential construction)	Increases costs	Unlikely given long-term political factors, but regulatory change could be sudden	Increasing permitting depends in part on state or local political changes, but Inland Empire construction has been increasing rapidly.
Continued Consolidation in Construction and Architecture/ Engineering Industry	Increases costs in near-term, then pressure for costs to remain high	Likely, given recent consolidation trends	The industry has been consolidating. Unclear whether that trend has played out or will continue.
Interest Rate Increases	Short-term cost increases as financing costs, for the Orange County Transportation Authority and contractors, increase long-term downward cost pressure if recession ensues	Highly likely to have moderate interest rate increases in next two to five years	The U.S. is near historically low interest rates; global savings glut will exert downward pressure on interest rates; on net, rate increases likely to be moderate and sustained.
Neighboring County Transportation Programs Exert Cost Pressure	Increases costs	Highly Likely; current work programs in neighboring counties meet or exceed level in Orange County	Recent self-help sales tax increases "lock in" sustained demand for public works contractors in Southern California.
Increasing Construction Wage Pressure	Increases costs	Likely in foreseeable future, unless residential market reverses course (which would likely coincide with a recession)	Construction wages increases by from 4.39 percent to 5.3 percent annually, 2014 to 2016, in Orange and neighboring Southern California Association of Governments region counties.
Recession	Decreases costs	Likely within the next ten years, but timing highly uncertain	Recession will reduce demand for private sector residential and commercial construction, but the public sector demand will remain although sales tax revenues will drop in a recession.

ATTACHMENT B

Orange County Business Council
Orange County Transportation Infrastructure Construction Cost Pressure Index
Prepared for the Orange County Transportation Authority

Orange County Business Council Research Team
Dr. Wallace Walrod – Chief Economic Advisor, Orange County Business Council
Dr. Marlon Boarnet – Professor and Chair, Department of Urban Planning and Spatial Analysis, University of Southern California
Benjamin Palmer – Research Associate, Orange County Business Council

Background and Purpose

As a supplementary examination to the recent Next 10: Market Conditions Forecast and Risk Analysis study delivered by Orange County Business Council (OCBC) in September 2017, the Orange County Transportation Authority (OCTA) Board of Directors (Board) requested further study and exploration of potential cost fluctuations beyond existing cost analysis from the California Department of Transportation's (Caltrans) Construction Cost Index (CCI) and internal OCTA analysis. Recent increases in construction costs combined with concerns over sales tax revenue growth trends have necessitated forward looking projections to determine the ability for OCTA to adequately fund a number of transportation and infrastructure projects aimed at alleviating traffic congestion and increasing the quality of life for Orange County residents.

In order to do so, the OCBC team has analyzed annual trends in material costs, labor costs and general economic conditions to determine a range of potential cost increases with a time horizon out until 2020 by collecting tracking relevant market data and indicators and performing data analytics on these datasets. In doing so, and providing these findings to OCTA's Board, more accurate budgets can be determined reducing the potential risk of cost pressure and project delivery slowdowns due to financial constraints. The result of this analysis has been the creation of an Infrastructure CCI which provides a range of potential cost fluctuations for 2018, 2019, and 2020.

Findings

OCBC used a series of regression analyses and forward-looking projections to create the Infrastructure Construction Cost Pressure (ICCP) Index. This ICCP Index provides a ranking from 0-5, with each rank corresponding to a range of percent changes in overall construction costs. The table below highlights each ICCP Index ranking and the proposed range of cost fluctuations, which have been provided on a low, midpoint, and high scale.

Orange County Business Council
Orange County Transportation Infrastructure Construction Cost Pressure Index
Prepared for the Orange County Transportation Authority

OCBC Orange County Transportation ICCP Index Score Ranking Implied Range of Construction Cost Change			
Index Score	**Low**	**Midpoint**	**High**
0	-17%	-9.5%	-2%
1	-2%	-0.5%	1%
2	1%	1.5%	2%
3	2%	4%	6%
4	6%	8.5%	11%
5	11%	25.5%	40%

These ranges are built to be forecasting tools, with scores indicating public construction forecast cost increase. Values of 2 and 3 indicate somewhat normal inflationary environments. A value of 4 is a high inflation environment. A value of 1 is a low inflation/deflationary environment. Values of 0 and 5 correspond to the most extreme conditions observed in Orange County over the past two decades, and hence the ranges for those values are wide due to the unusual nature of the highly deflationary environment that occurred immediately prior to and during the Great Recession and the high cost inflation environment that occurred in the building boom years of the early 2000s.

Using the index scale highlighted above, combined with a detailed trend analysis of building permits, unemployment rates, localized labor costs, material costs and general economic conditions; OCBC estimates an ICCP Index ranking of "4" in 2018, "3" in 2019, and "3" in 2020. This suggests potential cost increases ranging six percent to 11 percent in 2018, two percent to six percent in 2019, and two percent to six percent in 2020.

OCBC Orange County Transportation ICCP Index Score, 2018-2020		
Year	Index Score	Range of Cost Fluctuation
2018	4	6%-11%
2019	3	2%-6%
2020	3	2%-6%

Methodology

To determine the Orange County Transportation ICCP Index, the OCBC team started by aggregating several datasets, measures, and indicators on an annual basis as far back as 1972. Among others, these measures included the Caltrans CCI, state-level building permits and unemployment rates, material costs, and labor costs.

The OCBC team examined how the various measures and indicators of construction costs varied with changes in (1) building permitting activity, (2) unemployment rates, (3) materials costs, (4) labor costs, and recently past trends in construction inflation. Using statistical analyses, the research team has built a forecasting model that projects forward cost increases, and predicted cost increases, which are grouped into the categorical ranges shown above. OCBC plans to continue to test and refine the cost forecast model, adding information going forward.

Cost Risks - Systematic and Idiosyncratic

Looking forward, we encourage OCTA to think of future cost pressures in two groups – systematic and idiosyncratic risks.

Systematic Cost Risks: These are cost risks that relate to observable and predictable characteristics of the economy and the construction environment. The cost pressure model is built to understand systematic relationships, through statistical modeling, and to use the statistical model to forecast cost pressure in future years. The primary systematic cost pressures are 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. We will continue to refine our measurement of systematic risks.

Idiosyncratic Risks: There are several potential future cost pressures which cannot be statistically modeled. Such cost pressures are not related to historic (and hence observable) economic factors, but rather are, as the name suggests, idiosyncratic. Several such risk factors may be important and warrant careful tracking, even while incorporating these cost pressures into a statistical model is likely not possible. Key idiosyncratic cost risks, at this point, include:

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

ATTACHMENT C

2018 LOS ANGELES CONSTRUCTION MARKET ANALYSIS

MAY 2018

Prepared for:

Metro

Prepared by:

KKCS/TRIUNITY JV
IN ASSOCIATION WITH CH2M

Executive Summary

Goals and Objectives

The purpose of this analysis is to assess near and long-term construction market conditions in the Los Angeles region. The assessment takes on considerable importance because market conditions and resource availability will affect Los Angeles County Metropolitan Transportation Authority's (Metro's) ability to deliver the Measure R, Measure M, and State of Good Repair programs over the next 10 years (2018 to 2028), including the Twenty-Eight by '28 projects targeted for completion in time for the 2028 Summer Olympic Games. The goals and objectives for this study are as follows:

- Perform a market analysis showing the current and projected construction activity in California, Southern California, and in the Los Angeles region, with emphasis on Los Angeles, Orange, Riverside, and San Bernardino counties.
- Analyze the qualified contractor and skilled labor availability in the region, including the number of potential bidders and employment trends in the construction industry.
- Query contractors to determine key factors leading to their decisions to bid or not bid on Metro contract opportunities.
- Provide recommendations as to how Metro can become an "Owner of Choice" in the region through comparison with other successful transit agencies, interviews with the contracting community, and continued implementation of best management practices.

Summary

For this analysis, the KKCS/Triunity Joint Venture (KTJV)—in association with CH2M—researched available data; conducted discussions and surveys with contractors; and interviewed subject matter experts. The research concludes that there is a robust economic environment with a growing construction market in the four-county area. In addition, there will be more construction projects than workers and firms available to complete the work, which means that Metro will need to compete with other agencies in a tightening marketplace. This conclusion is based on:

4. Economic outlook per the Gross Domestic Product (GDP) and anticipated construction value of planned projects
5. Employment outlook per the projected unemployment rate versus anticipated employment requirements in construction
6. Construction cost trends including building costs and inflation

Economic Outlook

The economic outlook is strong and includes a GDP that is generally holding steady and a construction industry that is generally trending upward. The GDP rates appear to be stabilizing and there is no indication of large swings in the value, indicating a healthy economy that is much improved from the lows of the 2007 to 2009 timeframe (see Figure ES-1 on page ES-2).

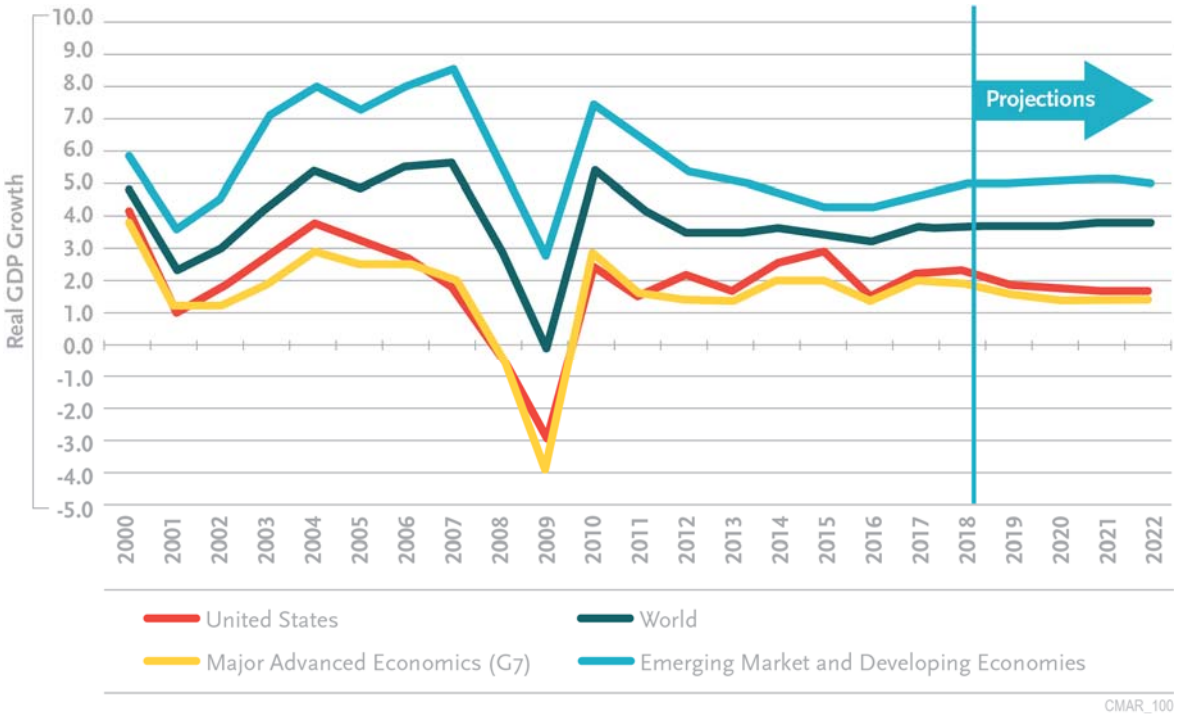


Figure ES-1. Real Gross Domestic Product 2000 to 2022
Source: IMF, 2017

The improvement of the GDP from the lows of 2009 is also evident in the construction industry, with increased construction spending (see Figure ES-2). Construction peaked between 2005 and 2008 and then bottomed between 2009 and 2012. The industry has seen steady growth since 2011, with total construction growing 2.6 percent from December 2016 to December 2017. During this same one-year period, residential construction performed at an even higher 6.2 percent rate of growth.

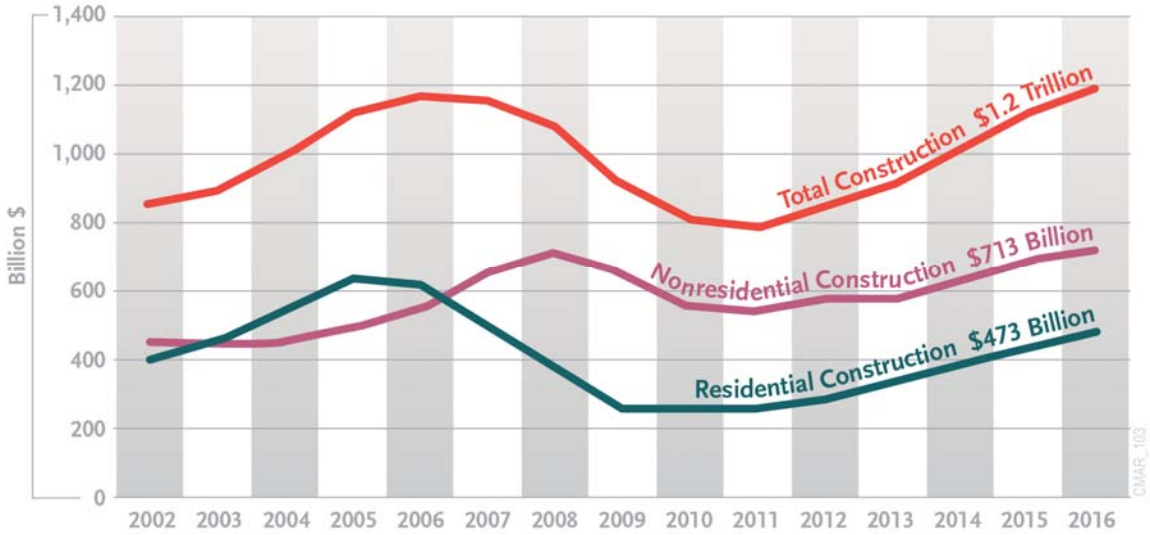


Figure ES-2. Annual Value of National Construction Put in Place, 2002-2016
Source: US Census Bureau, 2017a and 2017b

"The Infrastructure market looks to be improving considerably; therefore, staff and labor will begin to tighten along with available subcontractors and suppliers."

CMAR_203

The Los Angeles - Long Beach - Anaheim metropolitan areas are examples of growth in the region, where in 2017 building permits were issued for privately owned housing units valued at $7.8 billion, representing a 23.7 percent increase from the 2014 level of $5.9 billion. Another example is the February 1, 2018 US Census Bureau Monthly Construction Spending Report indicating the value of total construction for transportation (one element of the total construction value shown on Figure ES-2) increased by 12.9 percent from December 2016 to November 2017, while construction for highways and streets increased 1.5 percent for the same period.

Employment Outlook

A "perfect storm" of conditions is occurring in the construction industry with a construction labor shortage, low unemployment, and large amount of ongoing and planned work in the region. The regional unemployment rate has dropped from the high of 9.5 percent in 2010 to 4.5 percent in January 2018, with state and national averages showing even greater improvement (see Figure ES-3).

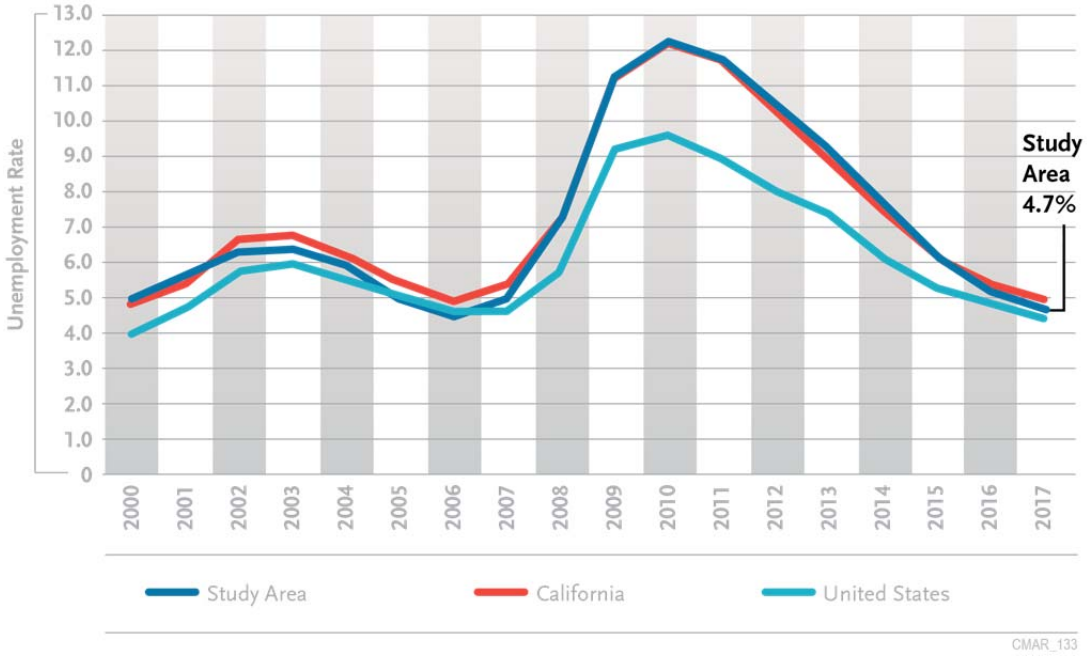


Figure ES-3. Unemployment Rate for US, State of California, and Study Area
Source: US Bureau of Labor Statistics, 2017
Note: Data for 2017 is through October

Specific to the four-county focus area in this study, the unemployment rate is 4.3 percent in Los Angeles County, 2.8 percent in Orange County, 4.3 percent in Riverside County, and 3.9 percent in San Bernardino County. These unemployment statistics will be further affected by the construction growth rate projected in the range of 1.4 percent to 3.4 percent depending on the job classification and the county location, per the State of California Employment Development Department (EDD).

In an interview, one contractor stated that the labor shortage is exacerbated because construction workers are retiring and there is a lower supply of experienced workers to fill the void. Additionally, one source in this study indicated that as many as 1.7 million workers left the construction labor force after the housing collapse in 2008 to seek alternate employment, and almost 1.5 million have still not returned to the construction labor force as of 2016 (NAHB, 2018a).

Responding to a regional labor shortage would typically involve outreach beyond the study area or even outside of California to draw-in external labor to the local market. As shown on Figure ES-4, most of the western states are also seeing growth in construction employment, which will make outreach to a broader employment base more difficult.

> *"Big shortages now getting worse. Have to pay premium over scale for best trades. "*
>
> *"Labor shortage will drive up the cost of work and lengthen the duration to complete projects."*

CMAR_228

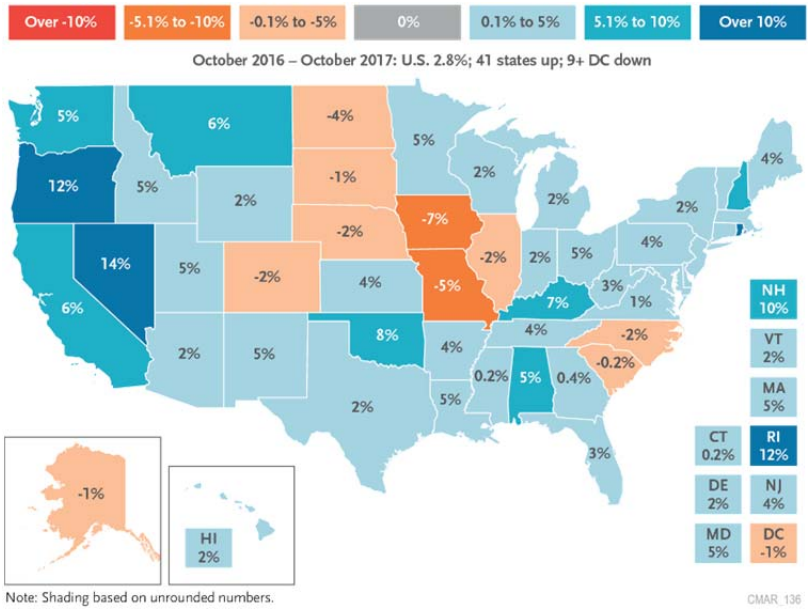


Figure ES-4. State Construction Employment Change
Source: AGC, 2017

Even recruiting from states projecting negative construction growth may be difficult given the cost of living differential compared to California. For example, a labor force being recruited from North Dakota's shrinking construction market to the Los Angeles-Long Beach area would face a 139 percent increase in housing costs, 26 percent more for utilities, and 22 percent more for transportation. One option used in the construction industry has been to establish local dormitory-style housing to attract out-of-state construction labor; this concept is further discussed in the body of this report, but would need to be reviewed for compliance with Project Labor Agreements and local hiring requirements.

> *"The U.S. is busy. The Southern CA market is extremely busy with many mega projects. The skilled workforce is tapped, and there are not many others coming from out of town due to their home markets being busy."*

CMAR_235

One of the best methods to address the labor shortage may be to develop a local labor force, including a joint effort with school districts and colleges to re-invigorate curriculum related to the construction industry, implement Metro's initiative to establish a vocational school, and identify unemployed persons living in Los Angeles County Measure H housing who are capable of re-training for the construction industry. Metro's Workforce Initiative Now-Los Angeles (WIN-LA) Program, currently under implementation, will focus on the development of construction labor and be expanded and tied to the unions to train those interested in construction. It may be worth exploring if WIN-LA can become a broader umbrella organization that supports workforce development, education/training, homeless/housing, and Science, Technology, Engineering, and Math (STEM) career development goals for the entire region.

Labor Shortage

The average annual construction spending is estimated to be $35 billion to $42 billion per year from 2018 to 2028 in the four-county area (study area).[1] The unemployment rate currently ranges from 4.3 percent to 2.8 percent, depending on county, and it is expected to decrease further; this decrease presents challenges to Metro not only in accessing available resources but in addressing inflationary pressures.

Economic modeling was used to identify the number of construction jobs that will be generated from construction activity for comparison to the currently available construction labor force. The modeling resulted in a range of potential jobs from high to low, which is detailed in Section 7 of the report. The construction labor required, as generated from the economic modeling, was compared to the available construction labor as determined by EDD. These projections were not in line with comments and assessments made by contractors during the interviews and surveys. To address the disconnect, an in-depth review and analysis of the data were performed and compared to trending data, based on historical values and information provided by the contractor interviews and surveys. This analysis is graphically depicted on Figure ES-5, Construction Labor Projections, showing a projected labor shortage through 2027. The data presented on Figure ES-5 is highly variable and will be affected by various events, including:

- Fluctuations in construction spending and pricing
- Economic volatility
- Unforeseen events (like a dramatic national policy decision)
- Natural and environmental disasters
- Immigration and emigration to the State of California

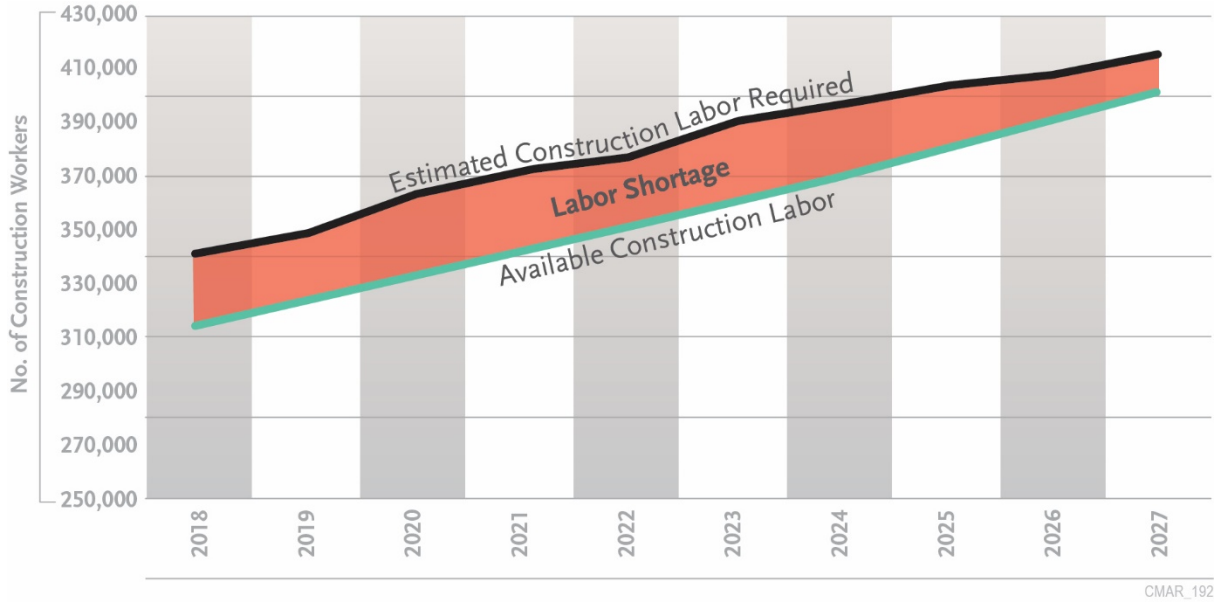


Figure ES-5. Construction Labor Projections
Study Area

[1] Construction spending is based on regional agency/city data in addition to data and analytics provided by Dodge Data and Analytics. Some agency/city data required linear projections beyond 2018 and Dodge data beyond 2022. These projections will fluctuate because of economic and geopolitical influences and should be updated periodically.

As noted during the interview with the AGC's chief economist, projections beyond one-year can vary widely because of various conditions, including those listed above. Therefore, the data presented on Figure ES-5 may change, and it is recommended that the data be reviewed on an annual basis to determine if the labor supply and demand is trending as projected.

These summary results are discussed in the following pages, with expanded discussion throughout the report. Additionally, the study addresses how Metro can be competitive in its procurements based on contractor interviews and surveys, including contractors who currently do not bid Metro work; as well as Metro and peer transit agency comparisons, including discussions with Dallas Area Rapid Transit (DART) and Seattle Sound Transit primarily related to best management practices.

Construction Cost Trends

The inflation projection is based on information contained in Engineering News-Record's (ENR) Building and Construction Costs Indices (CCI), which allow for a forecast to be developed based on historical experience. The annual percentage change in the CCI and Building Cost Indices (BCI) are trending upward from the values seen in 2013 and 2014. This indicates a rise in construction and building costs as shown on Figure ES-6. Importantly, this historical information that is used to develop the forecast inflation does not account for factors that will be unique to the forecast period and are already evident, including mercurial commodity pricing that is trending upward overall, a significant rise in fuel oil prices, a likely significant rise in steel prices, labor cost increases that will result from a historically low unemployment rate, and an anticipated rise in interest rates that will drive inflationary pressures. These factors will increase projected escalation well beyond the historical trends and for that reason, the KTJV team believes that escalation factors will be under-reported if based only on past experience.

> *"We see construction prices rising in the next 5 years. Currently, the market is at the end of the downturn cycle and the prices are starting to reflect a more robust market. Number of mega projects bidding within a short time will reduce competition, as well as anticipated skilled labor shortage will cause an upward trend in the prices."*
>
> CMAR_205

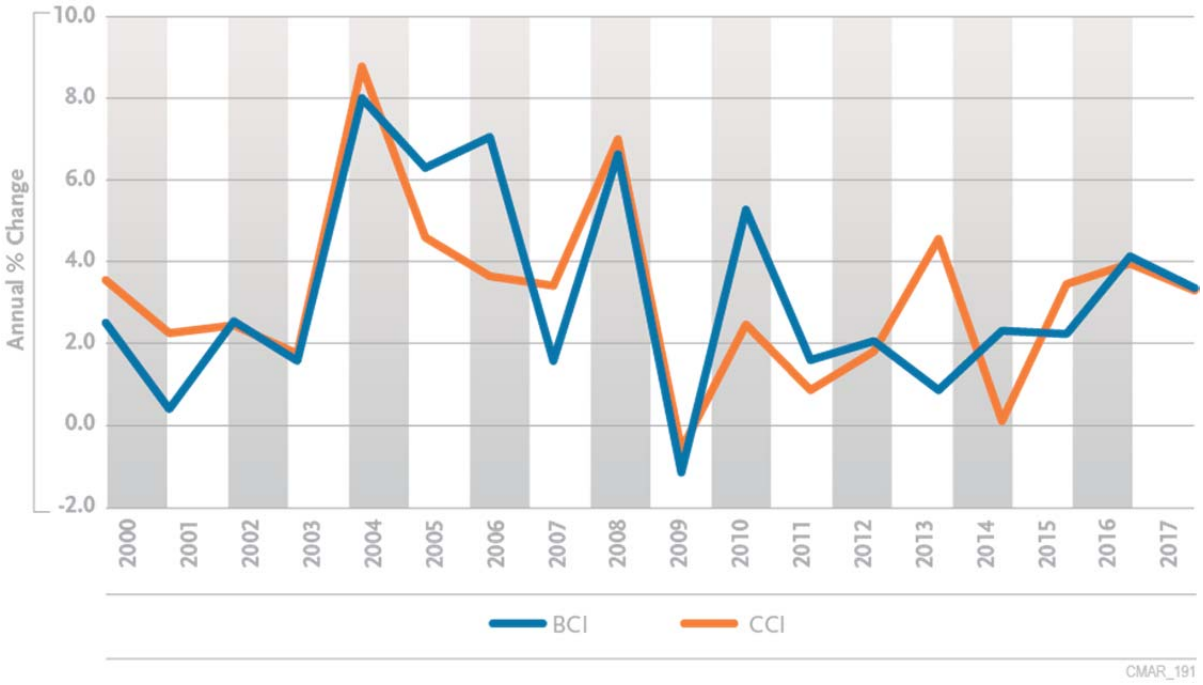


Figure ES-6. Construction Cost and Building Cost Indices, 2000-2017
Source: ENR, 2017

Contractor Interviews and Surveys

Potential bidders are most likely to pursue work with agencies that have a positive reputation in the contracting community. The amount of work and tightening labor pool will allow potential bidders to focus on owners that are consistent in the administration of procurements and the contracting process and are perceived to treat contractors fairly, especially in terms of cost and schedule issues that arise over the course of a project.

The KTJV team conducted two separate efforts to gain insight from contractors, (1) one-on-one interviews with 24 of ENR's top 100 design-build contractors; and (2) an online survey made available to the Associated General Contractors of America (AGC) membership. Additionally, Metro conducted its own outreach to the contracting community at a Construction Industry Forum, also included in this report. The questions and conversations were designed to extract opinions focused on three topics:

- Construction market conditions
- Areas of improvement, for those currently working with Metro
- Barriers that impede participation, for those not working with Metro

One-on-One Interviews

Details on the interview questions and responses are included in this report. In summary:

- 100 percent of those responding perceive there will be issues in the next 5 years with the labor market and resource availability.

> *"The availability of qualified professional and craft workers is declining, combined with increased compliance requirements, listed personnel requirements, and a general lack of interest in the hard work, long and often unusual hours required by construction."*
>
> CMAR_226

- 75 percent of those responding who work or have worked with Metro perceive Metro's allotted window for proposal submission to be inadequate especially for design-build.
- 72 percent of those responding who work or have worked with Metro perceive Metro's Contract Specifications and General Requirements to be unclear and ambiguous.
- 71 percent of those responding who work or have worked with Metro perceive that Metro's change order and claims processes require improvement.
- 55 percent of those responding perceive there will be inadequate Disadvantage Business Enterprises (DBE)/Small Business Enterprises (SBE) local resources to achieve utilization requirements.

> *"Need to recruit and develop more DBE or vastly decrease the requirements. Also need to recruit and develop more trade help."*
>
> CMAR_230

Additionally, the KTJV team noted the following consistencies among the respondents who provided expanded input as a part of the survey:

- **Risk Sharing.** Contractors noted the importance of sharing risk equally, and recommended working together with Metro prior to bid package advertisement to better define how risk can be most appropriately shared. This approach may also have a positive effect on bid pricing.

> *"If the risk is not well-defined contractors will price it into the work and it will result in higher bid prices."*
>
> CMAR_207

- **Partnering.** A common comment was to have true partnering on a project and to approach the work as a team, with some recommended re-emphasis on improving relationships between contractors and construction management consultants.

> *"Work to improve the use of partnering in the true sense and support partnering from the top down."*
>
> CMAR_208

- **Timely Document Processing.** The contractors noted that progress payments and change orders were reviewed and approved quickly at the field level, where field teams are empowered to make decisions. There is, however, a contractor perception that when documents are forwarded outside of the field office for further processing, timeliness suffers.

> *"Timely processing of payments/changes in the finance/accounting team."*
>
> CMAR_209

- **Short List/Qualification Selection Process.** Contractors stated that for them to pursue work with Metro, the selection of the contractor must have a short-listing qualification process, further indicating that if the selection is solely based on low bid, they will not participate.

For contractors not working in the region and/or not working with Metro, many of the respondents were not familiar with Metro or at least not aware that Metro was no longer doing business as its predecessor agencies had, including recent implementation of new best management practices. There is also a perception among respondents falling into this category that Metro has preferred companies in mind with whom to do business, placing the others at a disadvantage. In both cases, additional contractor outreach may be in order.

> *"The politics and the relationship development is a barrier to pursuing projects in LA in general."*
>
> CMAR_212

AGC Questionnaires

In addition to the one-on-one interviews already discussed, a 13-question online survey was developed and issued to the AGC Southern California membership. The survey reached out to both large and small companies, and focused more on resource availability and less on doing business with Metro.

The most noteworthy of the 25 contractor responses received are:

- 88 percent anticipate labor shortages over the next 5 years.
- 80 percent anticipate difficulty fulfilling DBE/SBE utilization requirements in the next 5 years.
- 64 percent anticipate increased escalation over the next several years.

> *"The market continues to tighten, and union benches are already empty for certain trades. As the market gets busier, it will become increasingly more challenging to find qualified labor."*
>
> CMAR_216

> *"There are not enough qualified DBE/SBE firms that specialize in the work that needs to get done at the size of the projects and how slow the owner payment process is."*
>
> CMAR_217

Metro Construction Industry Forum Survey

Additional information was provided to the KTJV team from a survey conducted by Metro during a Construction Industry Forum at Metro Gateway in September 2017. This industry survey was completed by 144 respondents that represented small, medium and large construction firms, and covered the breadth of contractor skillsets. The survey was focused on six barriers impeding companies from pursuing work at Metro. The results are graphically depicted on Figure ES-7.

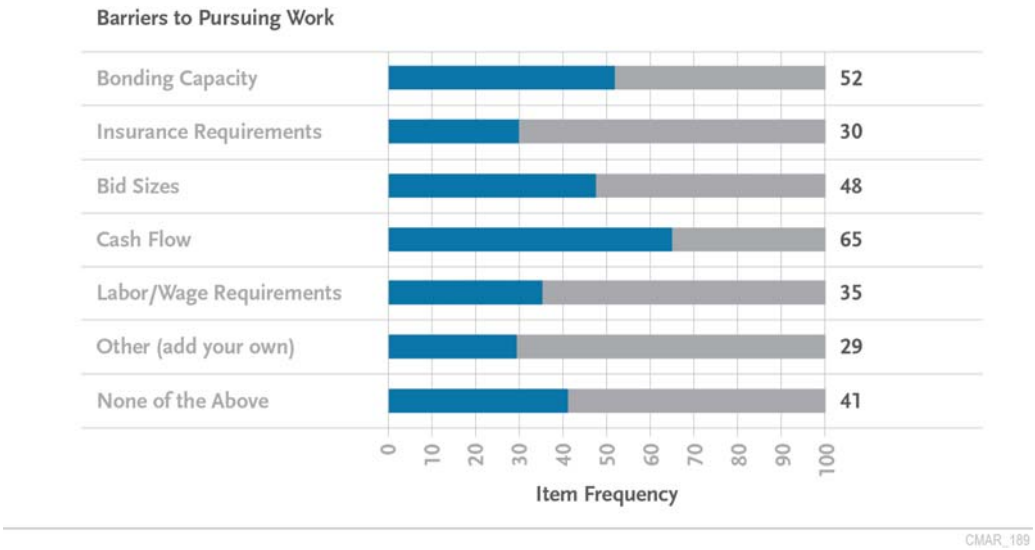


Figure ES-7. Graphical View of Metro Construction Industry Forum Survey Results
Source: Metro, 2017

Based on this analysis, the top three issues hindering contractors from pursuing work at Metro were related to smaller firms:

- **Cash Flow.** Metro is currently assessing changes in the contract language to address contractor cash flow considerations, including methodologies to expedite payment to DBE/SBE firms. Other strategies were discussed with the survey respondents, including working with contractors and lending institutions to establish improved cash flow financing.
- **Bonding Capacity.** Lack of bonding capacity often limits DBE/SBE firms that are otherwise capable of performing work. Survey respondents noted that lowering bonding capacity requirements in the contract would likely result in additional bidding participation, and some of the DBE/SBE firms may benefit with additional training on the Small Business Administration (SBA) Surety Bond Program. Metro is currently implementing a pilot bonding assistance program that may help alleviate this issue. Once the program is implemented and had an opportunity to run for six months, then a follow-up survey should be issued to determine if the program has addressed the issue and removed this barrier.

> *"Finding DBE/SBE that are CAPABLE of performing significant work. Bonding and Insurance are issues for many..."*
> CMAR_220

- **Bid Sizes.** Smaller firms have difficulty forming large mega-teams for design-build projects, and would be better positioned to participate in Metro procurements on small and medium-sized design-bid-build packages or larger packages as a joint venture partner.

Peer Transit Agency Comparisons

DART and Sound Transit are peer transit agencies that have seen improved contractor bidding participation in recent years. The KTJV team contacted these agencies for insight into lessons learned and processes currently in place designed to remove barriers to pursuing work with each agency, with emphasis on:

- Contract Provisions
- Outreach Program
- Contract Type
- Project Sizing
- Improving Participation
- Risk Management/Risk Allocation
- Delegation of Authority

DART

In August 2016 Metro conducted interviews with DART staff to gain insight into the agency's ability to transition itself to be an "Agency of Choice" with the local contracting community. DART representatives indicated the following changes were implemented, many of which coincidentally relate to feedback received from contractors in the Los Angeles region that were interviewed for this report:

- Streamlining and modifying Contract Provisions
  - Simplified the terms and conditions
  - Simplified the submittal requirements
  - Incorporated cost sharing agreements and cost and schedule incentives for performance
  - Incorporated aggressive forecasting and trend analysis for variances
- Conducting direct monthly discussions with the contractors
- Focusing DART staff on fair and consistent resolution of problems raised by the contractors
- Instituting a robust Lessons Learned program
- Implementing an ombudsman to meet with the contractors, channel communications, and help coordinate issue resolution

By implementing these comprehensive changes, DART was able to also change how it was perceived in the contracting community. The result was increased bidder participation as well as elimination of the "DART factor" bid markup as high as 40-percent for perceived risk.

Sound Transit

Sound Transit indicated it had not made any specific changes to improve contractor bidding and participation in its procurements, but had made modifications to contract documents to incorporate lessons learned, industry best practices, and updated state and federal regulatory requirements. Sound Transit utilizes similar contract types as Metro, but also includes General Contractor/Construction Manager (GC/CM), which is similar to Construction Manager at Risk (CMAR) and Construction Manager/General Contractor (CMGC). The State of Washington has specific legislation and regulations for implementation of GC/CM.

Sound Transit individually evaluates each project to determine which delivery method is best for any particular project and that it can successfully meet the project goals along with addressing the constraints. For each procurement, Sound Transit holds a contract packaging workshop that is modeled on the Transit Cooperative Research Program (TCRP) Report 131, *A Guidebook for the Evaluation of Project Delivery Methods*. Additionally, it holds one-on-one meetings with contractors for DB procurement during the procurement phase to review the Request for Qualifications(RFQ), project requirements, and address any questions the contactors might have.

Use of GC/CM and one-on-one discussion with DB contractors may be two of the reasons why Sound Transit has not reported lack of competition in its procurement processes. Compared to the Los Angeles region, it was noted by several regional contractors in the interviews conducted for this study that there is also interest in CM/GC contracting, as well as more one-on-one interface between Metro and potential DB bidders.

Conclusions

Over the next 5- to 10-year period there will be more construction work than workers and firms available to do the work and at a reasonable cost; Metro's Twenty-Eight by '28 program will be affected by this lack of resources. Metro's recent initiatives to implement best management practices and to initiate innovative approaches to developing local talent and resources are steps in the right direction to attract bidders and to expand available industry resources in a tightening and competitive marketplace.

Metro's access to resources can be improved by initiating an expedited and more bidder-friendly Request for Proposal (RFP) process, attracting companies outside of the region to participate in Metro procurements, building the craft labor base in the region, revisiting personnel qualifications requirements to strengthen the number of qualified candidates available, and structuring procurement packages to attract a greater range of responding firms.

As market demand increases, contractors will be increasingly selective in deciding which projects to pursue, dependent on the owner and the amount of risk an owner places on the contractor. Contract language that is perceived by contractors to be difficult, punitive, subject to interpretation, or inconsistent with other processes or procedures is viewed to be a source of conflict, uncertainty, and inefficiency, and can be a source of claims.

Recommendations

Building on Metro's recent initiatives, this study provides specific recommendations designed to increase the number of firms and depth of craft and management resources available to build Metro projects; and make Metro an "Owner of Choice" as potential bidders select where proposal preparation dollars are best invested in the region. These recommendations are discussed in detail in the body of this report. The primary recommendations are highlighted in summary below.

- Reduce the time and cost to propose on Metro projects by (1) requiring standard bid forms be prepared outside of the proposal process where they are done once, placed on file at Metro, and remain in force until there is a change in the information, (2) allowing for electronic submission of forms, certificates, and licenses, (3) not requiring the submission of a cost proposal as part of the qualification process, only requiring submission once the short listed firms have been selected, and (4) considering a limit on the number of short-listed bidders to three firms due to the high cost for the contractors to develop a detailed cost estimate.
- Open the bidding process to more firms/teams through less prescriptive RFP requirements. For example, "Describe experience working on similar projects with the same team" limits accessing resources from outside of the region and structuring differing combinations of teams, and excludes firms that may otherwise be capable; Key Personnel Qualifications often require high levels of experience that further limit the ability for bidders to be responsive and can result in higher bids for firms that can respond.
- Develop a joint committee to include Metro, Los Angeles County Office of Education, Los Angeles Community College District, and educators from trade schools to develop curriculum promoting skillsets applicable to the construction market. These efforts would bolster Metro's existing initiatives to develop its own vocational training center and develop talent through the WIN-LA program.

- Develop a joint committee to include Metro, representation from the Mayor's Office, and representatives of the AGC to innovate ways to create affordable housing to attract labor from outside of the region, including construction of dormitory-style housing that could serve the dual purpose of housing unemployed persons with capability for job retraining into the construction field.
- Identify projects that lend themselves to design-bid-build method so firms that are otherwise not able to assemble mega design-build teams can respond. There would also be the added benefit of providing more DBE/SBE participation, as many medium-size firms are also smaller and/or disadvantaged businesses.
- Maintain an aggressive posture competing with other agencies for limited available resources, including onboarding project management staff when qualified candidates are identified and available, even if prior to actual need arising.
- Evaluate contract language that might result in a less-attractive bidding climate to proposers and at higher cost.
- Reduce and simplify the number of contracting templates; check for inconsistencies; standardize the General Conditions and related contract provisions across all projects; and assess contract language for ambiguity that may lead to differences in interpretation. Then, assure contracts are administered exactly as written.
- Conduct one-on-one meetings with proposers during the RFP process to evaluate where there may be risk transfer to contractors, but with little or no commensurate value to Metro, and how to best achieve balanced risk sharing; and incorporate appropriate changes to the contract through RFP addenda.
- Reduce the time required to reach change order resolution by delegating more authority at the Project Manager level and assuring clear assignment of single-point change order responsibility.
- Due to the variable nature in material price increases and considering the recent tariffs and potential trade war, re-evaluate cost estimates for future planned projects to ensure that unit rates assumed in the estimate are in line with the current market trends.
- Due to construction costs trending upwards and becoming volatile with the trend for multiple cost increases per month for some items, perform a review of the escalation percentages utilized by Metro in the development of engineer's estimates.
- Develop contract language to allow for addressing likely cost increases for projects that have long durations to limit the risk to both Metro and the contractors.
- In addition to the one-on-one meetings prior to the RFP process, institute active engagement with the contracting community through monthly meetings with contractor executives to discuss successful project delivery. The intent of the meetings is to develop relationships between Metro and contractors, and to market the agency and its projects.
- Conduct regular discussions with the contractors to identify lessons learned, including what went well, what challenges there were, and areas for improvement.
- Institute an ombudsman to interface with the contractors to address issues and work to seek resolutions.
- Assess methodologies to objectively and accurately evaluate contractors' performance and capabilities.

2018 Measure M2 Eligibility
Summary Table of Pavement Management Plan (PMP) Elements

Local Agency	Current Network PCI	Current MPAH PCI	Current Local PCI	Projected Network PCI	Projected MPAH PCI	Projected Local PCI	7 Year R&R Plan Limits	7 Year R&R Plan Areas	7 Year R&R Plan Class	7 Year R&R Plan PCI	7 Year R&R Plan Inspection Dates	7 Year R&R Plan Treatment Type	7 Year R&R Plan Treatment Cost	7 Year R&R Plan Treatment Year	QA/QC	7 Years Current Budget $ x 10^6	7 Years Maintain Network PCI $ x 10^6	7 Years Improve Network PCI $ x 10^6	Software	Certification Form	Compliant PMP (Y/N)
Aliso Viejo	G	VG	G	G	G	G	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
Buena Park	G	G	G	G	G	F	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	SS	✓	Y
Costa Mesa	VG	VG	VG	VG	VG	VG	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
Fountain Valley	VG	G	VG	VG	G	VG	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
Fullerton	F	F	F	F	F	F	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
Garden Grove	G	G	G	P	F	P	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
Huntington Beach	G	G	G	G	G	G	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
La Palma	VG	VG	VG	VG	VG	VG	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
Laguna Beach	VG	VG	VG	VG	VG	VG	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
Laguna Hills	G	G	VG	G	G	G	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
Laguna Niguel	G	G	G	G	G	G	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
Laguna Woods*	VG	VG	N/A	G	G	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
Mission Viejo	VG	G	VG	G	G	VG	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	SS	✓	Y
Orange	G	G	G	G	G	G	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
Placentia	F	F	F	P	P	F	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
Rancho Santa Margarita	G	G	G	G	G	G	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	SS	✓	Y
Santa Ana	G	F	G	F	F	F	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	SS	✓	Y
Seal Beach	G	G	G	G	G	G	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
Villa Park	G	G	G	G	G	G	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
Westminster	G	F	G	G	F	G	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y
Yorba Linda	G	VG	F	F	G	F	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Micro	✓	Y

Legend		
Pavement Quality	Abbreviation	PCI
Very Good	VG	85-100
Good	G	75-84
Fair	F	60-74
Poor	P	41-59
Very Poor	VP	0-40

Acronyms	
Micro	MicroPaver Pavement Management Program
MPAH	Master Plan of Arterial Highways
PCI	Pavement Condition Index
QA/QC	Quality Assurance/Quality Control Plan
R&R	Road Maintenance & Rehabilitation Plan
SS	StreetSaver Pavement Management Program
*	All Laguna Woods local streets are private

I certify that the information contained in this table is an accurate representation of materials submitted to OCTA for purposes of meeting requirements related to the Pavement Management Plan.

Harry W. Thomas, OCTA

ATTACHMENT B

September 10, 2018

To: Members of the Board of Directors

From: Darrell E. Johnson, Chief Executive Officer

Subject: Measure M2 2018 Update: Next 10 Delivery Plan

Overview

The Measure M2 Next 10 Delivery Plan was originally approved on November 14, 2016, incorporating the 2016 revenue forecast with a plan for continued acceleration of the delivery of Measure M2 freeway, streets and roads, transit, and environmental projects through the year 2026. With annual updates to the Measure M2 sales tax revenue forecasts, staff reviewed the Next 10 Delivery Plan in 2017, and made needed adjustments to confirm that it remained able to be delivered and has just completed the same review for 2018. The results of this effort are presented to the Board of Directors.

Recommendations

A. Adopt the 2018 Measure M2 Next 10 Delivery Plan with revised financial assumptions.

B. Direct staff to continue to monitor revenue and project cost impacts that could affect the delivery plan and return to the Board of Directors with changes if necessary.

Background

Expedited delivery of Measure M2 (M2) began in 2007 and has continued to date in an effort to bring transportation improvements to the public as early as possible. The 2008 Great Recession and changes in consumer spending habits, resulted in reductions to the M2 sales tax revenue forecast. In response, the Orange County Transportation Authority (OCTA) Board of Directors (Board) proactively revised the forecasting methodology and adjusted delivery plans to ensure the M2 plan of projects and programs are implemented as promised to the voters.

The initial strategy to overcome the drop in M2 revenues for the freeway program included reliance on external revenues rather than a self-sustaining approach, as originally designed. This strategy, combined with availability of one-time state and federal grants, and effective use of bonding, allowed OCTA to capitalize on competitive construction market conditions to continue expedited delivery of M2 Capital Program elements.

On November 14, 2016, with the adoption of the Next 10 Delivery Plan (Next 10), the Board directed staff to dedicate and set aside local revenues through the allocation of net excess 91 Express Lanes revenue, for eligible projects. The two eligible projects are on State Route 91: Project I, between State Route 55 (SR-55) and State Route 57, and Project J, between SR-55 and the Riverside County line. This approach was continued with the review and approval of the updated Next 10 on November 13, 2017. With the 2017 update, it included Project I designated as a priority project for advancement.

Staff continues to incorporate strategies to ensure the complete M2 program of projects is able to be delivered through tight project scope management including refinements as appropriate, adjusting schedules and aggressively seeking external revenue.

Discussion

On July 23, 2018, the Board received an early presentation on the 2018 sales tax revenue forecast of $13.1 billion. The 2018 forecast is $400 million lower than the 2017 forecast of $13.5 billion. Staff incorporated the new revenue forecast, as well as updated programmed external revenues, project costs, and schedules into the M2 cash flow for each of the M2 Program elements. While a reduction in revenues affects the M2 Program as a whole, in most areas of the M2 Plan programs can be scaled to available revenues. The area where this is not possible is in the freeway program, due to set scopes for project delivery.

Next 10 Cash Flow Update

The Next 10 cash flow incorporates the revised revenue forecast of $13.1 billion, as well as the contribution from the Transportation Infrastructure Finance and Innovation Act, in the amount of $153.9 million, which is a contribution to the M2 general purpose lane project. This amount is a direct benefit to the M2 portion of the Interstate 405 Improvement Project, as the loan will be repaid with toll revenues and not with M2. The cash flow also incorporates updated project cost estimates for all M2 Program elements, as well as committed programmed state and federal external revenues.

In addition to state and federal funding commitments, the cash flow also assumes the availability of a reasonable level of federal and/or state funds from 2017 to 2041 and makes specific assumptions about near term grants, such as the federal New Starts Program for OC Streetcar. Additionally, per the Board's direction, the cash flow also includes net excess 91 Express Lanes revenue within the freeway program for projects on the 91 corridor (as defined by the 91 Express Lanes governing legislation), in an amount not to exceed the total cost of Project I and Project J.

Freeway Program Cash Flow

The net forecasted freeway program sales tax and interest revenues in the 2017 revenue forecast was $5.49 billion. The updated 2018 sales tax and interest revenue forecast is $5.36 billion. This results in a net freeway program loss in forecasted revenues of $127.1 million. OCTA has been successful in leveraging external funding in past years to offset reductions in sales tax revenues, and in the past year alone net external revenue for the freeway program increased by $291.9 million that was not available or programmed in the prior year cash flow. While sales tax revenue is down, the additional external revenue has resulted in a net positive revenue in the freeway program of $161.9 million.

With this 2018 update of Next 10, each project in the freeway program was reviewed and cost estimates updated. With the majority of the projects now either in 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 and resulted in a net decrease of $280 million. This cost reduction, in tandem with the amount of external revenue captured and the resulting reduction in bonding need, results in an overall positive outlook for the M2 Freeway Program.

Freeway Program Revenue Cash Flow Comparison 2017 vs 2018

Item	Influence	Impact on Cash Flow
Net Forecasted Sales Tax Revenue and Interest	Negative	- $127.1 million decrease
Net External Revenue	Positive	+ $291.7 million increase
Net Freeway Project Cost	Positive	- $278.8 million decrease
Net Bonding Revenue	Positive	- 102.9 million decrease
Net Bonding Expense	Positive	+ $205.6 million savings
Net Increase in FSP, EMP, Economic Uncertainty	Neutral	- $520.7 million added for safety
Total Difference in Ending Balance	Net Positive	+ $25.6 million for financial safety

FSP – Freeway Service Patrol / EMP – Environmental Mitigation Program

Key Financial Risks and Actions to Protect M2 Delivery

While the entire M2 Program continues to demonstrate financial viability and delivery of the complete M2 plan of projects and programs, risks continue to challenge the program. These include financial, organizational, and policy risks. Key financial risks and OCTA staff actions are highlighted below. A complete list of risks to be updated and tracked as part of the M2 quarterly progress reports to the Board is included on page 5 of the attached 2018 updated Next 10 document (Attachment A).

- Lower Sales Tax Revenues - In March of 2016, the Board adopted a new sales tax forecasting methodology. This year's revenue forecast came in lower than what was forecasted just one year ago. In addition, presentations by the expert economic forecast entities were far more conservative than in the past. Although, this points to the probability of a more accurate forecast going forward, there are no assurances and, hence, the revenue outlook continues to be a risk.

  OCTA staff will continue to monitor actuals to see how the forecast is performing and report to the Board quarterly.

- Repeal of SB 1 (Chapter 5, Statutes of 2017) Gas Tax - While the M2 cash flow includes only a small amount of direct SB 1 competitive funding, if Proposition 6, on the November 6, 2018 ballot is approved and the gas tax funding repealed, committed formula revenues may be impacted. Staff anticipates that up to $170 million of funding commitments programmed in the State Transportation Improvement Program for M2 projects could be deprogrammed or delayed, impacting M2 delivery schedules with state funding commitments.

  During the cash flow update of the Next 10, staff developed and analyzed two scenarios: one with current programmed commitments, which assumes current law with the gas tax in place, and a second scenario in the event of a repeal. While a total of $291.9 million was secured in state and federal funding since last year, if SB 1 is repealed the impact is conservatively estimated at $170.2 million. This remains a net positive. Attached are cash flow summary charts showing the difference between the cash flows with and without SB1 between now and 2041. Attachment B shows the cash flow with SB 1. Attachment C shows a comparison of the cash flow with and without SB 1. Attachment D shows a solvent cash flow with and without SB 1 but requires economic uncertainties to be lowered from 13 percent to seven percent if SB 1 is repealed. While both charts reflect a positive ending balance in all years and indicate that the full program (through 2041) is deliverable, the full impact of a repeal of

the gas tax on programmed external revenues is unknown. More details will be available pending the outcome of Proposition 6, and action by the California Transportation Commission on how to demobilize approved projects.

- Potential for Cost Increases Impacting Freeway Delivery - As presented on September 11, 2017, the Next 10 Market Conditions Forecast and Risk Analysis Report, conducted by respected local economists Dr. Wallace Walrod and Dr. Marlon Boarnet, identified a strong potential that OCTA could experience an increasing-cost environment during delivery of Next 10. The Board directed staff to continue to work with the consultant to monitor and track key early warning indicators. Through this follow on effort, the consultant team created a cost pressure index providing a range of potential cost fluctuations. The index identified that OCTA may experience a cost increase of between six to 11 percent during the 2018 though 2020 time period of construction activity.

  In order to accommodate cost pressures, OCTA's Project Controls Department monitors and adjusts project cost escalation assumptions according to market trends. Project controls makes use of schedule control, cost control, progress reporting, and change management to effectively monitor and control project escalation and execution. Imbedded in the Next 10 are cost assumptions based on historical information, current trends in the market, as well as review of the California Department of Transportations' (Caltrans) Construction Cost Index. Higher cost assumptions are included on some elements of projects based on assessed potential risk. Additionally, to further protect against potential cost increases in our freeway capital program and conform to project controls' project estimating process, staff incorporated a 13 percent program level expense line item in the cash flow for economic uncertainties (without SB 1, the cash flow scenario includes seven percent). This is intended to safeguard the program and ensure that OCTA does not over commit delivery during this time of uncertainty.

- Project Alternative Selection - In addition to project cost increases as a result of market forces, the freeway program is also at risk of cost impacts during alternative selection in the environmental phase. OCTA is committed to funding projects promised to the voters, and ensuring community and business support, and staying generally within the existing ROW. A number of projects are currently moving through the environmental process and alternative selection is, or will be, underway soon. While OCTA provides the funding commitments for the projects, Caltrans ultimately makes the decision on alternative selection. One project in particular is of current concern. Interstate 5 between

SR-55 and Interstate 405 (Project B) is challenged with ROW constraints within the project area. Two alternatives are under study with both proving to have equal net traffic benefits. One alternative has greater community and business impacts; however, due to the need for the reconstruction of two bridges, resulting in a nearly $300 million higher cost. The second alternative relies on design exceptions to provide the same capacity and same ultimate traffic benefit while minimizing community and business impacts. Given the constraints of the M2 Freeway Program, the impacts and lack of community and business support, OCTA is not in support of the higher cost alternative.

Keeping project scopes contained is critical to successful delivery of the entire M2 Freeway Program. With the current risk of a cost-increasing environment, and due consideration for the impacts, the higher cost alternative was not included in the cash flow. Inclusion of the constrained alternative ensures the same capacity improvement, the same net traffic benefit, and supports community and business wishes.

Updated revenue assumptions and commitments, along with revised bonding assumptions (the bonding plan is based on the scenario without SB 1 to ensure a conservative approach), result in a delivery plan that remains solvent. A balanced plan not only allows OCTA to secure favorable bond ratings when financing, but also allows OCTA to weather reasonable changes to cost or revenues. With a solvent cash flow, the Next 10 deliverables remain as adopted and are included along with a progress report as Attachment E.

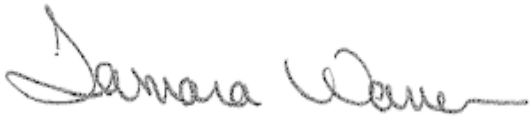
Summary

In response to the latest revenue forecast, staff reviewed the Next 10 and updated the revenues, bonding assumptions, project costs and schedules into the M2 cash flow. The result of the review and update demonstrates a delivery plan that remains solvent. To address the potential of higher cost in the near term as it relates to the freeway program, the cash flow assumes a 13 percent expense at the program level for economic uncertainties in the freeway program cash flow between now and 2028. The 2018 updated Next 10 is presented for Board review and approval.

Attachments

A. 2018 Update, Next 10 Delivery Plan, 2017-2026, Draft
B. 2018 Updated Next 10 Plan, M2 Program Cash Balance With SB 1 (Chapter 5, Statutes of 2017)
C. 2018 Updated Next 10 Plan, M2 Program Cash Balance Comparison With And Without SB 1 (Chapter 5, Statutes of 2017)
D. 2018 Updated Next 10 Plan, M2 Program Cash Balance With Adjusted Economic Uncertainty Allowance
E. 2018 Update, Next 10 Delivery Plan, Next 10 Progress Report on Deliverables

Prepared by:



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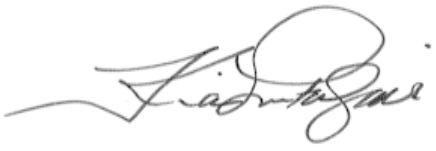

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ATTACHMENT A

2018 UPDATE

NEXT 10 DELIVERY PLAN

2017-2026

DRAFT

OCGO
Local Tax Dollars at Work

OCTA

UPDATED ON SEPTEMBER 10, 2018

On September 10, 2018, the Orange County Transportation Authority (OCTA) Board of Directors (Board) will consider adoption of the Draft 2018 Next 10 Delivery Plan (Next 10). Original commitments from the adopted Next 10 Plan remain largely unchanged with the exception of some required refinements due to changes in forecasted revenue assumptions as well as updated project information including cost estimates, schedules and available external funding.

Printed September 2018

**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**

Next 10 Plan Table of Contents

2018
UPDATE

NEXT 10 DELIVERY PLAN

Introduction

OCGO
Local Tax Dollars at Work

OCTA

2018 UPDATE

NEXT 10 DELIVERY PLAN

Introduction

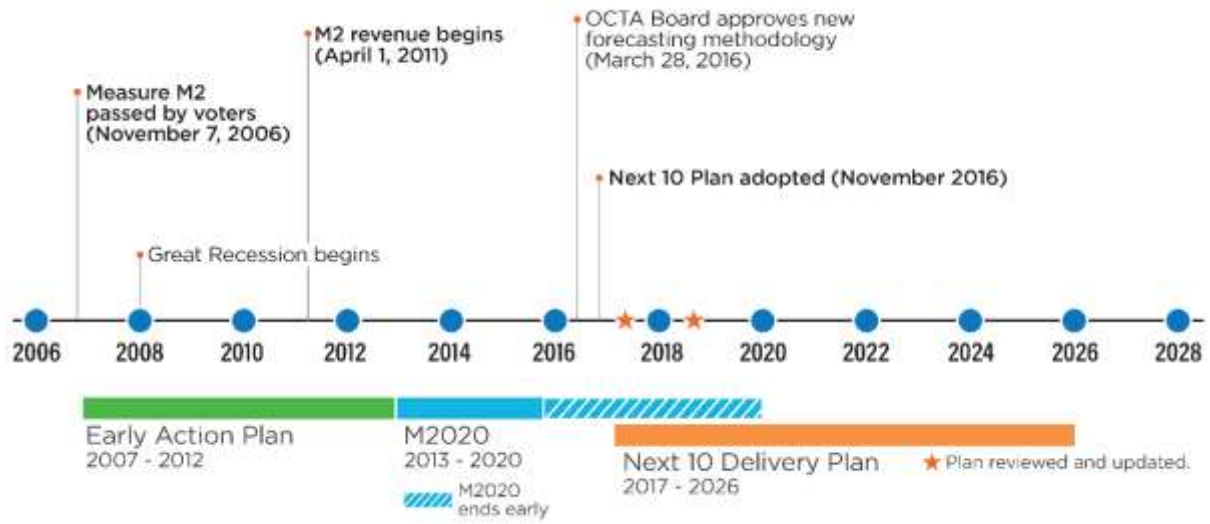
On November 7, 2006, Orange County voters, by a margin of 69.7 percent, approved the renewal of the Measure M one-half cent sales tax for transportation improvements. Voters originally endorsed Measure M in 1990 (M1) with a sunset in 2011. With the approval of Renewed Measure M (M2), the voters agreed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

Since M2 approval, the Orange County Transportation Authority (OCTA) Board of Directors (Board) has continued to advance implementation of M2 through the adoption of a series of early delivery plans. These early delivery plans were designed to ensure the delivery of projects and programs through 2041 as promised to the voters, bring transportation improvements earlier to residents and commuters of Orange County, and as appropriate, address slower growth in sales tax revenue projections through strategic financing and successfully capturing and augmenting the program with external revenue. To date there have been three early delivery plans, these include a five-year Early Action Plan (EAP) adopted in 2007 (completed in 2012), an M2020 Plan adopted in 2012 (intended to go through 2020), and the Next 10 Delivery Plan (Next 10 Plan). The M2020 Plan had to be revised due to a decrease in the sales tax revenue and was replaced with the Next 10 Plan that spans ten years through 2026. See Measure 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. The 2016 adopted Next 10 Plan set M2 project and program priorities and was based on a revenue forecast of $14.2 billion through 2041. Included with the adoption of the Next 10 Plan in 2016, was Board action to dedicate and set aside local revenues through the allocation of net excess 91 Express Lanes (EL) revenue, in an amount not to exceed the project costs for two eligible projects[1]. The 2017 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 2017 update also designated Project I as a priority project for advancement.

[1]The two eligible State Route 91 projects are 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.

Measure M2 Timeline



2018 Review

On July 11, 2018, the Board received an early sales tax revenue forecast of $13.1 billion. Although this sales tax forecast is preliminary until OCTA is in receipt of final year end actuals, it is not anticipated to vary significantly from the assumed $13.1 billion forecast. The reduction from $13.5 to $13.1 represents a $400 million gross reduction from what was assumed in the 2017 Next 10 Plan. While a reduction in revenues affects the M2 Program as a whole, in most areas within the M2 Plan, programs can be scaled based on available revenue. The greatest area of risk is within the freeway program because projects cannot be scaled due to set project scopes. The net sales tax revenue reduction to the freeway program is $127.1 million.

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. While the 2018 update incorporates the lower M2 sales tax revenue forecast, OCTA has been fortunate in capturing an additional $291.8 million in external state and federal funding that was not committed or programmed in the 2017 cash flow. The 2018 revised cash flow incorporates the current M2 revenue assumptions, current programmed external revenue, and revised bonding assumptions. Original project delivery commitments remain unchanged in the 2018 Next 10 Plan, although some refinements were required to account for revised revenue projections and updated project cost estimates and schedules. Through this process, staff confirmed that the 2018 review and update of the Next 10 Plan remains deliverable.

Program Delivery Risks

The Next 10 deliverables for projects and programs are not without risks. While the entire M2 Program continues to demonstrate financial viability and delivery of the complete M2 plan of projects and programs, risks continue to challenge the program. These include

financial, market, organizational, and regulatory risks. A table of risks is included on pages 5 through 7 with some of the key risks highlighted below.

Lower Sales Tax Revenues – OCTA has been challenged over the last six years with revenue forecasts not matching actuals and annual forecast updates coming in lower than the prior year. In March of 2016, the Board adopted a new sales tax forecasting methodology to address this issue. Using the new forecasting methodology, the sales tax forecast has been closer to actuals than in years past. This year's presentations by the four expert economic forecast entities were more conservative than in the prior years. Although this points to the probability of a more accurate forecast going forward, there are no assurances and, hence, the revenue outlook continues to be at risk.

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

Repeal of Senate Bill 1 (SB 1) (Chapter 5, Statutes of 2017) Gas Tax – With the passage of a gas tax increase in 2017, transportation funding was substantially increased and stabilized. If the repeal effort underway through Proposition 6 on the November 6, 2018 ballot is approved and the gas tax funding repealed, committed formula revenues may be impacted. While the M2 cash flow includes only a small amount of direct SB 1 competitive funding, staff anticipates that up to $170 million of funding commitments programmed in the State Transportation Improvement Program (STIP) for M2 projects could be deprogrammed or delayed, impacting M2 delivery schedules with state funding commitments.

The cash flow update included in the Next 10 Plan assumes current law with the gas tax in place. To ensure the program remained deliverable in the event of a repeal, a second scenario was developed and analyzed with a reduction of $170.2 million to the cash flow of currently committed state and federal funding. While this remains a net positive showing the full program (through 2041) is deliverable, the full impact of a repeal of the gas tax on programmed external revenues is unknown. More details will be available in late 2018/early 2019 pending the outcome of Proposition 6, and action by the California Transportation Commission on how to demobilize approved projects.

Potential for Cost Increases Impacting Freeway Delivery – In September of 2017, a Next 10 Market Conditions Forecast and Risk Analysis Report was conducted by respected 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 Next 10. The Board directed staff to continue to work with the consultant to monitor and track key early warning indicators. Through this follow on effort, the consultant team created a cost pressure index providing a range of potential cost fluctuations. The index identified that OCTA could experience a cost increase of between six to 11 percent during the 2018 though 2020 time period of construction activity. This is discussed further on page 17 in the section discussing Future Outlook.

Project Alternative Selection - In addition to project cost increases as a result of market forces, the freeway program is also at risk of cost impacts during alternative selection in the environmental phase. OCTA is committed to funding projects promised to the voters, and ensuring community and business support, while staying generally within the existing Right-of-Way (ROW). A number of projects are currently moving through the environmental process and alternative selection is, or will be, underway soon. While OCTA provides the funding commitments for the projects, the California Department of Transportation (Caltrans) ultimately makes the decision on alternative selection.

The cash flow of the Next 10 Plan includes estimated project costs based on the current information available. Funding projects that meet the intent of the M2 Plan with community and business support is important to successful delivery of the entire M2 Freeway Program. With the current risk of a cost-increasing environment this makes this even more important that OCTA work closely with our partners including Caltrans.

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	Proposed Action
	On Track		**One to Watch**
Financial			
1	The 2018 M2 revenue forecast estimate is $13.1 billion, which represents a 46 percent decrease in forecasted revenue since M2 adoption. If sales tax revenue continues to be lower than projections, this will further challenge delivery.	Sales tax revenue has been impacted by the recession and changes in consumer spending habits.	The 2018 lower forecast results in greater reliance on external funding to deliver the entire Freeway Program as listed. OCTA will continue to actively pursue available state and federal revenue, and work with the Caltrans to identify cost effective freeway alternative options for approval.
2	SB 1 gas tax repeal (Prop 6) on November 6, 2018 ballot.	While M2 does not rely on gas tax funding, if Prop 6 passes and SB 1 is repealed, there is a likelihood that current state funding commitments in the STIP for M2 projects could be impacted and could delay M2 freeway delivery schedules.	The 2018 update of the M2 cash flow included a sensitivity run with lower external revenue to test the adopted version. With assumptions on programming impacts of a repeal, the cash flow remains financially solvent. However, the true impact will not be known until decisions are made following an actual repeal.
3	Inability to scale the Freeway Program to available revenue and still deliver the promise.	The freeway program includes set project scopes leaving very little flexibility in what is delivered.	OCTA will work closely with Caltrans to value engineering strategies on freeway projects.

4	Delay in receipt of OC Streetcar Full Funding Grant Agreement (FFGA) from the Federal Transit Administration (FTA), could impact the overall delivery schedule.	While the FTA and the Congressional delegation continue to show strong support for the project, authorization for the New Starts FFGA remains outstanding.	Continue to communicate the merits of the OC Streetcar and need for swift action on receipt of the FFGA to FTA, Congress, and the Administration. Move cautiously to protect the delivery schedule while at the same time minimizing financial risk.
5	Sustain Metrolink train service, as an attractive alternative to driving in Orange County with the limits of available revenue.	Operational cost of Metrolink service continues to grow as system ages, track-sharing arrangements with Burlington Northern Santa Fe Railway (BNSF) are revised, and new air quality requirements. These changes may impact service long term.	Staff will continue to work closely with Metrolink and our partners to ensure cost increases are minimized, while seeking external revenue.
6	The Next 10 Market Conditions Forecast and Risk Analysis identified strong potential for an increasing-cost environment during the Next 10 delivery years.	A construction cost pressure index model was created to provide insight on forecasting capital costs. The index tracks four near-term cost risks: economic trends (building permits and unemployment), material costs, wage pressures, and economic conditions.	OCTA will continue to monitor and track key early warning indicators as recommended and include a program level line item for an economic uncertainty allowance in the freeway cash flow. This is intended to safeguard the program and protect against overcommitting during this time of uncertainty.
	Organizational		
7	Availability of specialized staff, given the scope of the M2 capital program.	External demand for key talent is becoming more of an issue as large infrastructure programs move forward in the region. Timely completion of engineering and construction related support of the capital program is key to reduce project delivery risk.	Expert and timely coordination between OCTA and Caltrans are imperative to manage this risk. Staff is currently working with Caltrans to ensure resource needs are met. Internally OCTA's Human Resources Division continues to implement programs to retain and attract talent.
8	New operational responsibilities with the OC Streetcar.	With the implementation of the OC Streetcar service, OCTA will be increasing its overall role in operations. OCTA holds a strong track record in operating various transportation systems including both a fixed and demand-based bus network.	To ensure success of the OC Streetcar, OCTA hired a streetcar operations manager with proven start-up experience to oversee start-up and daily operations.

	Regulatory		
9	New statewide directives create additional hurdles for the Freeway Program in particular.	New directives with greenhouse gas reductions and managed lane corridors focus, may impact approvals for four of the remaining freeway projects with general purpose lanes that are not yet environmentally cleared.	OCTA will monitor new directives and work closely with our partners including Caltrans to ensure that when freeway improvement projects are reviewed the commitment of the complete M2 program is understood.

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.

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

Updated Next 10 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 nearly two years of the ten-year plan complete, progress on the ten deliverables and accomplishments to date is provided.

Freeways

1. Deliver $3.5[2] billion of freeway improvements approved through construction.

Status: The M2 freeway program currently consists of 27 projects or project segments. At the point of Next 10 adoption in September 2016, nine were already, and another nine designated to be complete within the Next 10 time-frame. Together, the nine segments designated for completion by 2026 make up a $3.1 billion delivery promise. Since Next 10 adoption, three segments of the Interstate 5 (I-5) between Avenida Vista Hermosa and San Juan Creek Road, opened to traffic in March 2018, adding six miles of carpool lanes. The remaining six segments are in design or construction. Funded with 91 Express Lanes excess revenues, a tenth project, the SR-91 between SR-57 to SR-55 (Project I) was designated a priority project and is now part of Deliverable 1 and is planned to be

[2] Project I was originally part of Deliverable 2 as a "shelf ready" project, but through Board action to prioritize and fund with 91 Express Lanes excess revenues, it will be delivered by 2029. This change resulted in an increase of Deliverable 1 from $3.1 billion to $3.5 billion however an equal reduction to Deliverable 2, the net freeway deliverables remain at $4.3 billion total.

complete by 2029. With this project, OCTA will deliver $3.5 billion of freeway improvements approved through construction.

Completed			Year
1.	Project C	I-5, Vista Hermosa to PCH	2017
2.	Project C	I-5 between Avenida Pico and Avenida Vista Hermosa	2018
3.	Project C	I-5 between Pacific Coast Highway and San Juan Creek Road	2018
In Construction			**Construction Complete**
4.	Project K	I-405 between SR-73 and I-605	2023
In Design			**Construction Complete**
5.	Project A	I-5 between SR-55 and SR-57	2021
6.	Project C,D	I-5 between Oso Pkwy and Alicia Pkwy/La Paz Road Interchange	2023
7.	Project C	I-5 between Alicia Parkway and El Toro Road	2024
8.	Project C, D	I-5 between SR-73 and Oso Pkwy/Avery Pkwy Interchange	2024
9.	Project F	SR-55 between I-405 and I-5	2025
In Environmental			**Construction Complete**
10.	Project I[1]	SR-91, SR-57 to SR-55	2029

SR-71 – State Route 71 / SR-22 – State Route 22 / I-405 – Interstate 405 / SR-73 – State Route 73 / I-605 – Interstate 605

2. Invest approximately $715[3] million more in revenues, bringing the completed Freeway Program improvements to $4.3 billion (Projects A-M).

Status: The final eight remaining project segments (of the 27 total) are on track to be environmentally cleared by 2026, making them "shelf ready" for future advancement. In all, during the Next 10 time-period, approximately $4.3 billion in freeway improvements promised to the voters in M2 will be completed or underway by 2026. Using the guiding principles adopted by the Board, Deliverable 2 includes approximately $715 million in funding to move another project (or projects) directly into design and construction if assumptions on revenues and costs hold.

In Environmental			Scheduled to be Cleared
1.	Project L	I-405 between I-5 and SR-55	2018
2.	Project M	I-605 Katella Avenue Interchange	2018
3.	Project G	SR-57 NB Orangewood Avenue to Katella Avenue	2019
4.	Project B	I-5 between I-405 and SR-55	2019
5.	Project D	I-5 El Toro Road Interchange	2019
6.	Project F	SR-55 between I-5 to SR-91	2020

[3] Because Project I is now included with Deliverable 1, the original Deliverable 2 investment of $1.2 billion has been reduced to $715 million. The overall freeway deliverable commitment remains the same at $4.3 billion.

Begin Environmental in ~FY 2020			Anticipated to be Cleared by
7.	Project G	SR-57 NB Lambert Road to County Line	2023
8.	Project J	SR-91 between SR-241 and I-15	2026

Streets and Roads

3. **Allocate nearly $1 billion with $400 million in competitive funding to local jurisdictions to expand roadway capacity and synchronize signals (Project O and P) and nearly $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: All seven bridges included in the OC Bridges program are complete. Since the adoption of the Next 10 Plan in November 2016, OCTA awarded approximately $82 million in competitive funding through the Regional Capacity Program (Project O) and Regional Traffic Signal Synchronization Program (Project P). Additionally, $98.1 million in Local Fair Share (Project Q) funds have been distributed to local agencies. This brings the total allocation to date to $188.1 million. On August 13, 2018, the Board approved the release of the 2019 Call for Projects for approximately $32 million for Project O and $8 million for Project P and funding recommendations will be presented to the Board by mid-2019.

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).**

Completed		Year
1.	San Clemente Pier Metrolink/Amtrak Station Lighting	2017
2.	Laguna Niguel/Mission Viejo Station American Disabilities Act Ramps	2017
In Construction		**Complete Construction**
3.	Fullerton Transportation Center Elevator Upgrades	2018
4.	Orange Station Parking Structure	2019
In Design		**Anticipated Construction Complete**
5.	Anaheim Canyon Metrolink Station	2021
6.	Placentia Metrolink Station	2021

5. **Secure FFGA, start construction, oversee vehicle manufacturer 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.**

Status: OC Streetcar - Activities continue to move forward, including final possession of remaining required ROW, procurement of demolition services, coordination with third parties on utility relocation, finalizing the California Public Utilities Commission safety approvals for the OC Streetcar's grade crossings certification, finalizing the scope of services for the operations and maintenance request for proposals, and continued coordination with the FTA on the status of the FFGA. The streetcar vehicle manufacturing contract has been executed and the notice to proceed has been issued.

The FTA continues to show strong support for the project, and a FFGA is anticipated in 2018.

Status: OC Transit Vision - The draft Transit Master Plan was presented to the Board in February 2018. The plan included an action plan which was divided into short, medium and long-term recommendations. The Board directed staff to consider the plan in the upcoming Long-Range Transportation Plan process. Staff will be advancing many of the short-term action plan items over the next year.

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

Status: Approximately $20.2 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.

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: In December 2017, OCTA staff requested letters from local agencies to determine interest for a future round of Project V funding. OCTA received 13 letters of interest and in February 2018, the Board initiated a 2018 Project V Call for Projects. On June 25, 2018 the Board awarded $6.8 million to fund six Community-Based Transit Circulators Projects.

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: To date, the Board has approved up to $1.2 million to support 51 city-initiated improvements and $370,000 for OCTA-initiated improvements. The City of Anaheim postponed development of eight stops and plans to move forward in a future funding cycle. Of the remaining 43 stops, 14 stops have been completed and the remaining 29

stops are in the project closeout process. An additional funding cycle is anticipated in 2019.

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). The second deposit into the endowment was made in August 2017, and approximately $2.9 million will be deposited on an annual basis.

10. **Work with the Environmental Cleanup Allocation Committee 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 (Project X).**

Status: Since adoption of the Next 10 Plan in November 2016, OCTA issued two calls for Tier 1 Environmental Cleanup Program (ECP) projects. The Board awarded approximately $3.1 million to fund Tier 1 projects during the 2017 annual call for projects. The 2018 Tier 1 Call for Projects was released on March 12, 2018 and funding recommendations are anticipated in late summer.

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.

Oversight and Safeguards

The 2018 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 will continue to be 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 (currently underway), 2021, and 2024.

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.

The M2 Program 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, the ECP has funded over 176 projects totaling over $48 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 allow for bike and pedestrian project elements
- ✓ 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 2018 Next 10 Plan. The revenue assumptions of $13.1 billion are based on the latest 2018 M2 revenue forecast. The 2018 revenue forecast results in a 46 percent reduction from the original 2005 sales tax projection of $24.3 billion.

The Next 10 cash flow incorporates the revised revenue forecast of $13.1 billion, as well as the contribution from the Transportation Infrastructure Finance and Innovation Act (TIFIA) in the amount of $153.9 million, which is a contribution to the M2 general purpose lane project of the $629 million TIFIA loan. This amount 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. The cash flow also incorporates updated project cost estimates for all M2 Program elements, as well as committed programmed state and federal external revenues.

In addition to state and federal funding commitments, the cash flow also assumes the availability of a reasonable amount of federal and/or state funds from 2017 to 2041 and makes specific assumptions about near-term grants such as New Starts. Additionally, per the Board's direction, the cash flow also includes net excess 91 Express Lanes revenue within the freeway program for projects in the 91 corridor (as defined by the 91 Express Lanes governing legislation), in an amount not to exceed the total cost of Project I and Project J.

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. Bond assumptions are constrained to debt coverage ratios, and the Appendix on page 92 of the 2018 Next 10 Plan includes a more detailed discussion on assumed revenues, costs, and debt service.

For the 2018 Next 10 Plan development, 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. While a reduction in revenues affects the M2 Program as a whole, in many areas within the M2 Plan, programs can be scaled based on available revenues. The areas where this is not possible is in the Freeway Program due to set scopes for project delivery, and the Fare Stabilization Program portion of Project U within the Transit Program. The net freeway program loss in forecasted revenues from last year when the Next 10 was updated and adopted is $127.1 million.

The funding assumptions in the freeway mode assume $9.6 billion in total revenue, with costs for the same period totaling $9.5 billion. OCTA has been very successful in capturing external funding in past years to offset the reduction in sales tax revenue and in the past year alone, net external revenue for the freeway program increased by $291.9 million that was not available or programmed in the prior version of Next 10. While sales

tax revenue is down, the additional external revenue has resulted in a net positive revenue in the freeway program of $164.8 million.

With the 2018 Next 10 Plan, each project in the freeway program was reviewed and cost estimates updated. With the majority of the projects now either in 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 and resulted in a net decrease of $278.8 million. This cost reduction, in tandem with the amount of external revenue captured and the resulting reduction in bonding need, provides an overall M2 revenue savings in the freeway program. Given concern over the potential of entering an increasing cost environment, this savings allowed for the addition of a 13 percent program level expense line item in the cash flow for an economic uncertainty allowance. This provides some financial protection again rising costs or lower revenues. This is discussed further on page 17 in the section discussing Future Outlook. These changes along with revised bonding assumptions, results in a delivery plan (through 2041) that remains solvent.

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 for Project F Segment 1, and $153.9 million in TIFIA proceeds). Additionally, the program assumes $1.9 billion in bond proceeds, and $741.7 million in net excess 91 Express Lanes revenue, and $10 million a year (a conservative amount of unprogrammed revenue) beginning in 2022 through 2036 in federal and/or state funds.

The funding assumptions in the streets and roads mode assume $4.7 billion in total revenue, with costs for the same period totaling $4.7 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 $601.1 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 95.

For the transit mode, $3.7 billion in total revenue is assumed, with costs for the same period totaling $3.7 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 $526.8 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 95.

The ECP assumes $260 million in total revenue, with costs for the same period totaling $260 million. The projects within the ECP are scaled to available revenue and are cash flowed on a pay-as-you-go basis. More detailed program assumptions for the ECP can be found in the Appendix on page 95.

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

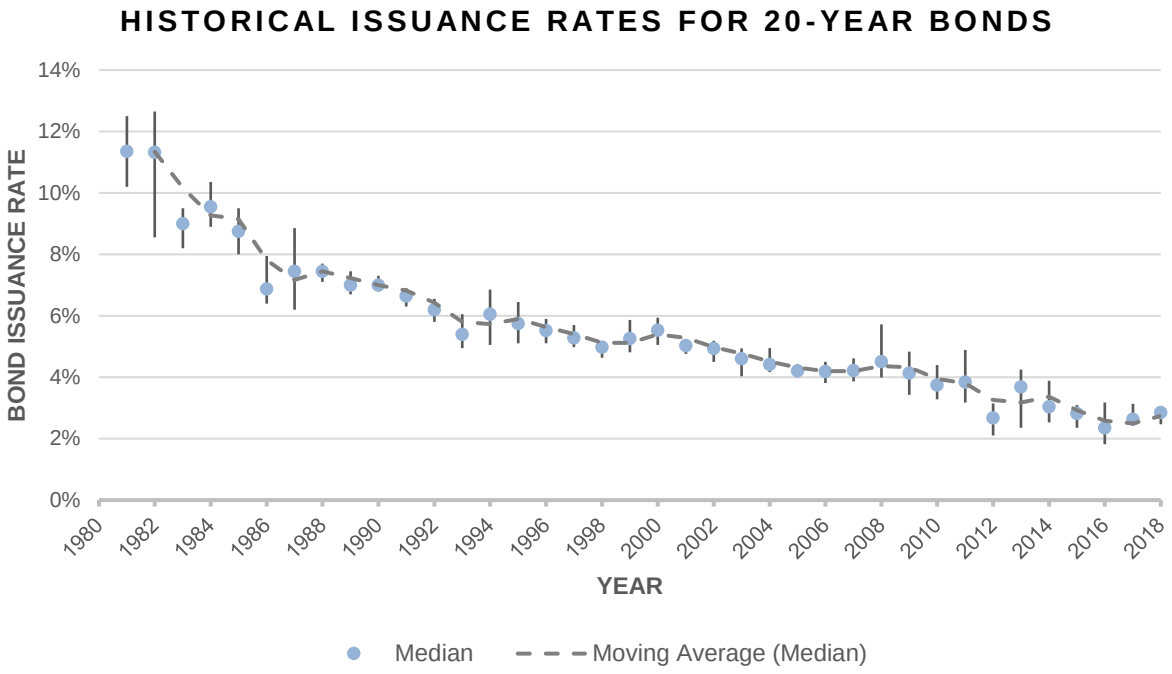
Funding and Financing

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 2018 M2 sales tax revenue forecast is $13.1 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 been coming in closer to the engineers' estimates. Looking forward, it is anticipated that construction bids will begin to exceed the engineers' estimates (requiring estimates to adjust upward), which will put additional cost pressure on OCTA's delivery of M2 and the Next 10 Plan. This is a result of several factors. First, with the economy picking up, the demand for contractors has increased which results in less competition and higher bids. Additionally, the large amount of construction activity in the region is putting significant demand on available resources. This includes materials and skilled and professional labor resources.

To address the risk of cost increases and ensure a positive cash flow moving forward during Next 10 freeway delivery, staff incorporated a 13 percent economic uncertainty allowance line item into the freeway program cash flow in FY 2019 and through 2029. This is included at the program level and will provide 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 has increased it continues to be attractive relative to historic lows. Current 20-year bond rates remain at 2.89 percent versus all-time lows of 1.82 percent. While short-term rates increased significantly, long-term rates remain near all-time lows, producing a relatively "flat" yield curve that allows OCTA to take advantage of attractive mid- and long-term rates. 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.

Future Outlook

As noted in the Risks section starting on page 3, 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.

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. 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 2020 the team tracked relevant market data and indicators and performed data analytics on this information. This analysis resulted in the creation of a cost pressure index which provides a range of potential cost fluctuations. Using the Infrastructure Construction Cost Pressure (ICCP) 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 six percent to 11 percent in 2018, two percent to six percent in 2019, and two percent to six percent in 2020.

OCBC OC Transportation ICCP Index Score, 2018-2020		
Year	Index Score	Range of Cost Fluctuation
2018	4	6%-11%
2019	3	2%-6%
2020	3	2%-6%

The consultant further shares 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 makes use of schedule control, cost control, progress reporting, and change management to effectively monitor and control project escalation and execution. Imbedded in the Next 10 are cost assumptions based on historical information, current trends in the market, as well as review of the Caltrans Construction Cost Index. Higher cost assumptions are included on some elements of projects based on assessed potential risk. OCTA's current assumptions developed by OCTA's Capital Programs Project Controls Department, assumes a four percent escalation in the near term (next three years), and then three and one-half percent escalation for projects beyond 2022. Project cost estimates also include a prudent contingency specifically developed for the project based on the individual project risks. Additionally, to further protect against potential cost increases in our freeway capital program and conform to project controls' project estimating process, staff incorporated a 13 percent program level expense line item in the cash flow for an economic uncertainty allowance. This is intended to safeguard the program and ensure that OCTA does not over commit delivery during this time of uncertainty.

2018
UPDATE

NEXT 10 DELIVERY PLAN

Freeway Program

OCGO
Local Tax Dollars at Work

OCTA

M2 Freeway Projects

OCGO
Local Tax Dollars at Work

- **A** I-5 Widening (SR-55 to SR-57)
- **B** I-5 Widening (SR-55 to I-405)
- **C, D** I-5 Widening (PCH to Avenida Pico)
- **C, D** I-5 Widening (El Toro Road to SR-73)
- **D** I-5/SR-74 (Ortega Hwy) Interchange Improvements
- **D** I-5 at El Toro Road Interchange Improvements
- **E** SR-22 Access Improvements
- **F** SR-55 Widening (I-405 to I-5)
- **F** SR-55 Widening (I-5 to SR-22)
- **G** SR-57 Widening (Orangethorpe Ave. to Lambert Road)
- **G** SR-57 Widening (Katella Ave. to Lincoln Ave.)
- **G** SR-57 NB Widening (Orangewood Avenue to Katella Avenue)
- **G** SR-57 NB Widening (Lambert Road to County Line)
- **H** SR-91 Widening (I-5 to SR-57)
- **I** SR-91 Widening (SR-55 to Tustin Ave.)
- **I** SR-91 Widening (SR-57 to SR-55)
- **J** SR-91 Widening (SR-55 to SR-71)
- **J** SR-91 Widening (SR-241 to I-15)*
- **K** I-405 Widening (I-605 to SR-73)
- **L** I-405 Widening (SR-55 to I-5)
- **M** I-605/Katella Ave. Interchange Improvements

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

Please note that schedules are updated as of June 30, 2018. Shown schedules are subject to change.

2018 UPDATE

NEXT 10 DELIVERY PLAN

Please note that schedules are updated as of June 30, 2018. 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.

2018 UPDATE

NEXT 10 DELIVERY PLAN

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 27 projects. Of this amount, nine were completed prior to the adoption of Next 10. The remaining 18 freeway projects are included in the Next 10 deliverable goals through 2026 and have been adjusted to reflect Board action regarding Project I[4]:

1. Deliver construction of ten[4] freeway project segments; seven along I-5 (three recently completed in 2018), one along I-405, one along SR-55, and one along SR-91 (Projects A, C, C/D, F, I, and K).
2. Complete the environmental phase for the remaining eight project segments to be shelf ready. This includes one on I-5, I-405, SR-91, and SR-55; two along SR-57; and two interchange projects, one at I-5/El Toro Road and one at Interstate 605 (I/605)/Katella Avenue (Projects B, D, F, G, J, L, and M).
3. Invest approximately $715[4] million in revenues (bringing the completed Freeway Program total to 78 percent) in revenues to move "shelf ready" projects forward using the guiding principles.

[4] With its own local funding source (91 Express Lanes excess revenue), Project I is now included to move directly into design and construction and the cash flow assumes ten projects to be complete or in construction during the 2017-2026 timeframe. The deliverables have been adjusted to reflect this Board directed change

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:
$41.66 million (Year of Expenditure [YOE]).

Status:
Design was completed in mid-2017. Construction is expected to begin in late 2018 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, is now part of the SR-55 Project F.

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. Bids were opened in May 2018 and the three Lowest Bidders were deemed “unresponsive.” All remaining bidders rescinded their offers, which required the project to be rebid. Caltrans re-advertised the project in August 2018 and the bids will be opened in October 2018.

Related Projects:
Projects B and F.

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

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 2018 M2 Program Cash Flow.

References:
- OCTA 2014 Long Range Transportation Plan
- June 2018 Capital Action Plan
- Capital Funding Program Report – State Highway Project (June 2018)

B. I-5 (SR-55 to the El Toro "Y" Area)

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.

Cost:
$438.3 million (YOE), including advancement to environmental phase.

Status:
This project is currently in the environmental phase. The Next 10 Plan includes funding this project through the environmental phase. Environmental clearance is scheduled for early-2019.

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 providing $15.37 million in federal funds and $12.63 million in state funds for preliminary engineering. 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.

Risks:
Overall time, scope, and costs risks are high with this project due to tight ROW and need for design variations.

B. I-5 (SR-55 to the El Toro "Y" Area)

Related Projects:
Projects A and F.

Involved Agencies:
OCTA, Cities of Tustin and Irvine, Caltrans, and FHWA.

Assumptions:
Cost based on June 2018 M2 Program Cash Flow.

References:
- OCTA 2014 Long Range Transportation Plan
- 2015 Freeway Plan
- June 2018 Project Status Report
- Capital Funding Program Report – State Highway Project (June 2018)

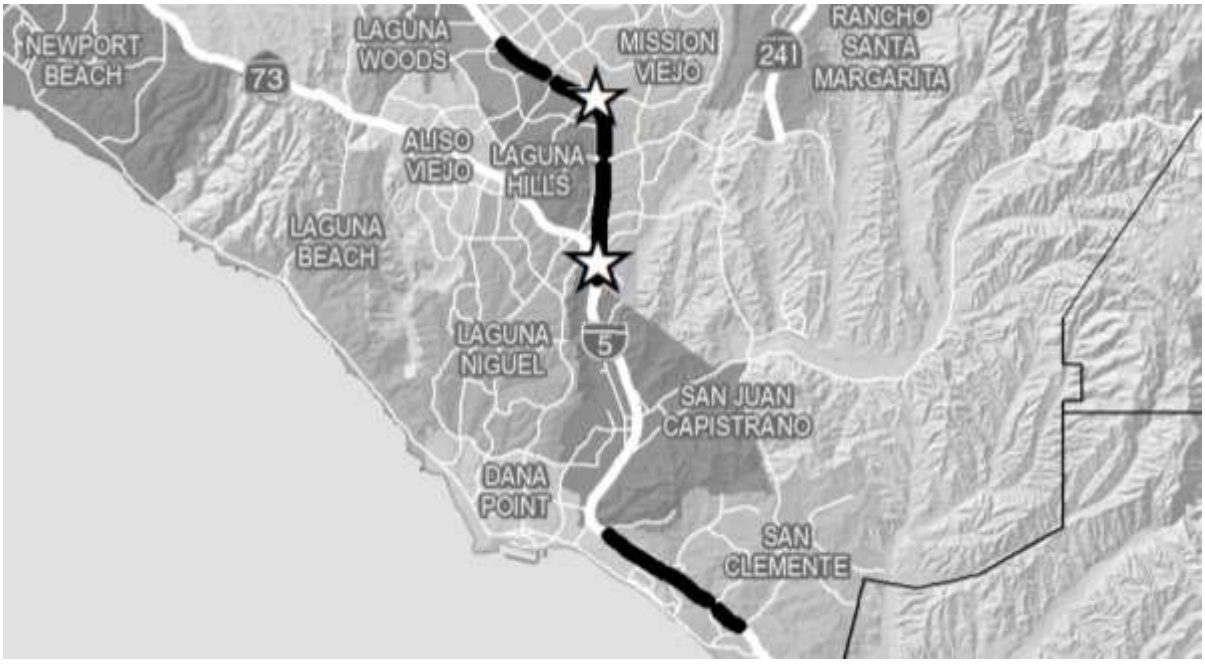
C. I-5 (El Toro Road to SR-73 includes Avery & La Paz Interchanges)

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



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

purpose lane in the northbound direction from Segment 2 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 Laguna Hills and Lake Forest areas.

Cost:
Segment 1: $188.12 million (YOE)
Segment 2: $188.64 million (YOE)
Segment 3: $164.17 million (YOE)

Landscaping for all three segments: 12.365 (YOE)

Status:
Segment 1 is scheduled to complete design in late 2018 and Segment 3 is scheduled to complete design in mid-2019. Construction is expected to start in early 2019 for Segment 2, and in 2019/20 for Segments 1 and 3, with all segments open to traffic 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: $28.17 million in federal funds and $91.98 million in state funds.

Segment 2: $55.60 million in federal funds.

Segment 3: $49.90 million in federal funds and $69.91 million in state funds.

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

Risks:
Overall time, scope, and costs risks are high with this project due to potential ROW impacts and delay from STIP funding schedule.

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.

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

Assumptions:
Costs based on June 2018 M2 Program Cash Flow.

References:
- OCTA 2014 Long Range Transportation Plan
- 2015 Freeway Plan
- June 2018 Project Status Report
- Capital Funding Program Report – State Highway Project (June 2018)

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 the traffic movements within the interchange and provide 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 be 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

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

Camino Estrella Overcrossing to San Juan Creek Road Undercrossing. On- and off-ramps at Camino Las Ramblas/ PCH were reconstructed. Additionally, the I-5/PCH northbound connector and I-5/Camino Las Ramblas Undercrossing were widened in both directions.

Cost:
Segment 1: $85.85 million
Segment 2: $71.43 million
Segment 3: $71.19 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. Remaining punch list work remains on Segment 1.

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:
Overall time and scope risks are low with this project as all segments have been opened to traffic. Remaining punch list work remains on Segment 1. 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 2018 M2 Program Cash Flow.

References:
- OCTA 2014 Long Range Transportation Plan
- June 2018 Project Status Report
- Capital Funding Program Report - State Highway Project (June 2018)

D. I-5 (El Toro Interchange)

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.

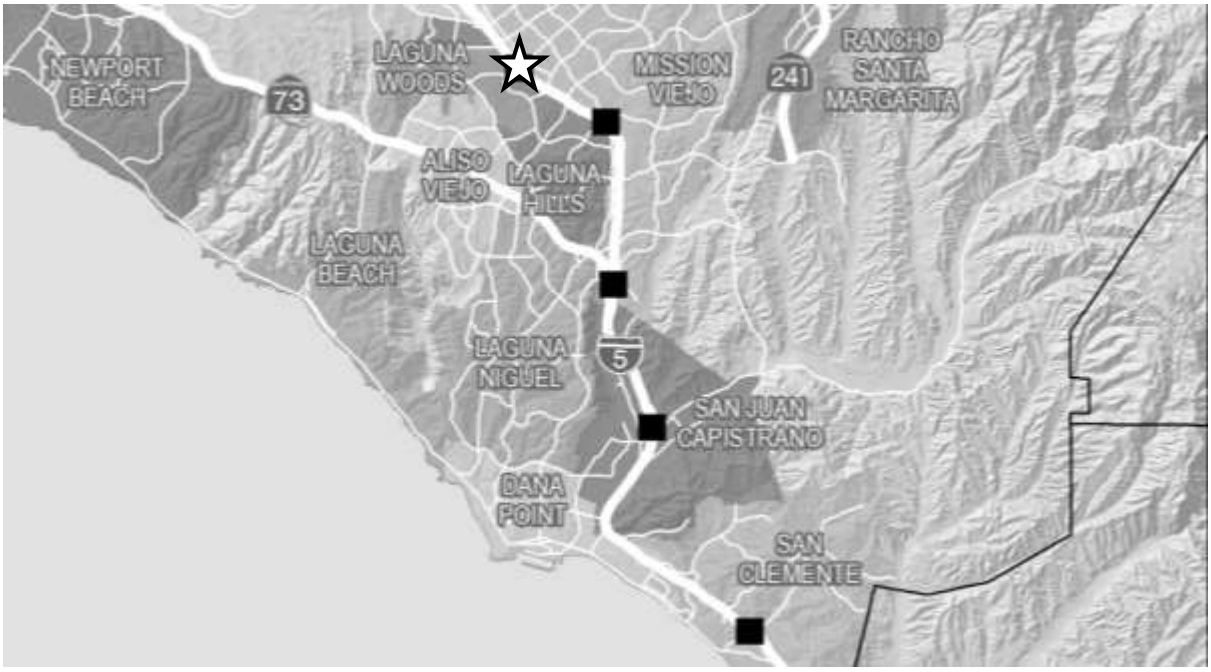
Cost:
$112.32 million (YOE), including advancement of the environmental phase.

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 late 2019.

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 Interchange)

Risks:
Overall time, scope, and costs risks are high with this project due to community issues and potentially high ROW impacts with most of the alternatives.

Related Projects:
Project C.

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

Assumptions:
Cost based on June 2018 M2 Program Cash Flow.

References:
- OCTA 2014 Long Range Transportation Plan
- 2015 Freeway Plan
- June 2018 Project Status Report
- Capital Funding Program Report - State Highway Project (June 2018)

D. I-5 (Ortega Highway Interchange)

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 $75.17 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.

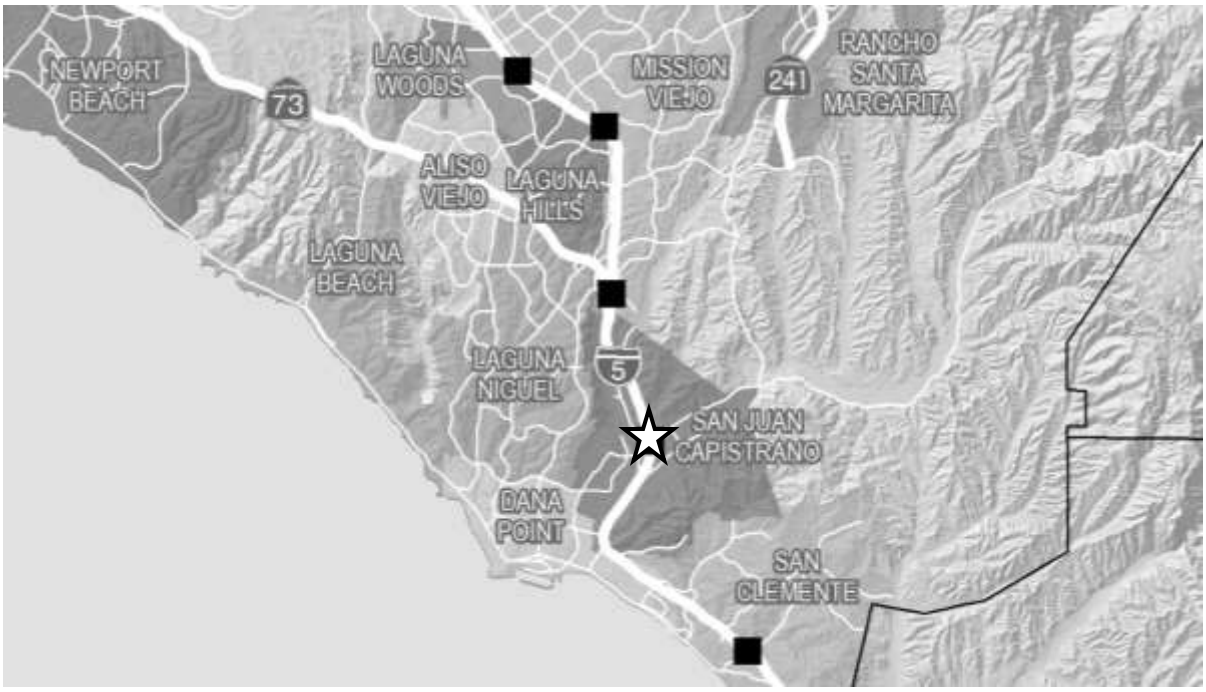
Benefits:
This project alleviated a major chokepoint and reduced congestion by widening the Ortega Highway Bridge and improving local traffic flow through reconfigured streets and on- and off-ramps.

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:
None – project completed.

Related Projects:
Project C.

Involved Agencies:
OCTA, City of San Juan Capistrano, Caltrans, and CTC.



D. I-5 (Ortega Highway Interchange)

Assumptions:
Cost based on June 2018 M2 Program Cash Flow.

References:
- OCTA 2014 Long Range Transportation Plan
- June 2018 Project Status Report
- Capital Funding Program Report - State Highway Project (June 2018)

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 completed in 2006 as part of the SR-22 widening project completed in late 2007 using M1 funds.

Present Day:
Prior to completion of the project, the existing freeway overcrossings did not allow clearance for the widening of these three streets to accommodate 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.

Additional improvements also include new freeway-to-freeway carpool ramps to the SR-22/I-405 and I-405/I-605 interchanges, which were completed in 2015 as part of a separate project.

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.

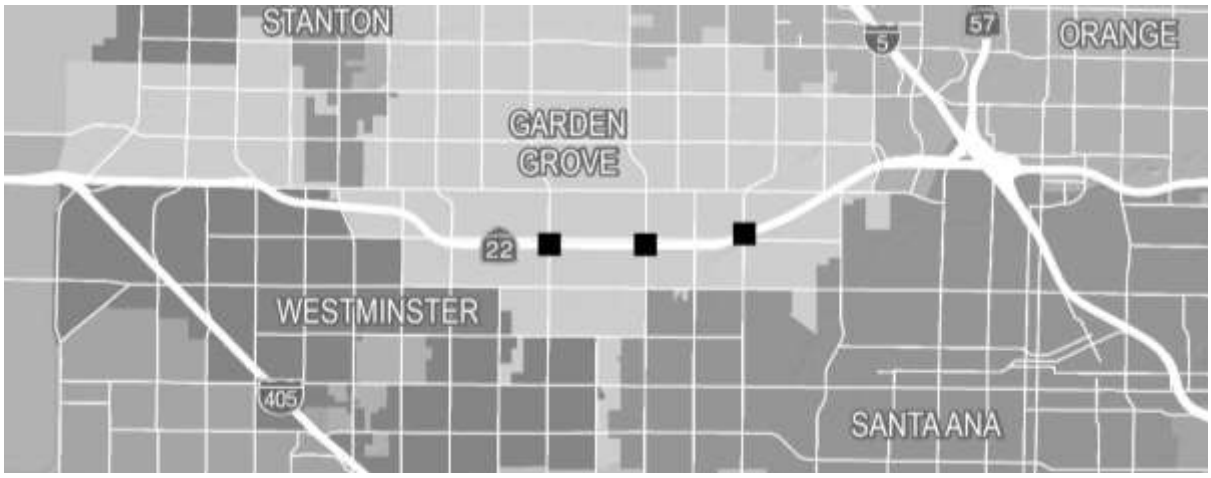
Risks:
None – project completed.

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-5 and I-405, 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 SR-22 and I-5, including merging lanes between interchanges to smooth traffic flow. Operational improvements between SR-22 and SR-91 would also be incorporated. The Next 10 Plan includes advancing the North Segment through the environmental phase. 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: $227.92 (YOE) including advancement of environmental phase.

Status:
Segment 1 is currently in the design phase. This project was accelerated by two years and construction is now expected to begin 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.

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

Benefits:
This project will increase freeway capacity, improving mobility and reducing congestion in central Orange County areas, by adding new lanes and operational improvements that provide an improved level of operation 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.

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 exceptions, increased project cost, and delay from STIP funding schedule.

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 2018 M2 Program Cash Flow.

References:
- OCTA 2014 Long Range Transportation Plan
- 2015 Freeway Plan
- June 2018 Project Status Report
- Capital Funding Program Report - State Highway Project (June 2018)

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 north 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: $144.36 million.

Segment 2: $167.55 million (YOE), including advancement of environmental phase.

Segment 3: $47.69 million (YOE), including advancement of environmental phase.

Status:
Segment 1 was completed and opened to traffic in 2014. The Next 10 Plan includes funding Segments 2 and 3

G. SR-57 Improvements

through the environmental phase. Segment 2 is scheduled to begin the environmental phase in 2020. Segment 3 is currently in the environmental phase and environmental clearance is scheduled for early 2019.

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 with this project due to construction within the existing ROW and relatively straightforward design issues.

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 2018 M2 Program Cash Flow.

References:
- OCTA 2014 Long Range Transportation Plan
- 2015 Freeway Plan
- June 2018 Project Status Reports
- Capital Funding Program Report - State Highway Project (June 2018)

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 SR-57 and I-5. 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 $58.95 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.

External Funding:
$27.23 million in state funds were used for the project.

Risks:
None – project completed.

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

Related Projects:
Project I.

Involved Agencies:
OCTA, Cities of Fullerton and Anaheim, Caltrans, and CTC.

Assumptions:
Cost based on June 2018 M2 Program Cash Flow.

References:
- OCTA 2014 Long Range Transportation Plan
- June 2018 Project Status Report
- Capital Funding Program Report – State Highway Project (June 2018)

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

Description:
Project I will add an auxiliary lane in the westbound direction from the SR-55/SR-91 connector to Tustin Avenue, one westbound general purpose lane from Glassell Street to State College Boulevard, and one eastbound general purpose lane between SR-57 and SR-55. The project is divided into two segments as described below.

Segment 1:
This completed segment 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.

Segment 2:
This future segment would include adding an eastbound general purpose lane on SR-91 between SR-57 and SR-55 and a westbound general purpose lane from Glassell Street to State College Boulevard. Additional features would include improvements to the Glassell, Tustin, and Lakeview interchanges, and freeway-to-freeway connectors from northbound SR-57 to SR-91 and southbound SR-57 to westbound SR-91. Select auxiliary lanes would be added or re-established. Segment 2 would generally be constructed within the existing ROW. The Next 10 Plan includes advancing this project through the environmental phase.

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

Cost:
Segment 1: The cost for this segment was $42.63 million.

Segment 2: $456.19 million (YOE), including advancement of the environmental phase of the project.

Status:
Segment 1 was completed in July 2016.

Segment 2 is currently in the environmental phase. Environmental clearance is expected by mid- 2019.

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 addressed choke-point 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.

Segment 2 improvements are expected to alleviate congestion and reduce delay by improving the connection from SR-57 to southbound SR-55**.**

External Funding:
Segment 1: $29.75 million in state funds were used for the project.

Segment 2: The Board has approved providing $7.00 million in federal funds to support the environmental phase of this project and the Board approved the use of SR-91 Express Lanes excess revenue for this project. Segment 2 is eligible for future state and federal funds.

Risks:
Overall time, scope and costs risks are low with Segment 2.

Related Projects:
Projects H and J.

Involved Agencies:
OCTA, Cities of Orange and Anaheim, Caltrans, CTC, and FHWA.

Assumptions:
Costs based June 2018 M2 Program Cash Flow.

References:
- OCTA 2014 Long Range Transportation Plan
- 2015 Freeway Plan
- June 2018 Project Status Report
- Capital Funding Program Report – State Highway Project (June 2018)

J. SR-91 (SR-55 to SR-71)

Description:
Project J adds capacity on the SR-91 beginning at SR-55 and extending to SR-71 in Riverside County. The project is divided into three segments as described below.

Segment 1:
This completed segment improved the portion of SR-91 east of SR-241 by adding one eastbound lane from one mile east of 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 the OCTA in coordination with Caltrans District 12.

Segment 3:
This segment would add one additional generally purpose lane on SR-91 beginning at SR-241 and extending to State Route 71 in Riverside County. This projects is contingent upon RCTC's delivery of the complementary improvements within Riverside County.

Cost:
Segment 1: $57.77 million.
Segment 2: $79.74 million.
Segment 3: $292.53 million (YOE), including advancement of the environmental phase.

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. Additional studies will be needed prior to construction.

J. SR-91 (SR-55 to SR-71)

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: The Board has approved the use of SR-91 Express Lanes excess revenue for this segment, however this project requires coordination with the planned RCTC project.

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, local jurisdictions and affected communities.

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 2018 M2 Program Cash Flow.

References:
- OCTA 2014 Long Range Transportation Plan
- 2015 Freeway Plan
- June 2018 Project Status Report
- Capital Funding Program Report – State Highway Project (June 2018)

K. I-405 Widening (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 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: $1.43 billion (YOE).

Express Lanes Portion: $475 million (YOE).

Status:
Project K is currently in the design/construction phase. This schedule is based on the design/build (D/B) 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.

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

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

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. Recently, a $628.93 million TIFIA loan was successfully secured. 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, and costs 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 Rossmoor, Caltrans, CTC, FHWA, and Build America Bureau TIFIA Office.

Assumptions:
Costs based on June 2018 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 2014 Long Range Transportation Plan
- June 2018 Project Status Report
- Capital Funding Program Report – State Highway Project (June 2018)

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

Description:
Project L will add new lanes to I-405 from SR-55 to the vicinity of I-5 to alleviate congestion and reduce delay. The project could also improve chokepoints at interchanges and add merging lanes near on/off ramps (such as Lake Forest Drive, Irvine Center Drive, and SR-133) to improve the overall freeway operations in the I-405/I-5 El Toro "Y" area. The project will generally be constructed within the existing ROW.

Cost:
$323.60 million (YOE), including advancement to the environmental phase.

Status:
The project is currently in the environmental phase. The Next 10 Plan includes funding this project through environmental. Environmental clearance is expected in late 2018.

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 SR-55 and the El Toro 'Y' 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.

Related Projects:
Project K.

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

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

Assumptions:
Costs based on June 2018 M2 Program Cash Flow.

References:
- OCTA 2014 Long Range Transportation Plan
- 2015 Freeway Plan
- June 2018 Project Status Report
- Capital Funding Program Report – State Highway Project (June 2018)

M. I-605 Interchange Improvements

Description:
Project M will improve freeway access and arterial connection to I-605 at Katella Avenue, which serves the communities of Los Alamitos and Cypress. The project will be coordinated with other planned improvements along the SR-22 and the I-405. Specific improvements will be subject to approved plans developed in cooperation with local jurisdictions and affected communities. Operational improvements have been identified on I-605 and Katella in order to increase the efficiency and safety of the interchange.

Cost:
The cost for this project is estimated to be $29.59 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 began in 2016. The Next 10 Plan includes funding this project through the environmental phase, which is expected to be completed in late 2018.

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, enhance safety, 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:
No external funding is currently programmed for this project. However, this project is eligible for future state and federal funds.

M. I-605 Interchange Improvements

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

Related Projects:
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 2018 M2 Program Cash Flow.

References:
- 2015 Freeway Plan
- June 2018 Project Status Report
- Capital Funding Program Report - State Highway Project (June 2018)

N. Freeway Service Patrol

Description:
The Freeway Service Patrol (FSP) provides competitively-bid, privately-contracted tow truck service. This service helps stranded motorists, quickly clearing 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:
$48.7 million in M2 revenue between 2017 and 2026.

Status:
FSP is largely funded by State Highway Account (SHA) funds. OCTA meets matching fund requirements by utilizing its share of Service Authority for Freeway Emergencies (SAFE) funds, which are collected by the Department of Motor Vehicles each year.

As demand and congestion levels increase, this project will permit service hours 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 coverage seven days a week.

Present Day:
As of June 2018, M2 and construction-funded Freeway Service Patrol has provided a total of 69,265 assists to motorists on the Orange County Freeway system.

Benefits:
To keep Orange County moving, FSP provides a range of free services from a jump start or a gallon of gas, to changing a flat tire or towing a disabled vehicle off the freeway.

In FY 2015-16, statewide, for every dollar invested in this program approximately $8 of congestion relief benefit was received.

In Orange County, for every dollar invested in the program approximately $12 of congestion relief benefit was received. 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 $2.6 million annually. SB1 also provides funding for this program.

SAFE ($1 per vehicle registration fee) – approximately $2.8 million annually.

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

Related Projects:
M2 Project N funds are designated to support FSP service for construction of Projects A-M.

N. Freeway Service Patrol

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 the SAFE program 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
- 2015 Freeway Plan

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 27) 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.

Concurrent with efforts made toward completing the Conservation Plan and EIR/EIS, OCTA has been working 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 conjunction with the preparation of the final Conservation Plan and EIR/EIS, Resource Management Plans (RMPs) are being developed to address biological monitoring requirements and management activities, including access provisions, for each of the seven Preserves.

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 third endowment deposit was made in early August 2018. Annual endowment deposits will continue to be made near the beginning of each fiscal year.

The United States Fish and Wildlife Service (USFWS), and the California Department of Fish and Wildlife (CDFW) – collectively referred to as 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.

Present Day:
Five of the seven Preserve RMPs have been finalized and approved by the resources agencies in September 2017. The remaining two RMPs (Eagle Ridge Preserve and Horizon Preserve) will be finalized by late summer 2018.

In consultation with the local fire authority, staff will be preparing 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 (27 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

2018
UPDATE

NEXT 10 DELIVERY PLAN

Streets & Roads Program

OCGO
Local Tax Dollars at Work

OCTA

M2 Streets & Roads Program

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

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

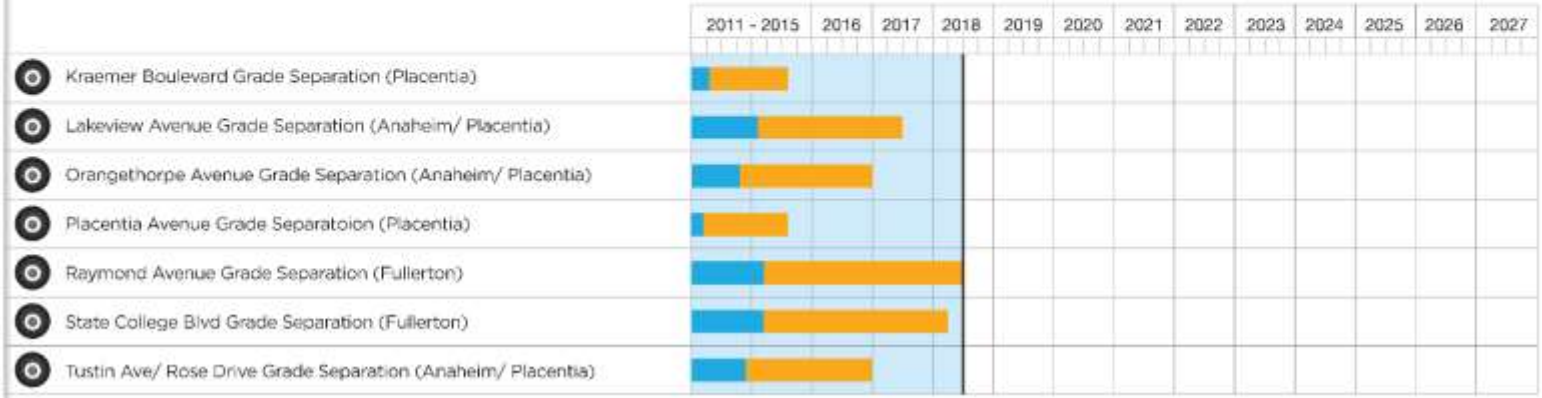
Local Fair Share Program (not mapped)
- Street maintenance and improvements

2018 UPDATE

NEXT 10 DELIVERY PLAN

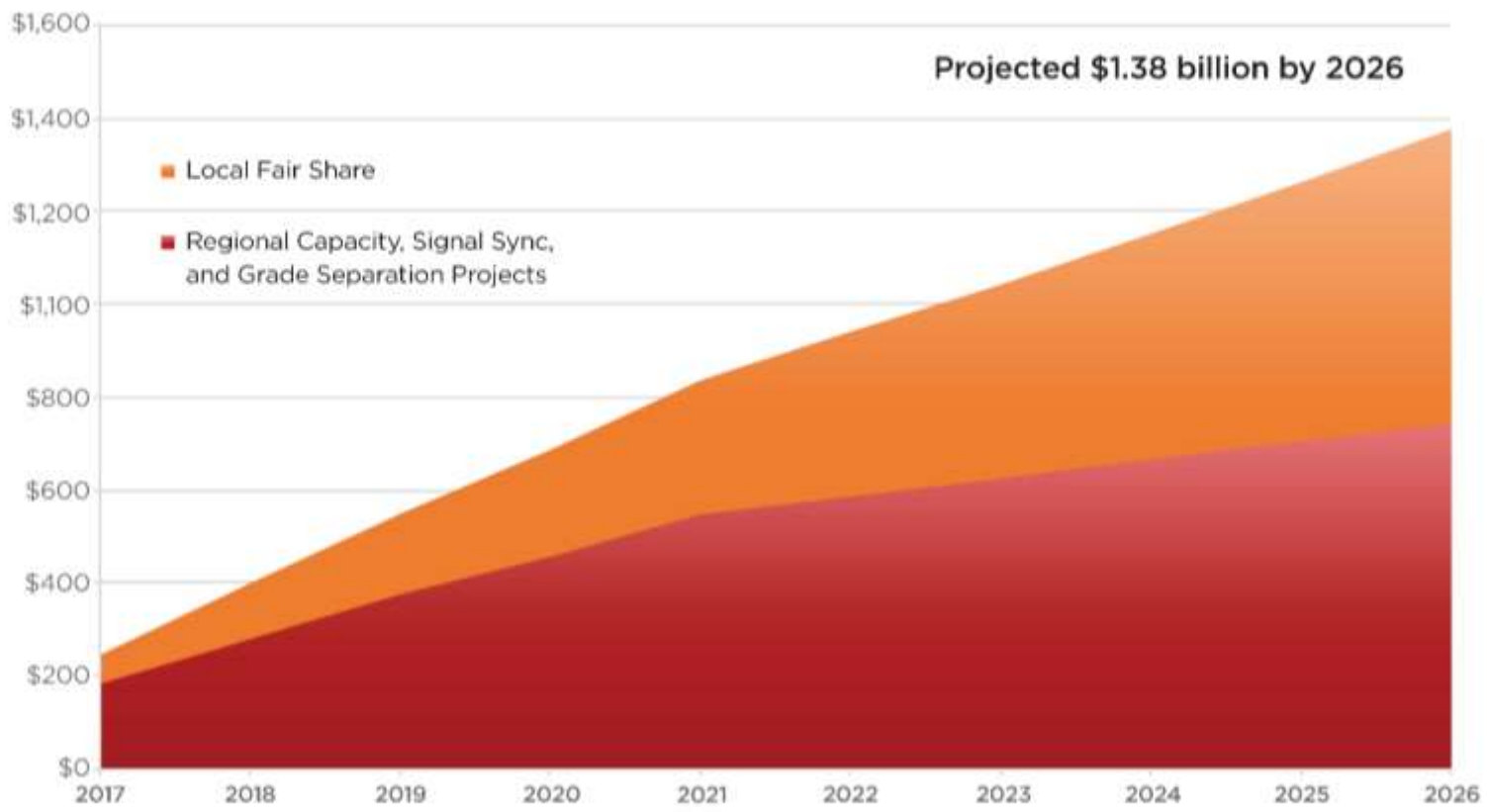
Environmental | Design/Advertise & Award | Construction | Completed

M2 Grade Separation Projects



2018 UPDATE
NEXT 10
DELIVERY PLAN

M2 Streets and Roads Cumulative Expenditures



Streets and Roads Program

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 by late 2018.
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).

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 $664.36 million. M2 is contributing a total of $144.53 million.

Status:
To date, OCTA has awarded $295 million to 146 projects through eight competitive RCP calls for projects. It is anticipated that there will be annual calls for projects between 2017 and 2026.

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

Present Day:
Approximately 820 miles of new lanes remain to be completed, mostly in the form of widening existing streets to ultimate planned widths.

Benefits:
Improvements funded through this program are projected to improve peak period arterial speeds by nearly 25 percent by 2035 compared to not constructing those projects. Completion of the MPAH system, including grade separations and traffic signal synchronization, will result in better traffic flow and a more efficient transportation system.

External Funding:
RCP:
Local agencies are required to provide a 50 percent minimum local match.

O. Regional Capacity Program

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 $262.49 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 eligibility requirements to receive funding. Local agencies 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 2018)

P. Regional Traffic Signal Synchronization Program

Description:
Project P will provide 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 more than $98 million, including $18 million in external funding, to 103 projects.

Including early efforts, OCTA and local agencies have implemented 66 corridor-based signal synchronization projects since 2008 for a cost of approximately $44 million (including non-M2 funds). Another 37 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 66 corridors with 2,258 intersections covering 597 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 minimum 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.

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

P. Regional Traffic Signal Synchronization Program

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 2018)

Q. Local Fair Share Program

Description:
Project Q provides formula "Local Fair Share" funds that local agencies 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 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 a 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 2018, approximately $342.35 million in Local Fair Share payments have been provided to local agencies and the County.

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.

Risks:
Local agencies 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 agencies (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 2018)

2018
UPDATE

NEXT 10 DELIVERY PLAN

Transit Programs

OCGO
Local Tax Dollars at Work

OCTA

M2 Transit Projects

(R) Metrolink Service Expansion Program
- Metrolink Grade Crossing Improvements
- High Frequency Metrolink Service
  existing rail line/station
  proposed station

(S) Transit Extensions to Metrolink
- OC Streetcar

(T) Metrolink Gateways

(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)

Please note that schedules are updated as of June 30, 2018. 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.
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 $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.

R. High Frequency Metrolink Service

Description:
Project R provides for sustained and expanded rail service into Los Angeles and Orange Counties along the three along the three Metrolink lines serving Orange County (Orange County, Inland Empire-Orange County, and 91 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 $335 million between 2017 and 2026 in sales tax revenue.

Status:
Metrolink is currently operating 54 weekday trains in Orange County. To date, rail safety enhancements at 52 at-grade rail-highway crossings have been completed, and as a result, quiet zones have been established in Anaheim, Dana Point, Irvine, Orange, San Clemente, Santa Ana, San Juan Capistrano, and Tustin (as part of the OCX improvements completed during the EAP).

Early station improvements completed during the EAP 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 and the Laguna Niguel/Mission Viejo Metrolink Station Americans with Disabilities Act (ADA) ramps was completed in September 2017. Four other rail station improvements are currently underway: Orange Transportation Center Parking Structure, Placentia Metrolink Station, Anaheim Canyon Metrolink Station improvement project, and Fullerton Transportation Center elevators. All projects are expected to be complete by 2020.

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, and 17th Street. Rail corridor improvements underway include: the Laguna Niguel to San Juan Capistrano Passing Siding project, San Juan Creek Railroad Bridge Replacement, Control Point at 4th Street, Railroad ROW Slope Stabilization Project, Metrolink Preventive Maintenance Capitalized Operation, Metrolink Rehabilitation/ Renovation, and ongoing operation of Positive Train Control.

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

R. High Frequency Metrolink Service

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.

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 $289.48 million.

Federal: CMAQ, the Surface Transportation Block Grant (STBG) Program, and Federal Transit Administration (FTA) Sections 5307, 5309, and 5337, totaling $342.27 million.

Local Other: Local funding from the cities as well as other entities is programmed for $83.71 million.

M1 also provided $135.28 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.

Related Projects:
Project S, Project T, and Project V.

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 (June 2018)

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 $296 million between 2017 and 2026 (for fixed guideways and rubber tire) in sales tax revenue.

Status:
Fixed Guideway: Through a competitive process, one project, the OC Streetcar, is moving forward through the design process. This project will operate in the Cities of Santa Ana and Garden Grove. There is potential for future calls for projects at the Board's discretion.

Rubber Tire: One call for projects has been issued since 2012, providing approximately $730,000 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. Additional external funding for the OC Streetcar project includes state Cap and Trade, federal CMAQ, and FTA Section 5307 and anticipated New Starts funding, totaling $407.76 million.

M1 also provided $10.98 million for preliminary studies.

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

S. Transit Extensions to Metrolink

Risks:
While the FTA and the Orange County Congressional delegation continue to show strong support for the project, authorization for the New Starts FFGA remains outstanding. Delay in receipt of OC Streetcar FFGA from the FTA, could impact the overall delivery schedule.

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 be able to provide their required match and OCTA, is approved for New Starts funding for the guideway project.

Rubber Tire: Future calls for projects will be based on the level of interest from local jurisdictions.

References:
- M2 Eligibility Guidelines
- Federal 5309 Funding Guidelines
- OCTA's Comprehensive Business Plan
- Capital Funding Program Report - Rail Project (June 2018)
- 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) is building a High-Speed Rail (HSR) system that is planned to extend as far north as Sacramento and as far south as San Diego. The system will be constructed in two phases, with Phase 1 extending from San Francisco to Anaheim. Phase 2 will be constructed as two connecting lines extending north to Sacramento from Merced, and south to San Diego from Los Angeles via the Inland Empire. Phase 1 includes construction of the connection between Los Angeles Union Station and the Anaheim ARTIC station. Expanding service to Phase 1 stations is planned to take place in 2029.

Benefits:
Early completion of Project T allowed for early investment in the Orange County rail system to facilitate the ultimate integration of various high-speed rail systems within the County. Additionally, this resolves long term parking constraints through the relocation of the station.

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

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.

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 (June 2018)

U. Expand Mobility Choices for Seniors and Persons with Disabilities

Description:
Project U provides funding to support mobility choices for seniors and persons with disabilities. This project is divided into three programs as described below. 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:
$115 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 2018, more than $22.46 million has supported over 96 million trips through the Fare Stabilization, $17.45 million provided 1.955 million trips through SMP, and $19.02 million provided 727,000 trips through SNEMT.

The SMP allows participating cities to identify the specific mobility needs of

U. Expand Mobility Choices for Seniors and Persons with Disabilities

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:
$67.3 million on a pay-as-you-go basis between 2017 through 2026.

Status:
To date, the Board has approved three rounds of funding, totaling over $43.6 million for 28 projects (service expansions from the 2018 call counted as separate projects) and 7 planning grants located in the Cities of Anaheim, Costa Mesa, County of Orange, Dana Point, Fountain Valley, Garden Grove, Huntington Beach, Irvine, La Habra, Lake Forest, Laguna Beach, Laguna Niguel, Mission Viejo, Newport Beach, Placentia, Rancho Santa Margarita, San Clemente, San Juan Capistrano, Tustin, and Westminster.

Out of the projects programmed by OCTA: 14 are currently active; five are expected to initiate new services; three have been cancelled (due to low ridership – Westminster in April 2017, La Habra in October 2017, and Anaheim in March 2018); and one is anticipated to be cancelled (Costa Mesa). In May 2017, the City of Garden Grove sent a letter to OCTA to cancel the planning study that would evaluate ridership demand for expansion of Westminster's circulator route.

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 17 participating cities

V. Community Based Circulators

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:
$7.4 million on a pay-as-you-go basis between 2017 through 2026.

Status:
Eighty percent of available Project W funds will be provided to construct local bus stop amenities implemented by cities. Up to 20 percent of available Project W funds are proposed to be directed towards the development and implementation of regional, customer-facing technologies, such as real-time systems and other elements that benefit the 100 busiest stops, as well as the overall bus system.

Project W Guidelines were presented to the Board on March 10, 2014. Based on October 2012 ridership data (daily weekday passenger boardings), OCTA staff identified 15 cities eligible to receive Project W funding for city-initiated bus stop improvements. For the first call for projects, seven cities applied for funding and the Board approved up to $1.2 million for 51 projects.

The City of Anaheim was not able to initiate the improvements for their eight projects and will reapply in the future. Upgrades to 14 of the busiest stops in the Cities of Brea, Costa Mesa, Irvine, Orange and Westminster have been completed to date, and the remaining 29 stop improvements in Santa Ana are currently in the project closeout process.

To date, $370,000 has been contributed towards an OCTA-initiated improvement, a mobile ticketing application (app) that makes it more convenient to purchase bus passes, obtain trip information, and board buses using smart phone devices to display bus passes as proof of payment. In 2017, the app was launched and is now in use across all services including OC Fair, fixed route, and Express Bus service. The app may be used by fixed route and college pass users, and is available for seniors and persons with disabilities.

Present Day:
OCTA bus stops currently do not have real-time schedule and arrival time information, and some high volume stops lack passenger amenities commensurate with the volume of riders.

Benefits:
Passenger information and amenities such as real-time information and better lighting at key stops will be a significant benefit for OC Bus customers.

External Funding:
None. These projects are funded by M2 only.

W. Safe Transit Stops

Risks:
City-initiated: Cities are responsible for amenities at bus stops. Depending on the amenities selected, long-term maintenance and operating costs could be hard to sustain.

OCTA-initiated: Purchased passes are saved to customers' mobile devices to avoid data/service connection issues, however digital passes are not accessible without battery power. While mobile capabilities are a strong incentive to use OCTA services, customers in need of on-demand services will likely utilize Uber and Lyft real-time pick-up services as opposed to waiting for fixed-route, scheduled bus service.

Related Projects:
Not Applicable.

Involved Agencies:
Local agencies (cities and the County of Orange) with a top 100 busiest stop are eligible to receive funding.

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

2018
UPDATE

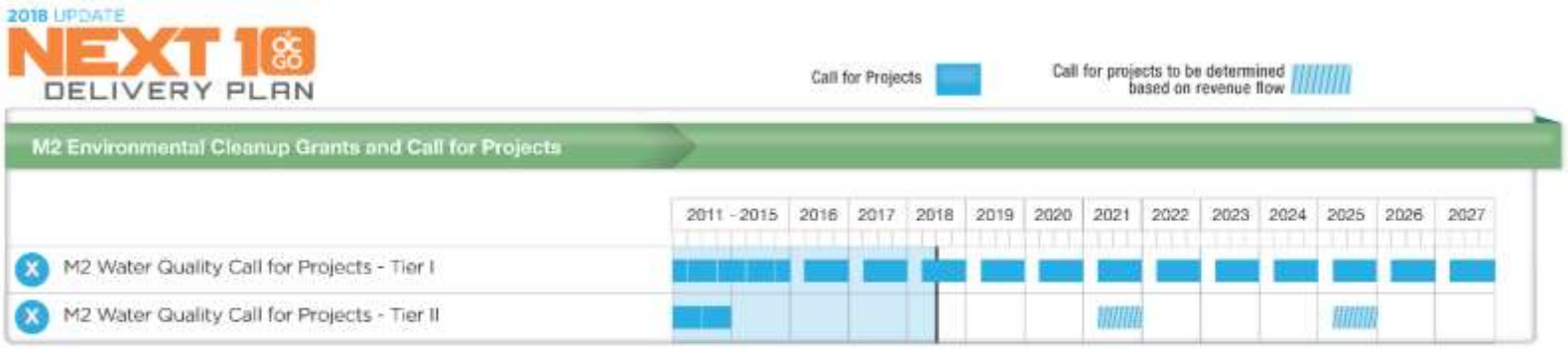
NEXT 10 DELIVERY PLAN

Environmental Cleanup Program

OCGO
Local Tax Dollars at Work

OCTA

2018 UPDATE
NEXT 10
DELIVERY PLAN



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 $269.7 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 ton[5] 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.

[5] 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 $41.2 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.

It is anticipated that there would be more frequency of calls for projects under the Tier 1 program. Depending on the availability of revenues for this program, there may be one to two Tier 2 calls for project during this ten-year period.

Status:
The Board has awarded approximately $20 million to fund 154 Tier 1 projects in 33 cities and the County of Orange through seven rounds of funding. An eighth call for projects was released in March 2018 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.

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

X. Environmental Cleanup Program

Water Act requirements for controlling transportation-generated pollution.

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

2018
UPDATE

NEXT 10 DELIVERY PLAN

Appendix

OCGO
Local Tax Dollars at Work

OCTA

To determine the status of the M2 Program, staff developed 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. This cash flow is reviewed annually and was updated as part of this 2018 Next 10 review. The revenue assumptions are based on the 2018 M2 revenue forecast of $13.1 billion using the latest M2 revenue forecast methodology approved by the Board. Additionally, the Next 10 Plan assumes approved TIFIA proceeds and the availability of a viable amount of discretionary federal and/or state funds from 2017 to 2041 and makes specific assumptions about near term grants such as New Starts and net excess 91 Express Lanes revenues for eligible projects. Revenues and expenses were merged into a high-level cash flow model that will be refined through the Plan of Finance. Bond assumptions were also included 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 $2.034 billion in M2 revenue, $1.2 billion in bond proceeds (including $95.4 million in prior bond proceeds), and $1.3 billion in state/federal grants ($1.3 billion of which is already programmed), $153.9 million in committed proceeds, $208.4 million in net excess 91 Express Lanes revenue for eligible projects, $33.4 million in interest, and $20 million transferred in from M1 for a total of $5.036 billion in total revenue. With OCTA's success in bringing in significant external revenue during the most recent state and federal funding cycle along with a reduction in project costs, this has allowed for $332.9 million (13 percent per year) program level line item to be added into the cash flow for economic uncertainties. Costs for the same period total $4.694 billion. The Next 10 Plan assumes four new bond issuances between 2019 and 2026. Bond issues (treated as revenue source for cash flow purposes) would exceed the forecasted Freeway Program shortfall since debt service payments follow each bond issue. Bonding would be constrained to legal debt coverage ratios, and a Plan of Finance will be brought separately to the Board for approval as needed with refined bond assumptions.

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 shelf-ready projects (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) and escalated to YOE dollars (with schedules and costs

constrained to ending balances by year). These future projects may be advanced based on revenue availability. The table on the following page summarizes revenues and costs assumed in the M2 Freeway Program through 2041 (in YOE dollars).

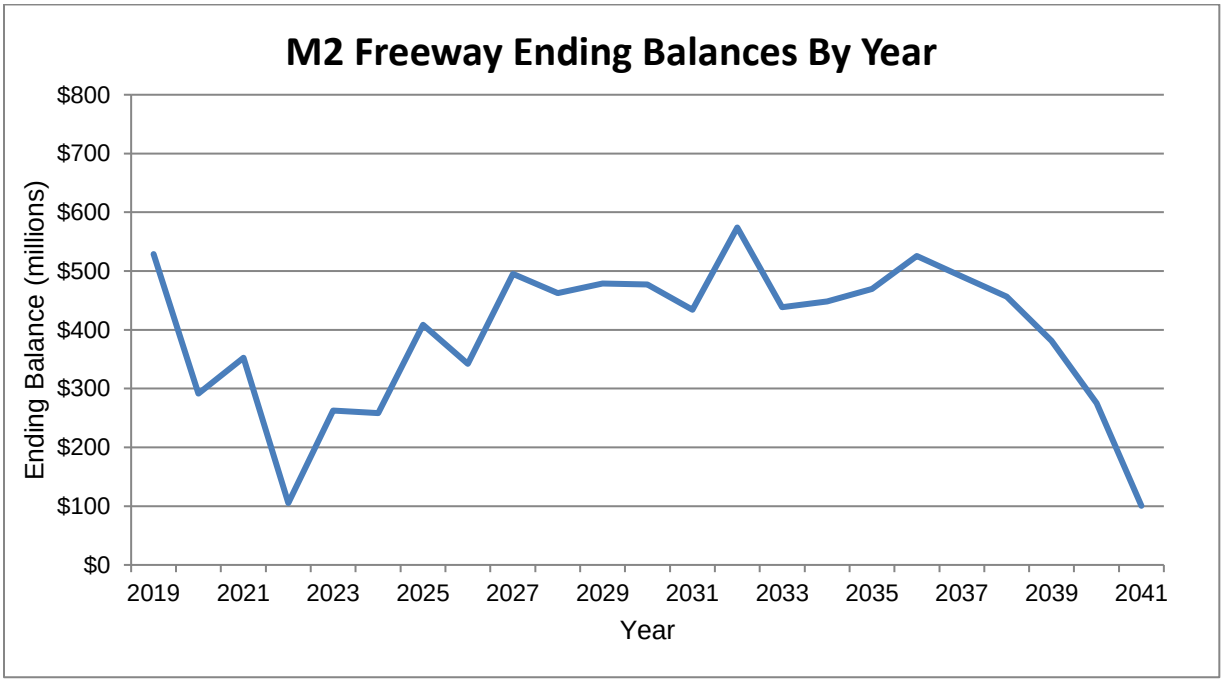
These assumptions assume that current law with regard to the recently enacted gas tax remains in place. If the repeal of the gas tax is successful, the program level economic uncertainties allowance would need to be reduced from 13 percent to seven percent but the program continues to be solvent. The freeway program cash flow has a low ending balance in 2022. This is the current control point of the program and will need to be closely monitored as OCTA continues to move into the potential of an increasing cost environment.

In summary, the analysis shows that despite the reduction in sales tax revenue and the potential of increasing costs, the addition of secured programmed external funds along with refined project costs and revised bonding assumptions allows the full scope of the M2 Program to be delivered as promised through 2041. The cash flow includes a program level line item allowance for economic uncertainties to provide OCTA with financial protection of unknown market risks.

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)	$488.6	$33.7	$41.7	$480.7
Project B (I-5, SR-55 to "Y")	$312.1	$28.0	$438.3	$(98.2)
Project C (I-5, South of "Y")	$651.8	$471.5	$781.8	$341.5
Project D (I-5 interchanges)	$268.2	$86.1	$187.5	$166.8
Project E (SR-22 access improvements)	$124.7	-	-	$124.7
Project F (SR-55 improvements)	$380.5	$235.6	$638.8	$(22.8)
Project G (SR-57 improvements)	$268.9	$111.2	$359.6	$20.6
Project H (SR-91, I-5 to SR-57)	$145.5	$27.2	$59.0	$113.8
Project I (SR-91,SR-57 to SR-55)[1]	$433.0	$485.9	$498.8	$420.1
Project J (SR-91, SR-55 to OC/RC line)[1]	$366.1	$422.6	$430.0	$358.6
Project K (I-405, I-605 to SR-55)[2]	$1,115.2	$289.3	$1,425.0	$(20.5)
Project L (I-405, SR-55 to I-5)	$332.3	$8.0	$323.6	$16.7
Project M (I-605 access improvements)	$20.8	-	$29.6	$(8.8)
Project N (Freeway Service Patrol)	$155.9	-	$155.8	$0.1
Mitigation Program @ 5%	$266.5	-	$222.7	$43.8
Transfer from M1 Savings	-	$20.0	-	$20.0
Interest Earnings	-	$33.4	-	$33.4
Bond Interest Costs[3]	-	-	$909.3	$(909.3)
Other Non-Programmed Revenue	-	$150.0	-	$150.0
Freeway Program Economic Uncertainties[4]	-	-	$1,130.6	$(1,130.6)
Subtotal Revenues and Costs	**$5,330.0**	**$2,402.6**	**$7,632.1**	
2041 Projected Balance:				**$100.6**



[1] $741.7 million in SR-91 Express Lanes excess revenues has been incorporated into Other Revenues for Project I (currently assumed at $449.2 million) and Project J (currently assumed at $292.5 million).

[2] $153.9 million has been incorporated into Other Revenues for Project K. This amount 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.

[3] Total debt service less bond proceeds and investment earnings

[4] The Plan allocates funds for economic uncertainties programmed in the first 10 years and the last 5 years of the Program.

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 $1.514 billion in M2 revenue, $22.1 million in interest, $121.6 million in prior bond proceeds, and $607.9 million in M1 and state/federal grants (primarily for the OC Bridges Program), for a total of $2.265 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). While the overall Streets and Roads Program balance by 2026 runs a total deficit of $102.8 million during the Next 10 years, the program is solvent by 2041. There are several years where internal borrowing is necessary to address negative ending balances.

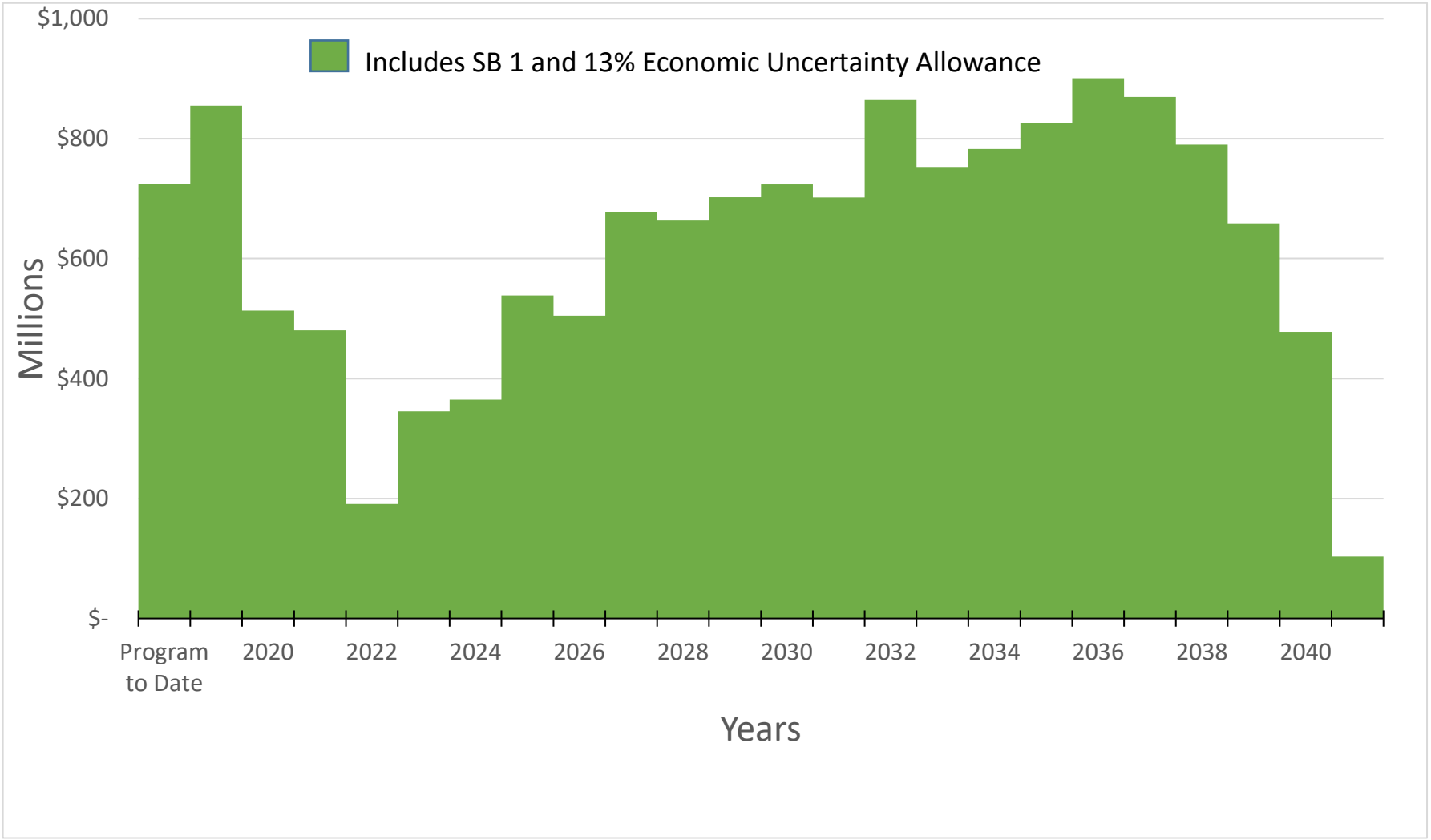
Transit Program

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 $1.201 billion in M2 revenue, $51.7 million in prior bond proceeds, $526.9 million in external revenue, and $9.4 million in interest for a total of $1.788 billion. Expenses for this same time period total $1.507 billion. The cash flow includes the assumption of $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 capacity 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 $97.8 million in M2 revenue. Expenses for this same time period total $97.8 million. Conservation of water quality improvements are on schedule with significant accomplishments at or above the planned objectives goal.

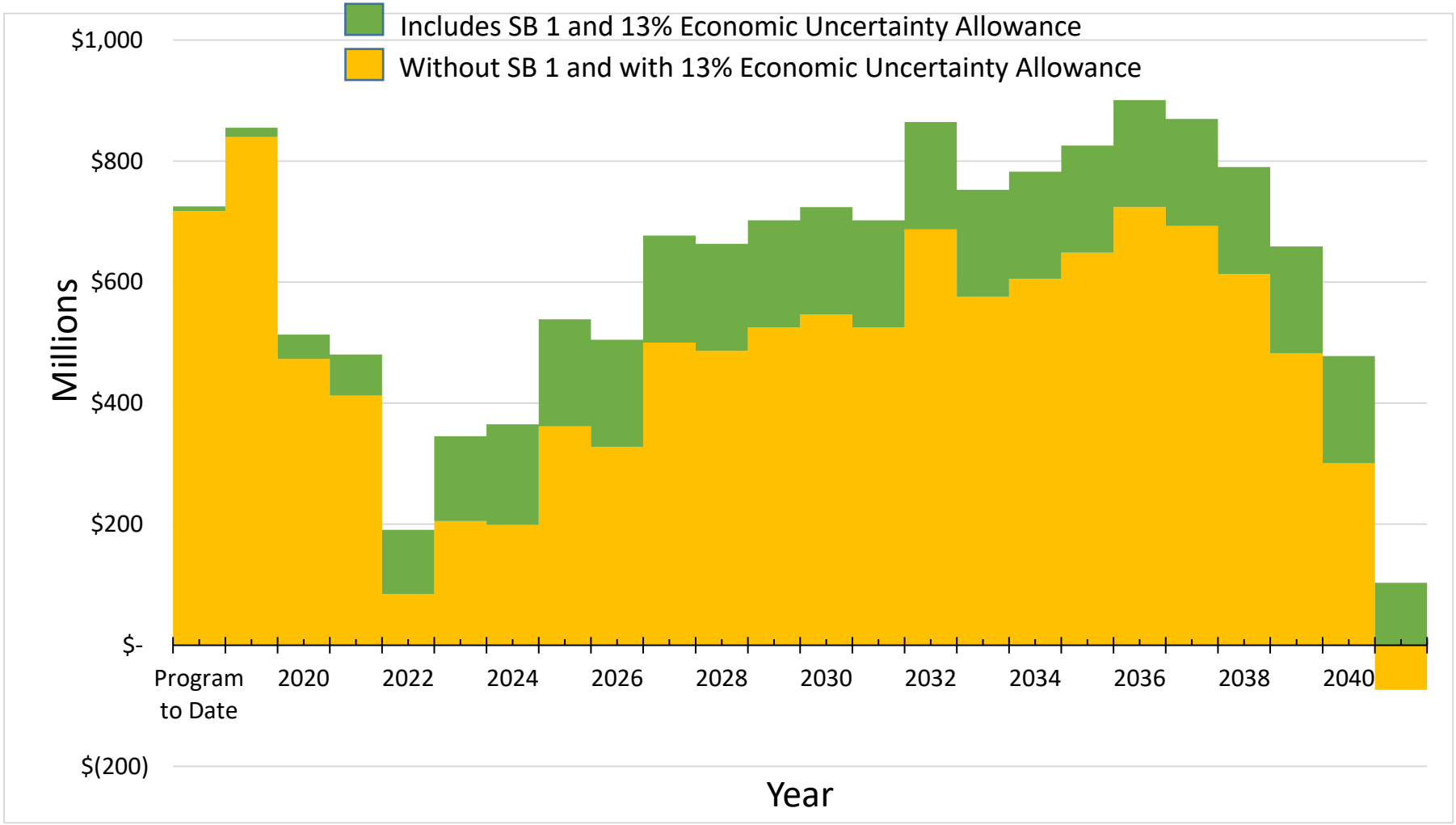
2018 Updated Next 10 Plan
M2 Program Cash Balance with SB 1 (Chapter 5, Statutes of 2017)



ATTACHMENT B

M2 – Measure M2

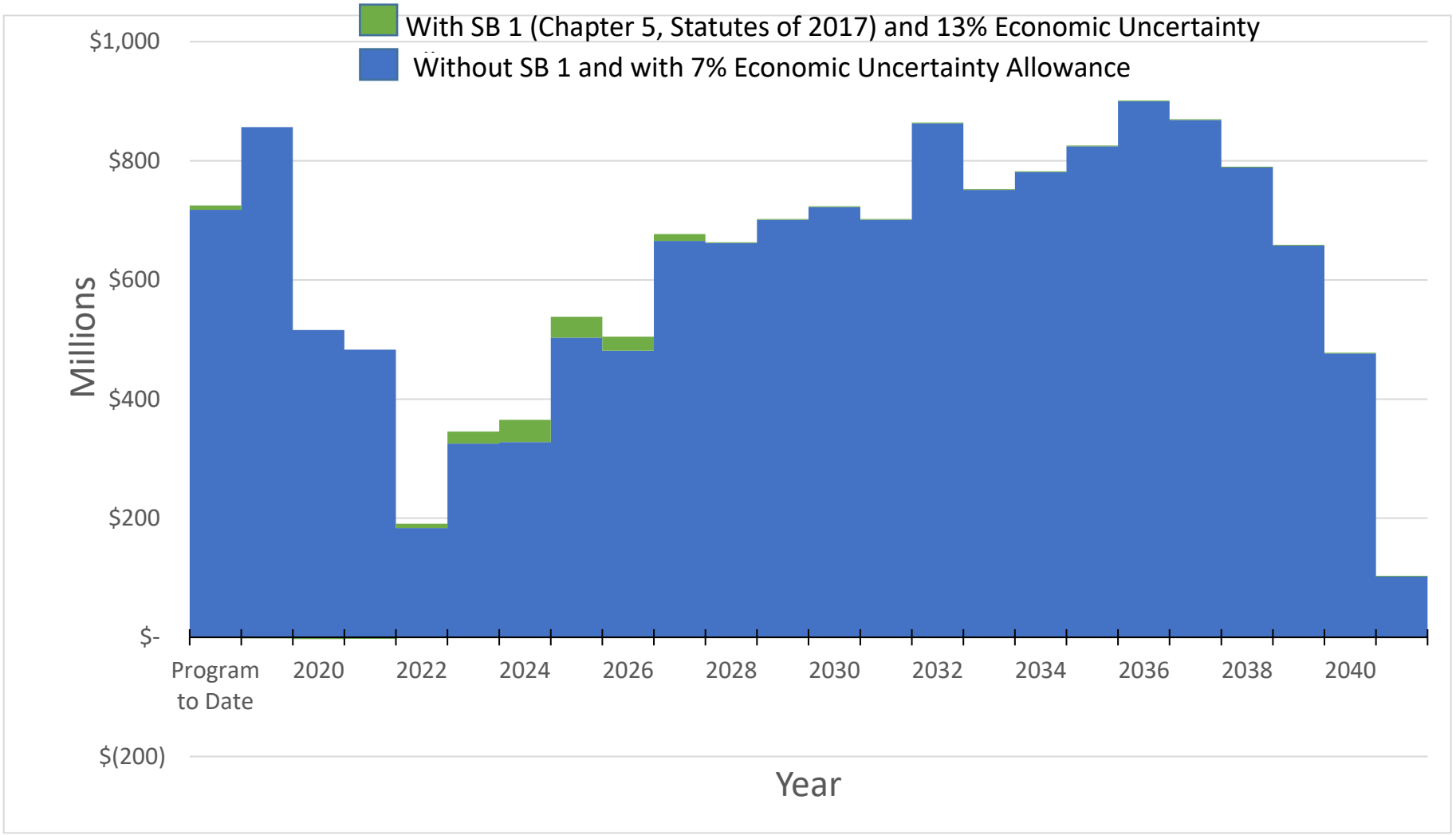
2018 Updated Next 10 Plan
M2 Program Cash Balance Comparison With And Without SB 1 (Chapter 5, Statutes of 2017)



ATTACHMENT C

M2 – Measure M2

2018 Updated Next 10 Plan
M2 Program Cash Balance With Adjusted Economic Uncertainty Allowance



ATTACHMENT D

ATTACHMENT E

2018 UPDATE NEXT 10 OC GO DELIVERY PLAN

Next 10 Progress Report on Deliverables

The 2018 Updated Next 10 Delivery Plan (Next 10) is based on ten deliverables intended to provide guidance on program and project delivery during the ten-year period 2017 through 2026. With nearly two years of the ten-year plan complete, progress on accomplishments is provided.

Freeways

1. Deliver $3.5[1] billion of freeway improvements approved through construction.

Status: The M2 freeway program currently consists of 27 projects or project segments. At the point of Next 10 adoption in November 2016, nine projects were completed, and another nine were designated to be complete within the Next 10 time-frame. Including the previously completed projects, OCTA was on track to deliver $3.1 billion in freeway improvements by 2026. Funded with 91 Express Lanes excess revenues, a tenth project, the SR-91 between SR-57 to SR-55 (Project I) was designated a priority project and is now part of Deliverable 1 (planned to be complete by 2029). Since Next 10 adoption, three segments of the Interstate 5 (I-5) between Avenida Vista Hermosa and San Juan Creek Road, opened to traffic in March 2018, adding six miles of carpool lanes. The remaining six segments are in design or construction. With Project I, OCTA will deliver $3.5 billion in freeway improvements approved through construction.

Invest approximately $715[1] million more in revenues, bringing the completed freeway program improvements to $4.3 billion (Projects A-M).

Status: The final eight remaining project segments (of the 27 total) are on track to be environmentally cleared by 2026, making them "shelf ready" for future advancement. In all, during the Next 10 time-period, approximately $4.3 billion in freeway improvements promised to the voters in M2 will be completed or underway by 2026. Using the guiding principles adopted by the Board of Directors (Board), Deliverable 2 includes approximately $715 million in funding to move another project (or projects) directly into design and construction if assumptions on revenues and costs hold.

Streets and Roads

2. Allocate nearly $1 billion with $400 million in competitive funding to local jurisdictions to expand roadway capacity and synchronize signals (Project O and Project P), and nearly $600 million in flexible funding to local jurisdictions to help maintain aging streets or for use on other transportation needs as appropriate (Project Q). Additionally, complete the OC Bridges Program.

Status: All seven bridges included in the OC Bridges program are complete. Since the adoption of the Next 10 Plan in November 2016, OCTA awarded approximately $82 million in competitive funding through the Regional Capacity Program (Project O) and Regional Traffic Signal Synchronization Program (Project P). Additionally, $98.1 million in Local Fair Share (Project Q) funds have been distributed to local agencies. This brings the total allocation to date to $188.1 million. On August 13, 2018, the Board approved the release of the 2019 Call for Projects

[1] Because Project I is now included with Deliverable 1, the original Deliverable 1 investment increased to $3.5 billion, and the original Deliverable 2 investment of $1.2 billion has been reduced to $715 million. The overall freeway deliverable commitment remains the same at $4.3 billion.

for approximately $32 million for Project O and $8 million for Project P and funding recommendations will be presented to the Board by mid-2019.

Transit

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

Status: Extend Metrolink into LA - Additional trains into LA are contingent on completion of a triple track project anticipated in early 2019 and successful negotiation of an agreement with the BNSR Railway for the shared use of their corridor and associated indemnification and liability. Negotiations are underway.

Status: Six rail station projects - Two are complete - San Clemente Pier Station Lighting and Laguna Niguel/Mission Viejo Station Americans with Disabilities Act ramps. Two station projects are in construction - the Fullerton Transportation Center Elevator Upgrades and the Orange Transportation Center parking structure. The final two are in design – Anaheim Canyon Station improvements and the Placentia Metrolink Station project.

4. Secure Full Funding Grant Agreement (FFGA), start construction, oversee vehicle manufacturer 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.

Status: OC Streetcar - Activities continue to move forward, including final possession of remaining required right-of-way, procurement of demolition services, coordination with third parties on utility relocation, finalizing the California Public Utilities Commission safety approvals for the OC Streetcar's grade crossings certification, finalizing the scope of services for the operations and maintenance request for proposals, and continued coordination with the Federal Transit Administration (FTA) on the status of the FFGA. The notice to proceed (NTP) for the streetcar vehicle manufacturing contract was issued. Award of the construction contract and NTP is anticipated by the end of the year.

The FTA continues to show strong support for the project, and a FFGA is anticipated in 2018.

Status: OC Transit Vision - The draft Transit Master Plan was presented to the Board in February 2018. The plan included an action plan which was divided into short, medium and long-term recommendations. The Board directed staff to consider the plan in the upcoming Long-Range Transportation Plan process. Staff will be advancing many of the short-term action plan items over the next year.

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

Status: Approximately $20.2 million has been provided for the Senior Mobility Program, the Senior Non-Emergency Medical Transportation Program, and the Fare Stabilization Program since the Next 10 adoption.

6. 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: In December 2017, OCTA staff requested letters from local agencies to determine interest for a future round of Project V funding. OCTA received 13 letters of interest, and in February 2018, the Board initiated a 2018 Project V call. On June 25, 2018, the Board awarded $6.8 million to fund six community-based transit circulators projects.

7. 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: To date, the Board has approved up to $1,205,666 to support 51 city-initiated improvements, and $370,000 for OCTA-initiated improvements. The City of Anaheim postponed development of eight stops and will move forward in a future funding cycle. Of the remaining 43 stops, 14 stops have been completed, and the remaining 29 stops are in the project closeout process. An additional funding cycle is anticipated in 2019.

Environmental

8. 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 allowing streamlined project approvals for M2 freeway projects. In January 2018, 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 Preserves. Two deposits into the endowment have taken place with approximately $2.9 million to be deposited annually.

9. Work with the Environmental Cleanup Allocation Committee (ECP) 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 ECP (Project X).

Status: Since adoption of the Next 10 Plan in November 2016, OCTA issued two calls for Tier 1 ECP projects. The Board awarded approximately $3.13 million to fund Tier 1 projects during the 2017 annual call. The 2018 Tier 1 call was released on March 12, 2018, and funding recommendations are anticipated in late summer.

Information Items

COMMITTEE TRANSMITTAL

August 13, 2018

To: Members of the Board of Directors

From: Laurena Weinert, Clerk of the Board

Subject: Capital Programs Division – Fourth Quarter Fiscal Year 2017-18 and Planned Fiscal Year 2018-19 Capital Action Plan Performance Metrics

Executive Committee Meeting of August 6, 2018

Present: Chairwoman Bartlett, Vice Chairman Shaw, and Directors Hennessey, and M. Murphy
Absent: Directors Do, Murray, and Nelson

Committee Vote

Following the discussion, no action was taken on this receive and file information item.

Staff Recommendation

Receive and file as an information item.

August 6, 2018

To: Executive Committee

From: Darrell E. Johnson, Chief Executive Officer

Subject: Capital Programs Division - Fourth Quarter Fiscal Year 2017-18 and Planned Fiscal Year 2018-19 Capital Action Plan Performance Metrics

Overview

The Orange County Transportation Authority's Strategic Plan key strategies and objectives to achieve the goals for Mobility and Stewardship include delivery of all Capital Action Plan projects on time and within budget. The Capital Action Plan is used to create a performance metric to assess capital project delivery progress on highway, grade separation, rail, and facility projects. This report provides an update on the Capital Action Plan delivery and performance metrics.

Recommendation

Receive and file as an information item.

Background

The Orange County Transportation Authority (OCTA) Capital Programs Division is responsible for project development and delivery of highway, grade separation, rail, and facility projects from the beginning of the environmental approval phase through construction completion. Project delivery commitments reflect defined project scope, costs, and schedules. Project delivery commitments shown in the Capital Action Plan (CAP) are key strategies and objectives to achieve the Strategic Plan goals for Mobility and Stewardship.

This report is a quarterly update on the CAP performance metrics, which are a snapshot of the planned CAP project delivery milestones in the budgeted fiscal year (FY).

Discussion

The Capital Programs Division objective is to deliver projects on schedule and within the approved project budget. Key project cost and schedule commitments are captured in the CAP, which is regularly updated with new projects and project status (Attachment A). The CAP is categorized into four key project groupings; freeway projects, grade separation projects, rail and station projects, and facility projects. Schedule milestones are used as performance indicators of progress in project delivery. The CAP performance metrics provides a FY snapshot of the milestones targeted for delivery in the budgeted FY, and provides transparency and performance measurement of capital project delivery.

The CAP project costs represent the total cost of the project across all phases of project delivery, including support costs, and right-of-way (ROW) and construction capital costs. Baseline costs, if established, are shown in comparison to either the actual or forecast cost. Baseline costs may be shown as to-be-determined (TBD) if project scoping studies and estimates have not been developed or approved, and may be updated as project delivery progresses and milestones are achieved. Projects identified in the Orange County local transportation sales tax Measure M2 (M2) are identified with the corresponding M2 project letter. The CAP status update is also included in the M2 Quarterly Report.

The CAP summarizes the very complex capital project critical path delivery schedules into eight key milestones.

Begin Environmental	The date work on the environmental clearance, project report, or preliminary engineering phase begins.
Complete Environmental	The date environmental clearance and project approval is achieved.
Begin Design	The date final design work begins, or the date when a design-build contract begins.
Complete Design	The date final design work is 100 percent complete and approved.
Construction Ready	The date contract bid documents are ready for advertisement, including certification of ROW, all agreements executed, and contract constraints cleared.

Advertise for Construction	The date a construction contract is advertised for bids.
Award Contract	The date the construction contract is awarded.
Construction Complete	The date all construction work is completed, and the project is open to public use.

These delivery milestones reflect progression across the project delivery phases shown below.

Project schedules reflect approved milestone dates in comparison to forecast or actual milestone dates. Milestone dates may be shown as TBD if project scoping or approval documents have not been finalized and approved, or if the delivery schedule has not been negotiated with the agency or consultant implementing the specific phase of a project. Planned milestone dates can be revised to reflect new dates from approved baseline schedule changes. On a monthly basis, actual dates are updated when milestones are achieved, and forecast dates are updated to reflect project delivery status.

CAP milestones achieved in the fourth quarter FY 2017-18 include:

Freeway and Railroad Grade Separation Projects

- The construction ready milestone for the Interstate 5 (I-5) widening from Oso Parkway to Alicia Parkway was achieved. Advertisement for construction bids is planned in October 2018.

- The complete construction milestone for the State Route 57 (SR-57) widening landscape replacement planting project from Katella Avenue to Lincoln Avenue was achieved. This milestone was originally planned in FY 2018-19, but was delivered early.

- The Raymond Avenue railroad grade separation achieved completion of construction with conditional construction acceptance by the City of Fullerton. Construction is now complete on all of the OC Bridges projects, and closeout activities will continue.

The following CAP milestones missed the planned delivery through the fourth quarter of FY 2017-18.

Freeway Projects

- The complete environmental milestone for the State Route 241 direct connector to the 91 Express Lanes has been delayed beyond FY 2017-18 to assess and account for shifting traffic patterns in the 91 corridor, and to include regionally coordinated transportation planning changes which may impact the 91 corridor.

- The complete design milestone for the I-5 widening between State Route 73 and Oso Parkway has been delayed. The California Department of Transportation (Caltrans) is performing ROW acquisition activities, which are the delivery schedule critical path planned to be completed in April 2019. OCTA's design consultant has finalized the design; however, Caltrans has requested the final plans, specifications, and estimates (PS&E) not be submitted for final construction contract packaging until a few months prior to the planned April 2019 construction ready milestone. This will allow any potential design updates due to changes in standards and/or specifications to be incorporated into the final PS&E submittal.

- The award contract milestone for construction of the second high-occupancy vehicle (HOV) lane on I-5 between State Route 55 (SR-55) and SR-57 was missed. Construction bids were opened, and eight bids were received. However, as of July 23, 2018, Caltrans informed OCTA that all eight bidders have been found non-responsive, and the project will be re-advertised for construction bids in FY 2018-19. Staff is currently working with Caltrans to re-assess the schedule impacts. This situation may be indicative of difficulties contractors are having with market pricing and in securing subcontractors.

- The complete construction milestone for construction of an HOV lane on I-5 from Avenida Pico to Avenida Vista Hermosa was missed. However, all new lanes and facilities are open to traffic, and construction completion is anticipated by August 2018.

- The complete construction milestone for the HOV lane on I-5 from Pacific Coast Highway to San Juan Creek Road was missed. However, all construction was completed on July 3, 2018, and the project is now in the landscape plant establishment period.

Rail and Station Projects

- The complete design, construction ready, and advertise construction milestones for the San Juan Capistrano railroad passing siding project were missed. As reported last quarter, final design was delayed awaiting the City of San Juan Capistrano's concurrence on National Pollution Discharge Elimination System permitting requirements. Concurrences from the City of San Juan Capistrano have been obtained, and OCTA's design consultant is finalizing the construction contract documents. Staff will be seeking OCTA Board of Directors (Board) approval to release the invitation for construction bids on August 27, 2018.

- The Placentia Metrolink Station construction ready, advertise construction, and award contract milestones were missed. As reported last quarter, final approval of the new station by BNSF, City of Placentia acquisition of required BNSF ROW, and finalization of the BNSF railroad construction and maintenance (C&M) agreement remain to be completed. The project schedule is being re-assessed, and the planned advertisement for construction has been moved into FY 2018-19.

- The OC Streetcar award contract milestone was missed. Construction bids were opened on June 19, 2018, a pre-award protest was received and a responsibility review process of apparent low bidders is underway. A construction contract award recommendation is planned to be brought to the OCTA Board for approval as soon as the Federal Transit Administration (FTA) begins the final processing and approval process of the OC Streetcar Full Funding Grant Agreement (FFGA).

Recap of FY 2017-18 Performance Metrics

The performance metrics snapshot provided at the beginning of FY 2017-18 reflected 34 planned major project delivery milestones to accomplish. Two additional milestones not originally planned for delivery in the FY were delivered early. The CAP and performance metrics have been updated to reflect both milestones achieved and missed throughout FY 2017-18 (Attachment B). There were 24 milestones completed (70.6 percent) in FY 2017-18, including the two milestones delivered early.

Through FY 2017-18, six of the 12 missed milestones are attributable to the Laguna Niguel/San Juan Capistrano railroad passing siding and the Placentia Metrolink Station delays.

New FY 2018-19 Performance Metrics

The CAP and performance metrics have been updated with the latest project status, and there are 25 major project delivery milestones planned in FY 2018-19 (Attachment C).

FY 2018-19 Cost and Performance Metrics Risk Look Ahead

The largest FY 2018-19 risks are third party agreements and approvals, and market cost trends impacting construction costs. Construction costs may continue to rise through the FY due to rapidly changing markets for materials and labor. To provide the OCTA Board with additional insight into the construction market looking forward, staff has been working with a consultant to monitor key construction market indicators. A presentation on current trends, including consultant insight, is being prepared. Additionally, staff is updating the M2 Next 10 Delivery Plan. The update will incorporate the latest sales tax revenue projections, committed external state and federal revenue, updated project cost estimates, and revised bonding assumptions. Both reports will be brought to the Board in September 2018.

Market cost changes have potential to impact construction bid costs for the I-5 widening from Oso Parkway to Alicia Parkway, which is planned to be advertised for construction bids in October 2018. Additionally, the Caltrans re-advertisement for construction of the second HOV lane on I-5 between SR-55 and SR-57 is at risk for bid costs exceeding available budget authority.

Final award of the OC Streetcar construction contract is subject to the FTA processing and approval of the FFGA.

Advancing the Placentia Metrolink station project to construction as planned in the third quarter of FY 2018-19 is dependent on processing and approvals of the station, ROW, and C&M agreement by BNSF.

The City of Fullerton is experiencing difficulty with its contractor completing construction of the Fullerton Transportation Center Elevator Upgrades, currently planned in the second quarter of FY 2018-19. Work is now behind schedule and liquidated damages are being assessed.

Summary

Significant capital project delivery progress has been achieved and is reflected in the CAP. The planned FY 2018-19 performance metrics created from forecast project schedules will be used as a general project delivery performance indicator. Staff will continue to manage project costs and schedules across all project phases to meet project delivery commitments and report quarterly.

Attachments

A. Capital Action Plan, Status Through June 2018
B. Capital Programs Division, Fiscal Year 2017-18 Performance Metrics Through June 2018
C. Capital Programs Division, Fiscal Year 2018-19 Performance Metrics Plan

Prepared by:

James G. Beil, P.E.
Executive Director, Capital Programs
(714) 560-5646

Capital Action Plan

Status Through June 2018

Updated: July 23, 2018

Capital Projects	Cost Baseline/Forecast (millions)	Schedule Plan/Forecast: Begin Environmental	Complete Environmental	Begin Design	Complete Design	Construction Ready	Advertise Construction	Award Contract	Complete Construction
Freeway Projects:									
I-5, Pico to Vista Hermosa	$113.0	Jun-09	Dec-11	Jun-11	Oct-13	Feb-14	Oct-14	Dec-14	Aug-18
Project C	$85.9	**Jun-09**	**Oct-11**	**Jun-11**	**Oct-13**	**May-14**	**Sep-14**	**Dec-14**	Jul-18
I-5, Vista Hermosa to Pacific Coast Highway	$75.6	Jun-09	Dec-11	Jun-11	Feb-13	Jun-13	Oct-13	Dec-13	Mar-17
Project C	$71.4	**Jun-09**	**Oct-11**	**Jun-11**	**May-13**	**Aug-13**	**Feb-14**	**Jun-14**	**Jul-17**
I-5, Pacific Coast Highway to San Juan Creek Road	$70.7	Jun-09	Dec-11	Jun-11	Jan-13	May-13	Aug-13	Oct-13	Sep-16
Project C Cost/Schedule Risk	$71.2	**Jun-09**	**Oct-11**	**Jun-11**	**Jan-13**	**Apr-13**	**Aug-13**	**Dec-13**	Jul-18
I-5, I-5/Ortega Interchange	$90.9	Sep-05	Jun-09	Jan-09	Nov-11	Mar-12	Jun-12	Aug-12	Sep-15
Project D	$75.2	**Sep-05**	**Jun-09**	**Jan-09**	**Dec-11**	**Apr-12**	**Jun-12**	**Aug-12**	**Jan-16**
I-5, I-5/Ortega Interchange (Landscape)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Project D	N/A	N/A	N/A	**Jan-14**	**Oct-14**	**Feb-15**	**Aug-15**	**Sep-15**	**Sep-16**
I-5, SR-73 to Oso Parkway	$151.9	Sep-11	Jun-14	Mar-15	Jan-18	May-18	Aug-18	Dec-18	Jan-24
Project C & D Cost/Schedule Risk	$188.1	**Oct-11**	**May-14**	**Mar-15**	Aug-18	Apr-19	Jul-19	Nov-19	Dec-24
I-5, Oso Parkway to Alicia Parkway	$196.2	Sep-11	Jun-14	Nov-14	Jun-17	Dec-17	Feb-18	Jun-18	Feb-23
Project C & D Cost/Schedule Risk	$188.6	**Oct-11**	**May-14**	**Nov-14**	**Dec-17**	**Jun-18**	Oct-18	Jan-19	Oct-23
I-5, Alicia Parkway to El Toro Road	$133.6	Sep-11	Jun-14	Mar-15	Jun-18	Dec-18	Jan-19	May-19	Jun-23
Project C Cost/Schedule Risk	$164.2	**Oct-11**	**May-14**	**Mar-15**	Apr-19	Oct-19	Feb-20	Jun-20	Jun-24
I-5, SR-73 to El Toro Road (Landscape)	TBD	N/A	N/A	TBD	TBD	TBD	TBD	TBD	TBD
Project C	$12.4	N/A	N/A	Jan-22	Sep-23	Jan-24	Mar-24	Jun-24	Dec-25
I-5, I-5/El Toro Road Interchange	TBD	Apr-17	Nov-19	TBD	TBD	TBD	TBD	TBD	TBD
Project D	TBD	**Apr-17**	Nov-19	TBD	TBD	TBD	TBD	TBD	TBD
I-5, I-405 to SR-55	TBD	May-14	Aug-18	TBD	TBD	TBD	TBD	TBD	TBD
Project B	TBD	**May-14**	Apr-19	TBD	TBD	TBD	TBD	TBD	TBD
I-5, SR-55 to SR-57	$38.1	Jul-11	Jun-13	Jun-15	Mar-17	Jul-17	Sep-17	Dec-17	Feb-20
Project A Cost/Schedule Risk	$41.7	**Jun-11**	**Apr-15**	**Jun-15**	**Jun-17**	**Dec-17**	**Mar-18**	Nov-18	Jan-21
SR-55, I-405 to I-5	$410.9	Feb-11	Nov-13	Sep-17	Apr-20	Dec-20	Apr-21	Jul-21	Aug-25
Project F Cost/Schedule Risk	$410.9	**May-11**	**Aug-17**	**Sep-17**	Apr-20	Dec-20	Apr-21	Jul-21	Aug-25
SR-55, I-5 to SR-91	TBD	Dec-16	Jan-20	TBD	TBD	TBD	TBD	TBD	TBD
Project F	TBD	**Dec-16**	Jan-20	TBD	TBD	TBD	TBD	TBD	TBD
SR-57 Northbound (NB), Orangewood Avenue to Katella Avenue	TBD	Apr-16	Dec-18	TBD	TBD	TBD	TBD	TBD	TBD
Project G	TBD	**Apr-16**	Jan-19	TBD	TBD	TBD	TBD	TBD	TBD
SR-57 (NB), Katella Avenue to Lincoln Avenue	$78.7	Apr-08	Jul-09	Jul-08	Nov-10	Mar-11	May-11	Aug-11	Sep-14
Project G	$38.0	**Apr-08**	**Nov-09**	**Aug-08**	**Dec-10**	**Apr-11**	**Jul-11**	**Oct-11**	**Apr-15**

ATTACHMENT A

Capital Action Plan

Status Through June 2018

Updated: July 23, 2018

Capital Projects	Cost Baseline/Forecast (millions)	Schedule Plan/Forecast: Begin Environmental	Complete Environmental	Begin Design	Complete Design	Construction Ready	Advertise Construction	Award Contract	Complete Construction
SR-57 (NB), Katella Avenue to Lincoln Avenue (Landscape)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Project G	N/A	N/A	N/A	**May-09**	**Jul-10**	**Jun-17**	**Jul-17**	**Sep-17**	**Jun-18**
SR-57 (NB), Orangethorpe Avenue to Yorba Linda Boulevard	$80.2	Aug-05	Dec-07	Feb-08	Dec-09	Apr-10	Jun-10	Oct-10	May-14
Project G	$52.3	**Aug-05**	**Dec-07**	**Feb-08**	**Jul-09**	**Dec-09**	**May-10**	**Oct-10**	**Nov-14**
SR-57 (NB), Yorba Linda Boulevard to Lambert Road	$79.3	Aug-05	Dec-07	Feb-08	Dec-09	Apr-10	Jun-10	Oct-10	Sep-14
Project G	$54.1	**Aug-05**	**Dec-07**	**Feb-08**	**Jul-09**	**Mar-10**	**May-10**	**Oct-10**	**May-14**
SR-57 (NB), Orangethorpe Avenue to Lambert Road (Landscape)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Project G	N/A	N/A	N/A	**Oct-14**	**Aug-17**	**Dec-17**	**Jan-18**	**Feb-18**	Apr-19
SR-57 (NB), Lambert Road to Tonner Canyon	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Project G	TBD	Jul-20	Jan-23	TBD	TBD	TBD	TBD	TBD	TBD
SR-91 Westbound (WB), I-5 to SR-57	$78.1	Jul-07	Apr-10	Oct-09	Feb-12	Jul-12	Aug-12	Nov-12	Apr-16
Project H	$59.0	**Jul-07**	**Jun-10**	**Mar-10**	**Apr-12**	**Aug-12**	**Oct-12**	**Jan-13**	**Jun-16**
SR-91 Westbound (WB), I-5 to SR-57 (Landscape)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Project H	N/A	N/A	N/A	**Nov-14**	**Aug-16**	**Dec-16**	**Feb-17**	**Mar-17**	**Nov-17**
SR-91, SR-57 to SR-55	TBD	Jan-15	Oct-18	TBD	TBD	TBD	TBD	TBD	TBD
Project I **Cost/Schedule Risk**	TBD	**Jan-15**	Aug-19	TBD	TBD	TBD	TBD	TBD	TBD
SR-91 (WB), Tustin Interchange to SR-55	$49.9	Jul-08	Jul-11	Jul-11	Mar-13	Jul-13	Aug-13	Oct-13	Jul-16
Project I	$42.6	**Jul-08**	**May-11**	**Jun-11**	**Feb-13**	**Apr-13**	**Jun-13**	**Oct-13**	**Jul-16**
SR-91, SR-55 to SR-241	$128.4	Jul-07	Jul-09	Jun-09	Jan-11	Apr-11	Jun-11	Sep-11	Dec-12
Project J	$79.7	**Jul-07**	**Apr-09**	**Apr-09**	**Aug-10**	**Dec-10**	**Feb-11**	**May-11**	**Mar-13**
SR-91, SR-55 to SR-241 (Landscape)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Project J	N/A	N/A	N/A	**May-12**	**Feb-13**	**Apr-13**	**Jul-13**	**Oct-13**	**Feb-15**
SR-91 Eastbound, SR-241 to SR-71	$104.5	Mar-05	Dec-07	Jul-07	Dec-08	Mar-09	May-09	Jul-09	Nov-10
Project J	$57.8	**Mar-05**	**Dec-07**	**Jul-07**	**Dec-08**	**May-09**	**Jun-09**	**Aug-09**	**Jan-11**
91 Express Lanes to SR-241 Toll Connector	TBD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	TBD	**Nov-13**	TBD	**Dec-16**	TBD	TBD	TBD	TBD	TBD
I-405, I-5 to SR-55	TBD	Dec-14	Jul-18	TBD	TBD	TBD	TBD	TBD	TBD
Project L	TBD	**Dec-14**	Aug-18	TBD	TBD	TBD	TBD	TBD	TBD
I-405, SR-55 to I-605 (Design-Build)	$1,900.0	Mar-09	Mar-13	Mar-14	Nov-15	Feb-16	Mar-16	Nov-16	May-23
Project K	$1,900.0	**Mar-09**	**May-15**	**Mar-14**	**Nov-15**	**Feb-16**	**Mar-16**	**Nov-16**	May-23
I-405/SR-22 HOV Connector	$195.9	N/A	N/A	Sep-07	Sep-09	Mar-10	May-10	Aug-10	Aug-14
	$120.3	N/A	N/A	**Sep-07**	**Jun-09**	**Sep-09**	**Feb-10**	**Jun-10**	**Mar-15**
I-405/I-605 HOV Connector	$260.4	N/A	N/A	Sep-07	Sep-09	Mar-10	May-10	Oct-10	Jan-15

Capital Action Plan

Status Through June 2018

Updated: July 23, 2018

Capital Projects	Cost Baseline/Forecast (millions)	Schedule Plan/Forecast: Begin Environmental	Complete Environmental	Begin Design	Complete Design	Construction Ready	Advertise Construction	Award Contract	Complete Construction
	$172.6	N/A	N/A	**Sep-07**	**Sep-09**	**Feb-10**	**May-10**	**Oct-10**	**Mar-15**
I-405/SR-22/I-605 HOV Connector (Landscape)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	**Jun-08**	**May-09**	**Feb-16**	**May-16**	**Jul-16**	**Feb-18**
I-605, I-605/Katella Interchange	TBD	Aug-16	Nov-18	TBD	TBD	TBD	TBD	TBD	TBD
Project M	TBD	**Aug-16**	Nov-18	TBD	TBD	TBD	TBD	TBD	TBD
Grade Separation Projects:									
Sand Canyon Avenue Railroad Grade Separation	$55.6	N/A	Sep-03	Jan-04	Jul-10	Jul-10	Oct-10	Feb-11	May-14
Project R	$61.9	N/A	**Sep-03**	**Jan-04**	**Jul-10**	**Jul-10**	**Oct-10**	**Feb-11**	**Jan-16**
Raymond Avenue Railroad Grade Separation	$77.2	Feb-09	Nov-09	Mar-10	Aug-12	Nov-12	Feb-13	May-13	Aug-18
Project O	$128.4	**Feb-09**	**Nov-09**	**Mar-10**	**Dec-12**	**Jul-13**	**Oct-13**	**Feb-14**	**May-18**
State College Boulevard Railroad Grade Separation (Fullerton)	$73.6	Dec-08	Jan-11	Jul-06	Aug-12	Nov-12	Feb-13	May-13	May-18
Project O	$97.0	**Dec-08**	**Apr-11**	**Jul-06**	**Feb-13**	**May-13**	**Sep-13**	**Feb-14**	**Jan-18**
Placentia Avenue Railroad Grade Separation	$78.2	Jan-01	May-01	Jan-09	Mar-10	May-10	Mar-11	Jun-11	Nov-14
Project O	$64.5	**Jan-01**	**May-01**	**Jan-09**	**Jun-10**	**Jan-11**	**Mar-11**	**Jul-11**	**Dec-14**
Kraemer Boulevard Railroad Grade Separation	$70.4	Jan-01	Sep-09	Jan-09	Jul-10	Jul-10	Apr-11	Aug-11	Oct-14
Project O	$63.8	**Jan-01**	**Sep-09**	**Feb-09**	**Jul-10**	**Jan-11**	**Jun-11**	**Sep-11**	**Dec-14**
Orangethorpe Avenue Railroad Grade Separation	$117.4	Jan-01	Sep-09	Feb-09	Dec-11	Dec-11	Feb-12	May-12	Sep-16
Project O	$108.6	**Jan-01**	**Sep-09**	**Feb-09**	**Oct-11**	**Apr-12**	**Sep-12**	**Jan-13**	**Oct-16**
Tustin Avenue/Rose Drive Railroad Grade Separation	$103.0	Jan-01	Sep-09	Feb-09	Dec-11	Mar-12	May-12	Aug-12	May-16
Project O	$98.3	**Jan-01**	**Sep-09**	**Feb-09**	**Jul-11**	**Jun-12**	**Oct-12**	**Feb-13**	**Oct-16**
Lakeview Avenue Railroad Grade Separation	$70.2	Jan-01	Sep-09	Feb-09	Oct-11	Oct-12	Feb-13	May-13	Mar-17
Project O	$110.6	**Jan-01**	**Sep-09**	**Feb-09**	**Jan-13**	**Apr-13**	**Sep-13**	**Nov-13**	**Jun-17**
17th Street Railroad Grade Separation	TBD	Oct-14	Jun-16	TBD	TBD	TBD	TBD	TBD	TBD
Project R	TBD	**Oct-14**	**Nov-17**	TBD	TBD	TBD	TBD	TBD	TBD
Rail and Station Projects:									
Rail-Highway Grade Crossing Safety Enhancement	$94.4	Jan-08	Oct-08	Jan-08	Sep-08	Sep-08	Sep-08	Aug-09	Dec-11
Project R	$90.4	**Jan-08**	**Oct-08**	**Jan-08**	**Sep-08**	**Sep-08**	**Sep-08**	**Aug-09**	**Dec-11**
San Clemente Beach Trail Safety Enhancements	$6.0	Sep-10	Jul-11	Feb-12	Apr-12	Apr-12	Jul-12	Oct-12	Jan-14
Project R	$5.0	**Sep-10**	**Jul-11**	**Feb-12**	**Jun-12**	**Jun-12**	**Oct-12**	**May-13**	**Mar-14**
San Juan Capistrano Passing Siding	$25.3	Aug-11	Jan-13	Mar-15	May-16	May-16	Aug-16	Dec-16	Jan-19
Cost/Schedule Risk	$30.8	**Aug-11**	**Mar-14**	**Mar-15**	Jul-18	Jul-18	Aug-18	Jan-19	Feb-21
OC Streetcar	$310.4	Aug-09	Mar-12	Feb-16	Sep-17	Oct-17	Dec-17	Aug-18	Aug-21
Project S Cost/Schedule Risk	$418.9	**Aug-09**	**Mar-15**	**Feb-16**	**Nov-17**	**Dec-17**	**Dec-17**	Aug-18	Aug-21

Capital Action Plan

Status Through June 2018

Updated: July 23, 2018

Capital Projects	Cost Baseline/Forecast (millions)	Schedule Plan/Forecast: Begin Environmental	Complete Environmental	Begin Design	Complete Design	Construction Ready	Advertise Construction	Award Contract	Complete Construction
Placentia Metrolink Station and Parking Structure	$34.8	Jan-03	May-07	Oct-08	Jan-11	TBD	TBD	TBD	TBD
Project R Cost/Schedule Risk	$34.8	**Jan-03**	**May-07**	**Oct-08**	**Feb-11**	Jan-19	Jan-19	May-19	Jan-21
Anaheim Canyon Station	$27.9	Jan-16	Dec-16	Mar-19	May-19	May-19	Jul-19	Nov-19	Mar-21
	$27.9	**Jan-16**	**Jun-17**	**Mar-18**	May-19	May-19	Jul-19	Nov-19	Mar-21
Orange Station Parking Expansion	$33.2	Dec-09	Dec-12	Nov-10	Apr-13	Jul-16	Jul-16	Nov-16	Feb-19
	$32.3	**Dec-09**	**May-16**	**Nov-10**	**Apr-16**	**Jul-16**	**Jul-16**	**Jun-17**	Feb-19
Fullerton Transportation Center - Elevator Upgrades	$3.5	N/A	N/A	Jan-12	Dec-13	Dec-13	Jun-14	Sep-14	Mar-17
Cost/Schedule Risk	$4.6	N/A	N/A	**Jan-12**	**Dec-13**	**Dec-13**	**Aug-14**	**Apr-15**	Dec-18
Laguna Niguel/Mission Viejo Station ADA Ramps	$3.5	Jul-13	Jan-14	Jul-13	Aug-14	Aug-14	Sep-14	Jan-15	Apr-17
	$5.2	**Jul-13**	**Feb-14**	**Jul-13**	**Jul-15**	**Jul-15**	**Jul-15**	**Oct-15**	**Sep-17**
Anaheim Regional Transportation Intermodal Center	$227.4	Apr-09	Feb-11	Jun-09	Feb-12	Feb-12	May-12	Jul-12	Nov-14
Project R & T	$232.2	**Apr-09**	**Feb-12**	**Jun-09**	**May-12**	**May-12**	**May-12**	**Sep-12**	**Dec-14**

Note: Costs associated with landscape projects are included in respective freeway projects.

Grey = Milestone achieved
Green = Forecast milestone meets or exceeds plan
Yellow = Forecast milestone is one to three months later than plan
Red = Forecast milestone is over three months later than plan

Begin Environmental: The date work on the environmental clearance, project report, or preliminary engineering phase begins.
Complete Environmental: The date environmental clearance and project approval is achieved.
Begin Design: The date final design work begins, or the date when a design-build contract begins.
Complete Design: The date final design work is 100 percent complete and approved.
Construction Ready: The date contract bid documents are ready for advertisement, including certification of right-of-way, all agreements executed, contract constraints are cleared.
Advertise for Construction: The date a construction contract is both funded and advertised for bids.
Award Contract: The date the construction contract is awarded.
Construction Complete: The date all construction work is completed and the project is open to public use.

Acronyms

I-5 - Santa Ana Freeway (Interstate 5)
SR-73 - San Joaquin Freeway (State Route 73)
SR-55 - Costa Mesa Freeway (State Route 55)
SR-57 - Orange Freeway (State Route 57)
SR-91 - Riverside Freeway (State Route 91)
SR-71 - Corona Expressway (State Route 71)
SR-22 - Garden Grove Freeway (State Route 22)
I-405 - San Diego Freeway (Interstate 405)
SR-241 - Foothill/Eastern Transportation Corridor (State Route 241)
I-605 - San Gabriel River Freeway (Interstate 605)
HOV - High-Occupancy Lane
ADA - Americans with Disabilities Act

ATTACHMENT B

Capital Programs Division
Fiscal Year 2017-18 Performance Metrics Through June 2018

Begin Environmental

Project Description	FY 18 Qtr 1 Fcst	FY 18 Qtr 1 Actual	FY 18 Qtr 2 Fcst	FY 18 Qtr 2 Actual	FY 18 Qtr 3 Fcst	FY 18 Qtr 3 Actual	FY 18 Qtr 4 Fcst	FY 18 Qtr 4 Actual	FY 18 Fcst
No "Begin Environmental" milestones scheduled for FY 2017-18									
Total Forecast/Actual	0	0	0	0	0	0	0	0	0

Complete Environmental

Project Description	FY 18 Qtr 1 Fcst	FY 18 Qtr 1 Actual	FY 18 Qtr 2 Fcst	FY 18 Qtr 2 Actual	FY 18 Qtr 3 Fcst	FY 18 Qtr 3 Actual	FY 18 Qtr 4 Fcst	FY 18 Qtr 4 Actual	FY 18 Fcst
SR-55, I-405 to I-5	X	✔							
17th Street Railroad Grade Separation			X	✔					
91 Express Lanes to SR-241 Toll Connector					X				(missed)
Total Forecast/Actual	1	1	1	1	1	0	0	0	3

Begin Design

Project Description	FY 18 Qtr 1 Fcst	FY 18 Qtr 1 Actual	FY 18 Qtr 2 Fcst	FY 18 Qtr 2 Actual	FY 18 Qtr 3 Fcst	FY 18 Qtr 3 Actual	FY 18 Qtr 4 Fcst	FY 18 Qtr 4 Actual	FY 18 Fcst
SR-55, I-405 to I-5	X	✔							
Anaheim Canyon Metrolink Station					X	✔			
Total Forecast/Actual	1	1	0	0	1	1	0	0	2

Complete Design

Project Description	FY 18 Qtr 1 Fcst	FY 18 Qtr 1 Actual	FY 18 Qtr 2 Fcst	FY 18 Qtr 2 Actual	FY 18 Qtr 3 Fcst	FY 18 Qtr 3 Actual	FY 18 Qtr 4 Fcst	FY 18 Qtr 4 Actual	FY 18 Fcst
SR-57 (Northbound), Orangethorpe Avenue to Lambert Road Landscape	X	✔							
OC Streetcar	X			✔					
I-5, Oso Parkway to Alicia Parkway			X	✔					
San Juan Capistrano Passing Siding			X						(missed)
I-5, SR-73 to Oso Parkway					X				(missed)
Total Forecast/Actual	2	1	2	2	1	0	0	0	5

Construction Ready

Project Description	FY 18 Qtr 1 Fcst	FY 18 Qtr 1 Actual	FY 18 Qtr 2 Fcst	FY 18 Qtr 2 Actual	FY 18 Qtr 3 Fcst	FY 18 Qtr 3 Actual	FY 18 Qtr 4 Fcst	FY 18 Qtr 4 Actual	FY 18 Fcst
Placentia Metrolink Station and Parking Structure	X								(missed)
I-5, SR-55 to SR-57			X	✔					
SR-57 (Northbound), Orangethorpe Avenue to Lambert Road Landscape			X	✔					
San Juan Capistrano Passing Siding			X						(missed)
OC Streetcar			X	✔					
I-5, Oso Parkway to Alicia Parkway							X	✔	
Total Forecast/Actual	1	0	4	3	0	0	1	1	6

Advertise Construction

Project Description	FY 18 Qtr 1 Fcst	FY 18 Qtr 1 Actual	FY 18 Qtr 2 Fcst	FY 18 Qtr 2 Actual	FY 18 Qtr 3 Fcst	FY 18 Qtr 3 Actual	FY 18 Qtr 4 Fcst	FY 18 Qtr 4 Actual	FY 18 Fcst
SR-57 (Northbound), Katella Avenue to Lincoln Avenue Landscape	X	✔							
OC Streetcar			X	✔					
Placentia Metrolink Station and Parking Structure			X						(missed)
I-5, SR-55 to SR-57					X	✔			
SR-57 (Northbound), Orangethorpe Avenue to Lambert Road Landscape					X	✔			
San Juan Capistrano Passing Siding					X				(missed)
Total Forecast/Actual	1	1	2	1	3	2	0	0	6

Capital Programs Division
Fiscal Year 2017-18 Performance Metrics Through June 2018

Award Contract

Project Description	FY 18 Qtr 1 Fcst	FY 18 Qtr 1 Actual	FY 18 Qtr 2 Fcst	FY 18 Qtr 2 Actual	FY 18 Qtr 3 Fcst	FY 18 Qtr 3 Actual	FY 18 Qtr 4 Fcst	FY 18 Qtr 4 Actual	FY 18 Fcst
SR-57 (Northbound), Katella Avenue to Lincoln Avenue Landscape		✔	X						
SR-57 (Northbound), Orangethorpe Avenue to Lambert Road Landscape					X	✔			
Placentia Metrolink Station and Parking Structure					X				(missed)
I-5, SR-55 to SR-57							X		(missed)
OC Streetcar							X		(missed)
Total Forecast/Actual	0	1	1	0	2	1	2	0	5

Complete Construction

Project Description	FY 18 Qtr 1 Fcst	FY 18 Qtr 1 Actual	FY 18 Qtr 2 Fcst	FY 18 Qtr 2 Actual	FY 18 Qtr 3 Fcst	FY 18 Qtr 3 Actual	FY 18 Qtr 4 Fcst	FY 18 Qtr 4 Actual	FY 18 Fcst
I-5, Vista Hermosa to Pacific Coast Highway	X	✔							
Laguna Niguel/Mission Viejo Station ADA Ramps		✔	X						
I-405/SR-22/I-605 HOV Connector Landscape					X	✔			
State College Boulevard Railroad Grade Separation (Fullerton)					X	✔			
I-5, Pico to Vista Hermosa							X		(missed)
I-5, Pacific Coast Highway to San Juan Creek Road							X		(missed)
SR-91 (Westbound), I-5 to SR-57 Landscape				✔			X		
Raymond Avenue Railroad Grade Separation								✔	(early)
SR-57 (Northbound), Katella Avenue to Lincoln Avenue Landscape								✔	(early)
Total Forecast/Actual	1	2	1	1	2	2	3	2	7

Totals	7	7	11	8	10	6	6	3	34

Begin Environmental: The date work on the environmental clearance, project report, or preliminary engineering phase begins.
Complete Environmental: The date environmental clearance and project approval is achieved.
Begin Design: The date final design work begins or the date when a design-build contract begins.
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Construction Ready: The date contract bid documents are ready for advertisement, right-of-way certified, all agreements executed, and contract constraints are cleared.
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SR-55 - Costa Mesa Freeway (State Route 55)
SR-57 - Orange Freeway (State Route 57)
SR-91 - Riverside Freeway (State Route 91)
I-605 - San Gabriel River Freeway (Interstate 605)
I-405 - San Diego Freeway (Interstate 405)
SR-241 - Foothill/Eastern Transportation Corridor (State Route 241)
ADA - Americans with Disability Act
HOV - high-occupancey vehicle

X = milestone forecast in quarter
✔ = milestone accomplished in quarter

ATTACHMENT C

Capital Programs Division
Fiscal Year 2018-19 Performance Metrics Plan

Begin Environmental

Project Description	FY 19 Qtr 1 Fcst	FY 19 Qtr 1 Actual	FY 19 Qtr 2 Fcst	FY 19 Qtr 2 Actual	FY 19 Qtr 3 Fcst	FY 19 Qtr 3 Actual	FY 19 Qtr 4 Fcst	FY 19 Qtr 4 Actual	FY 19 Fcst
No "Begin Environmental" milestones scheduled for FY 2018-19									
Total Forecast/Actual	0	0	0	0	0	0	0	0	0

Complete Environmental

Project Description	FY 19 Qtr 1 Fcst	FY 19 Qtr 1 Actual	FY 19 Qtr 2 Fcst	FY 19 Qtr 2 Actual	FY 19 Qtr 3 Fcst	FY 19 Qtr 3 Actual	FY 19 Qtr 4 Fcst	FY 19 Qtr 4 Actual	FY 19 Fcst
I-405, I-5 to SR-55	X								
I-605/Katella Avenue Interchange			X						
SR-57 (Northbound), Orangewood Avenue to Katella Avenue					X				
I-5, I-405 to SR-55							X		
Total Forecast/Actual	1	0	1	0	1	0	1	0	4

Begin Design

Project Description	FY 19 Qtr 1 Fcst	FY 19 Qtr 1 Actual	FY 19 Qtr 2 Fcst	FY 19 Qtr 2 Actual	FY 19 Qtr 3 Fcst	FY 19 Qtr 3 Actual	FY 19 Qtr 4 Fcst	FY 19 Qtr 4 Actual	FY 19 Fcst
No "Begin Design" milestones scheduled for FY 2018-19									
Total Forecast/Actual	0	0	0	0	0	0	0	0	0

Complete Design

Project Description	FY 19 Qtr 1 Fcst	FY 19 Qtr 1 Actual	FY 19 Qtr 2 Fcst	FY 19 Qtr 2 Actual	FY 19 Qtr 3 Fcst	FY 19 Qtr 3 Actual	FY 19 Qtr 4 Fcst	FY 19 Qtr 4 Actual	FY 19 Fcst
San Juan Capistrano Passing Siding	X								
I-5, SR-73 to Oso Parkway	X								
I-5, Alicia Parkway to El Toro Road							X		
Anaheim Canyon Metrolink Station							X		
Total Forecast/Actual	2	0	0	0	0	0	2	0	4

Construction Ready

Project Description	FY 19 Qtr 1 Fcst	FY 19 Qtr 1 Actual	FY 19 Qtr 2 Fcst	FY 19 Qtr 2 Actual	FY 19 Qtr 3 Fcst	FY 19 Qtr 3 Actual	FY 19 Qtr 4 Fcst	FY 19 Qtr 4 Actual	FY 19 Fcst
San Juan Capistrano Passing Siding	X								
Placentia Metrolink Station and Parking Structure					X				
Anaheim Canyon Metrolink Station							X		
I-5, SR-73 to Oso Parkway							X		
Total Forecast/Actual	1	0	0	0	1	0	2	0	4

Advertise Construction

Project Description	FY 19 Qtr 1 Fcst	FY 19 Qtr 1 Actual	FY 19 Qtr 2 Fcst	FY 19 Qtr 2 Actual	FY 19 Qtr 3 Fcst	FY 19 Qtr 3 Actual	FY 19 Qtr 4 Fcst	FY 19 Qtr 4 Actual	FY 19 Fcst
San Juan Capistrano Passing Siding	X								
I-5, Oso Parkway to Alicia Parkway			X						
Placentia Metrolink Station and Parking Structure					X				
Total Forecast/Actual	1	0	1	0	1	0	0	0	3

Capital Programs Division
Fiscal Year 2018-19 Performance Metrics Plan

Award Contract

Project Description	FY 19 Qtr 1 Fcst	FY 19 Qtr 1 Actual	FY 19 Qtr 2 Fcst	FY 19 Qtr 2 Actual	FY 19 Qtr 3 Fcst	FY 19 Qtr 3 Actual	FY 19 Qtr 4 Fcst	FY 19 Qtr 4 Actual	FY 19 Fcst
OC Streetcar	X								
I-5, SR-55 to SR-57			X						
I-5, Oso Parkway to Alicia Parkway					X				
San Juan Capistrano Passing Siding					X				
Placentia Metrolink Station and Parking Structure							X		
Total Forecast/Actual	1	0	1	0	2	0	1	0	5

Complete Construction

Project Description	FY 19 Qtr 1 Fcst	FY 19 Qtr 1 Actual	FY 19 Qtr 2 Fcst	FY 19 Qtr 2 Actual	FY 19 Qtr 3 Fcst	FY 19 Qtr 3 Actual	FY 19 Qtr 4 Fcst	FY 19 Qtr 4 Actual	FY 19 Fcst
I-5, Pico to Vista Hermosa	X								
I-5, Pacific Coast Highway to San Juan Creek Road	X								
Fullerton Transportation Center Elevator Upgrades			X						
Orange Metrolink Station Parking Structure					X				
SR-57 (Northbound), Orangethorpe Avenue to Lambert Road Landscape							X		
Total Forecast/Actual	2	0	1	0	1	0	1	0	5

Totals	8	0	4	0	6	0	7	0	25

Begin Environmental: The date work on the environmental clearance, project report, or preliminary engineering phase begins.
Complete Environmental: The date environmental clearance and project approval is achieved.
Begin Design: The date final design work begins or the date when a design-build contract begins.
Complete Design: The date final design work is 100 percent complete and approved.
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SR-55 - Costa Mesa Freeway (State Route 55)
SR-57 - Orange Freeway (State Route 57)
I-605 - San Gabriel River Freeway (Interstate 605)
I-405 - San Diego Freeway (Interstate 405)

X = milestone forecast in quarter
✔ = milestone accomplished in quarter

COMMITTEE TRANSMITTAL

August 13, 2018

To: Members of the Board of Directors

From: Laurena Weinert, Clerk of the Board

Subject: Measure M2 Comprehensive Transportation Funding Programs – 2019 Annual Call for Projects

Regional Planning and Highways Committee Meeting of August 6, 2018

Present: Directors Bartlett, Delgleize, M. Murphy, Pulido, and Steel
Absent: Directors Nelson and Spitzer

Committee Vote

This item was passed by the Members present.

Director Pulido was not present to vote on this item.

Committee Recommendations

A. Approve proposed revisions to the Comprehensive Transportation Funding Programs Guidelines.

B. Authorize staff to issue the 2019 annual call for projects for the Regional Capacity Program, providing $32 million for potential projects.

C. Authorize staff to issue the 2019 annual call for projects for the Regional Traffic Signal Synchronization Program, providing $8 million for potential projects.

August 6, 2018

To: Regional Planning and Highways Committee

From: Darrell E. Johnson, Chief Executive Officer

Subject: Measure M2 Comprehensive Transportation Funding Programs – 2019 Annual Call for Projects

Overview

The Comprehensive Transportation Funding Programs Guidelines provide the mechanism for administration of the annual competitive call for projects for Measure M2 programs, including the countywide Regional Capacity Program (Project O) and the Regional Traffic Signal Synchronization Program (Project P). The 2019 Regional Capacity Program and Regional Traffic Signal Synchronization Program call for projects is presented for review and approval.

Recommendations

A. Approve proposed revisions to the Comprehensive Transportation Funding Programs Guidelines.

B. Authorize staff to issue the 2019 annual call for projects for the Regional Capacity Program, providing $32 million for potential projects.

C. Authorize staff to issue the 2019 annual call for projects for the Regional Traffic Signal Synchronization Program, providing $8 million for potential projects.

Background

Measure M2 (M2) includes a number of competitive grant programs that provide funding for regional streets and roads projects. The Regional Capacity Program (RCP), also known as Project O, provides funding for improvements to the Orange County Master Plan of Arterial Highways (MPAH). The program also provides for intersection improvements and other projects to help improve street operations and reduce congestion.

The Regional Traffic Signal Synchronization Program (RTSSP), also known as Project P, provides funding for multi-agency, corridor-based, signal synchronization projects throughout Orange County.

These programs allocate funds annually through a competitive call for projects (call) process and target projects that improve traffic flow by considering factors such as degree of congestion relief, cost-effectiveness, and project readiness. To date, these programs have provided $386 million for 385 project phases.

The Comprehensive Transportation Funding Programs (CTFP) document serves as the mechanism and framework with which the Orange County Transportation Authority (OCTA) administers the RCP and RTSSP call, as well as other M2 competitive programs for transit (projects S, T, and V) and environmental cleanup programs (Project X).

The CTFP Guidelines (Guidelines) identify procedures and requirements that local agencies are required to follow to apply for funding and, following the award of funds, to seek reimbursement. The Guidelines were first approved by the OCTA Board of Directors (Board) on March 22, 2010, and were most recently updated and approved in August of 2018.

Discussion

Updates to the Guidelines have been prepared in anticipation of the Board's authorization of the upcoming 2019 annual call for the RCP and RTSSP. OCTA worked closely with the Technical Steering Committee (TSC) and Technical Advisory Committee (TAC) to determine areas of the Guidelines that needed to be adjusted and/or updated. Issues and lessons learned from previous calls were also reviewed and considered. The Guidelines were reviewed and updated, as appropriate, to provide for both better consistency and streamlining throughout the document.

A summary of substantive proposed changes is provided below. These changes essentially fall into three categories which include updates, technical changes, and general clarifications. A more detailed overview of the proposed changes is provided (Attachment A), and a marked-up excerpt of the Guidelines in track changes format is also provided (Attachment B).

Summary of proposed substantive changes:

Updates include the following changes:

- Schedule and call due date changes;
- A limited expansion of RTSSP objectives to now include routes based on traffic patterns, in addition to straight-line corridors; and
- Updated project funding signage specifications.

Technical changes include:

- Removal of the RCP's outdated MPAH assessment project scoring category; and
- Updates to two RTSSP project scoring categories to better reflect existing project applications and incentives for non-capital signal timing projects.

General clarifications that:

- Note that for projects seeking to use the Fast Track approach, the local agency must have received environmental clearance and demonstrate that all necessary easements and titles are in place;
- Specify that freeway interchange agreements with the California Department of Transportation should be in place at the time of application submission;
- Required resolutions must include specific OCTA eligibility and match commitment language; and
- Specify that for RTSSP projects, excess communication system capacity is non-participating from an M2 perspective.

These proposed changes were recommended for Board approval by the OCTA TSC and TAC in June and are now being submitted for consideration and approval.

Next Steps:

If the Board approves these recommendations and authorizes the 2019 call for the RCP and RTSSP, staff will send out letters and e-blast announcements notifying local agencies of the call's initiation and any other pertinent information. Applications would be due to OCTA by October 18, 2018, and based upon project selection criteria as specified in the Guidelines, projects will be prioritized for Board, TAC, and TSC consideration in spring 2019. Project funds, if awarded, would become available to local agencies starting July 1, 2019, and may be programmed as late as fiscal year 2021-22.

Summary

M2 provides funds for intersection and arterial improvements through the RCP, and signal synchronization through the RTSSP, to enhance street operations and reduce congestion. The CTFP serves as the mechanism that OCTA uses to administer competitive RCP and RTSSP funds. Proposed changes to the CTFP were presented and approved by the TAC on June 27, 2018, and staff is now seeking approval of proposed modifications to the Guidelines and authorization to release the 2019 annual call.

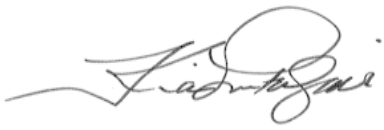
Attachments

A. Summary of Proposed 2019 RCP and RTSSP Call Updates
B. Comprehensive Transportation Funding Programs, Guidelines Excerpt, Proposed Revisions

Prepared by:

Joseph Alcock
Section Manager, M2 Local Programs
(714) 560-5372

Approved by:



Kia Mortazavi
Executive Director, Planning
(714) 560-5741

ATTACHMENT A

Summary of Proposed 2019 RCP and RTSSP Call Updates

- The 2019 call schedule and funding have been updated to reflect the amount available for programming, if ultimately, authorized by the Board. These amounts include $32 million for the RCP and $8 million for the RTSSP.
- Page xi, Definition 25: Removed reference to www.sustainableinfrastructure.org "recycled resources," in order to be more reflective of actual project applications and activities.
- Page xv, Precept 21: Updated language for signage requirements to simplify and direct local agencies to visit website(s) for more up to date project-specific information (http://www.octa.net/Projects-and-Programs/Plans-and-Studies/Funding-Programs/Call-for-Projects/Overview/).
- Page 2-4, Sequential Programming RCP Process: Noted that if an agency is seeking an engineering allocation under the Fast Track approach, they must have received environmental clearance and demonstrate that all necessary easements and titles are in place.
- Page 7-2, RCP Programming Approach: Clarified that projects scoring 50 points or above can potentially be funded via Tier II, once the Tier I process has been completed.
- Page 7-3, RCP Program Approach Table: Removed reference to less than 50 points on the Tier II description.
- Page 7-8, Exhibit 7-3 FAST Comprehensive Transportation Funding Programs Application Checklist under Construction: Noted that as part of a FAST project application, appropriate agreements between the California Department of Transportation and the project lead agency need to be in draft form and/or in place.
- Pages 7-9 and 7-13, "Sample Resolution for Candidate Orange County Comprehensive Transportation Program Projects" Form: Noted that local agencies, at a minimum, must include items a-h on their city council resolution submittals.
- Chapter 7: Removed all references to MPAH Needs Assessment Category. Assessment is nearly ten years old.
- Chapter 7: Removed MPAH needs assessment scoring from all tables and reallocated points to the Transportation Significance Category.
- Page 8-2, Objectives: Modified the objectives for the signal synchronization program to allow for routes in addition to straight-line corridors.
- Page 8-3, 2019 Call, Page 8-5, Application Process, and Page 8-11, Project Definition: Provided clarification on how multiple corridors will be assessed and evaluated.
- Page 8-5, Application Process: Required original photos to be submitted with an electronic copy of applications.
- Page 8-5, Application Process: If the Orange County Transportation Authority is requested to be the lead agency, applicants are required to submit current city specifications with project applications.

- Page 8-12, Eligible Activities New or Upgraded Communication Systems: Noted that systems should be sized for the needed capacity of the Intelligent Transportation System network and that excess capacity would be considered non-participating.
- Page 8-17, Table 8-1, RTSSP Scoring Criteria: Adjusted project scoring points in the project characteristics and current project readiness categories to reflect current program dynamics.
    - Project Characteristics: Reallocated points to incentivize signal timing (non-capital improvements).
    - Current Project Readiness: Reallocated points for preliminary engineering Complete category to Re-timing of prior RTSSP category.
- Consolidated Chapter 9 into other chapters to remove redundancies.
- General updates and cleanup throughout the document for consistency.

Acronyms
Board – Board of Directors
Call – Call for Projects
FAST – Freeway Arterial/Street Transition
MPAH – Master Plan of Arterial Highways
RCP – Regional Capacity Program
RTSSP – Regional Traffic Signal Synchronization Program

ATTACHMENT B

Comprehensive Transportation Funding Programs Guidelines Excerpt

Proposed Revisions

engineering phase or for the right-of-way phase, and all liens/claims have been settled for the construction phase. The date of project phase completion will begin the 180-day requirement for the submission of a project final report as required by the M2 Ordinance, Attachment B, Section III.A.9.

23. The term "reasonable" in reference to project phase costs shall refer to a cost that, in its nature and amount, does not exceed that which would normally be incurred under the circumstances prevailing at the time the decision was made to incur the cost. Factors that influence the reasonableness of costs: whether the cost is of a type generally recognized as ordinary and necessary for the completion of the work effort and market prices for comparable goods or services.

24. The term "savings" or "project savings" in reference to projects awarded through the CTFP are any grant funds remaining on a particular project phase after all eligible items within the approved project scope have been reimbursed.

25. "Sustainability", as it applies to capacity enhancing infrastructure projects, refers to project elements that support environmental benefits such as use of renewable or recycled resources ~~as recognized through the Envision Process (www.sustainableinfrastructure.org)~~.

26. The term "Work Force Labor Rates (WFLR)" include direct salaries plus direct fringe benefits.

18. An administrative time extension may be granted for expiring M2 funds for a project that is clearly engaged in the procurement process (advertised but not yet awarded).
19. Funds that have been encumbered shall be used in a timely fashion. For project phases, excluding right-of-way, funds will expire after 36 months from encumbrance. For the right-of-way phase, funds will expire after 36 months from the date of the first offer letter and/or, if contract services are required, 36 months from the contract Notice to Proceed (NTP). Extensions up to 24 months may be granted through the Semi-Annual Review (SAR) process. Extension requests must be received no less than 90 days prior to the encumbrance deadline.
20. Preliminary Engineering allocations can be programmed in two different fiscal years depending on the project schedule and when certain engineering costs will need to occur during the project development and implementation phases. Local agencies can issue a separate NTP on a single contract to ensure compliance with the timely use of funds requirement. Local agencies may also issue separate contracts for the funds programmed in different fiscal years. Local agencies are required to obligate the funds within the same fiscal year of the programming or request a delay at least 90 days prior to the obligation deadline.
21. For all construction projects awarded CTFP funds in excess of $500,000 and/or exceeding a 90-day construction period schedule, the local agency shall install and remove signage in accordance with OCTA specifications during the construction period. The implementing agency ~~may~~ shall request OCTA furnished signage. OCTA signage specifications can be found on the Call for Projects website (http://www.octa.net/Projects-and-Programs/Funding-Programs/Call-for-Projects/Overview/). ~~or it may choose to provide agency furnished signage so long as said signage conforms to OCTA specifications as follows: Signage shall include an M2 logo that is a minimum of 12" tall, an OCTA logo that is a minimum of 3" tall (image files provided by OCTA upon request), verbiage stating "Street Improvements Funded by Measure M" in Myriad Pro, bold condensed font at 256 pt. and "Your dollars at Work" in Myriad Pro, bold condensed font at 180 pt.~~ Agencies will be required to certify that these signage requirements have been met as part of the initial payment process (see chapter 9).
22. OCTA shall reprogram funds derived from savings or project cancellation based upon final project status. An implementing agency may request to transfer 100 percent of savings of M2 funds between the phases within a project with approval from the TAC and Board. Funds can only be transferred to a phase that has already been awarded competitive funds. Such requests must be made prior to the acceptance of a final report and submitted as part of a semi-annual review. State-Local Partnership Program (SLPP) funds are not eligible for the transfer of savings. Agencies may only

hardship or could jeopardize the overall project delivery and milestones. The agency will waive the opportunity to request a project delay under this approach. The Fast Track approach is permitted only for projects that do not have right of way acquisition needs. If seeking engineering funds, the local agency must have received environmental clearance and demonstrate that all necessary easements and titles are in place for local agency use~~not anticipate any ROW acquisitions.~~ In no circumstances will the Fast Track option be considered for local agency convenience as this could delay implementation of other projects that are shelf ready.

Each call for projects will cover a three-year period that overlaps subsequent future cycles. Funding targets for each cycle are based upon prior funding commitments, anticipated revenues, reprogramming of unused grants (cancellations and savings), and a set aside for future funding cycles.

As part of each call for projects, OCTA will determine an appropriate balance between grants made for the planning and implementation phases.

Tiered Funding

Project funding for Project O (Regional Capacity Program or RCP) will follow a tiered funding process that differentiates between large and small projects. The tiered process is described in detail in Chapter 7.

Funding Projections – Call for Projects

Revenue estimates for M2 are updated annually. Programming decisions are based upon conservative economic assumptions provided by Southern California academic institutions. In the future, OCTA will add project cancellations and realized savings from completed projects to anticipated revenues for redistribution in the first year of each funding cycle.

Project Cost Escalation

OCTA will escalate approved right-of-way and construction projects in years two and three. The match rate percentage identified by implementing agencies in the project grant application shall remain constant throughout the project. This includes projects where the programming has been escalated for future years. OCTA will base escalation rates for future years on Engineering News Record (ENR) Construction Cost Index 20 City Average (CCI) escalation rates.

Chapter 7 - Regional Capacity Program (Project O)

Overview

The Regional Capacity Program (RCP) is a competitive program that will provide more than $1 billion over a thirty-year period. The RCP replaces the Measure M local and regional streets and roads competitive programs (1991-2011).

Although each improvement category described in this chapter has specific eligible activities, the use of RCP funding is restricted to and must be consistent with the provisions outlined in Article XIX. The California State Controllers Guidelines Relating to Gas Tax Expenditures, which implements Article XIX, will provide additional clarification.

The MPAH serves as the backbone of Orange County's arterial street network. Improvements to the network are required to meet existing needs and address future demand. The RCP is made up of three (3) individual program categories which provide improvements to the network:

- The ACE improvement category complements freeway improvement initiatives underway and supplements development mitigation opportunities on arterials throughout the MPAH.
- The ICE improvement category provides funding for operational and capacity improvements at intersecting MPAH roadways.
- The FAST focuses upon street to freeway interchanges and includes added emphasis upon arterial transitions to interchanges.

Projects in the arterial, intersection, and interchange improvement categories are selected on a competitive basis. All projects must meet specific criteria in order to compete for funding through this program.

Also included under the RCP is the Rail Grade Separation Program (RGSP), which is meant to address vehicle delays and safety issues related to at-grade rail crossings. Seven rail crossing projects along the MPAH network were identified by the CTC to receive TCIF. TCIF allocations required an additional local funding commitment. The RGSP captures these prior funding commitments. Future calls for projects for grade separations are not anticipated.

Funding Estimates

Funding will be provided on a pay-as-you go basis. The RCP will make an estimated $1.1 billion (in 2005 dollars) available during the 30-year M2 program. Programming estimates are developed in conjunction with periodic calls for projects. Funding is shared with intersection, interchange and grade separation improvement categories. No predetermined funding has been set aside or established for street widening.

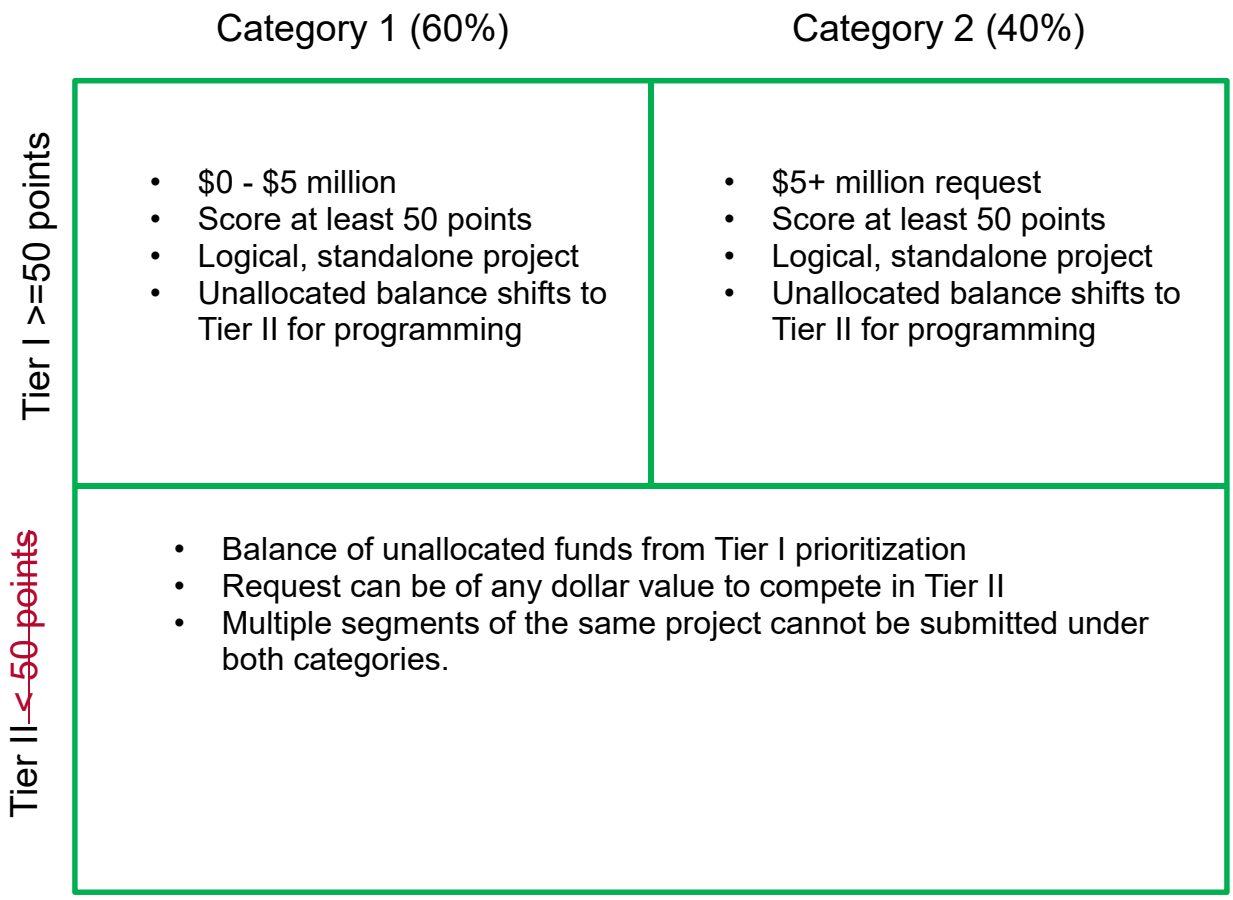
Programming Approach

Programming decisions are based upon project prioritization ranking, feasibility and readiness. Each round of funding has resulted in a diverse range of activities, cost and competitive score. Funding applications may seek financial assistance for planning, engineering, right of way, construction or a combination of these activities. Effective grant programs include a combination of project development as well as implementation projects. In order to ensure continued distribution of funding opportunities between small and large-scale projects, a tiered funding approach will be used.

An estimated $32 million will be available for Project O programming during the 2019 Call for Projects. Category 1 projects are limited to those projects requesting $5 million or less. Category 2 projects are defined as those requesting more than $5 million in Measure M2 funds.

Tiered Funding Approach: The two-tiered funding (Tier 1 and Tier 2) approach will only be applicable to the RCP. This approach is proposed to prioritize high scoring projects while providing a balanced program with funding availability for small and large projects. The first tier is for projects scoring 50 points or higher, and the second tier is for ~~projects scoring below 50 points~~all projects after first satisfying the Tier I ranking. Within Tier 1, two categories would be established with 60 percent (Category 1) of the M2 funds available for smaller projects (requesting $5 million or less), and 40 percent (Category 2) of the M2 funds available for larger projects (requesting $5 million or more). This approach is intended to broaden the distribution of M2 funds to higher scoring/lower cost projects and retain the ability to fund larger projects without placing formal funding caps on allocations. Any M2 funds not programmed in Tier I will be designated for Tier 2 allocation. A funding split between small and large projects is not recommended for Tier 2.

Applications may be for any project phase provided it represents a meaningful, logical terminus and is consistent with scoping from a previously funded project if applicable (i.e., if engineering was previously funded, the right of way and/or construction request must be for the same project scope).



~~If a project is partially funded under Tier I, additional funding will not be considered under Tier II.~~

2019 Call for Projects

The 2019 Call for Projects (call) for Project O – the Regional Capacity Program (RCP) – under M2 will provide approximately **$32 million** for streets and roads improvements across Orange County.

Funding will be provided for the three RCP funding programs: ACE, ICE, and FAST. Chapter 7 details the specific program's intent, eligible project expenditures, ineligible project expenditures, and additional information that may be needed when applying for funds. Each section should be read thoroughly before applying for funding. Application should be prepared for the program that best fits the proposed project.

For this call, OCTA shall program projects for a three-year period (FY 19/20 – 21/22), based upon the current estimate of available funds. For specifics on the funding policies that apply to this call, refer to the Program Precepts as found in Section IV of these guidelines.

Applications

In order for OCTA to consider a project for funding, applications will be prepared by the lead agency. A separate application package must be completed for each individual project. Multiple variations of the same project (i.e. with different local match rates) will not be considered. If funding is requested under multiple program components for a single project (i.e. arterials and intersections) a separate application must be prepared for each request. OCTA shall require agencies to submit both online and hardcopy applications for the 2019 call for projects by **5:00 p.m. on ~~Friday~~Thursday, October 18~~9~~, 2018**. **Late and/or incomplete submittals will not be accepted.**

Since each funding program has slightly different application requirements, an "Internal Application Checklist Guide" has been provided for the three programs under the RCP (Exhibits 7-1, 7-2, and 7-3). The checklist guide identifies the basic forms and documentation required for each of the program components. In addition, items required at the time of project submittal are differentiated from supplemental items due later. The appropriate checklist should be provided as a cover sheet for **each** application submitted. For any items that are required for the candidate project or program that are missing or incomplete, an explanation should be included in a cover letter with the application. In addition to this checklist guide, please review the **Attachments/Additional Information** section of each program component for a description of supplementary documentation which may be required to support your agency's project application in specific cases.

Additionally, **three (3) <u>unbound</u> hardcopies** of the application and any supporting documentation must be submitted to OCTA by the application deadline. Hardcopy applications should be mailed to:

OCTA

Attention: Joe Alcock

600 S. Main Street

P.O. Box 14184 Orange, CA 92863-1584

Hardcopy applications can be hand delivered to:

600 S. Main Street

Orange, CA 92868

Exhibit 7-1

Arterial Capacity Enhancement (ACE)

CTFP Application Checklist Guide

Planning – Environmental & Engineering

- CTFP Online Application – submitted through OCFundtracker
- Project Description, Scope of Work and Project Limits
- Cost Estimate for Complete Project - ALL PHASES
- General Application Sample Resolution
- ADT Counts and LOS Calculations
- Aerial Photo w/ Proposed Improvements Shown

Right-of-Way

- CTFP Online Application – submitted through OCFundtracker
- Project Description Detail (include plat maps and legal descriptions for proposed acquisitions)
- Detailed right-of-way Acquisition/Disposal Plan using the OCTA provided right-of-way acquisition/disposal plan form available for download at https://ocfundtracker.octa.net.
- Cost Estimate for Complete Project - ALL PHASES
  - Estimated right-of-way Cost by Parcel (Land, Improvements Taken, Severance, Goodwill, Incidental Expenses)*
- General Application Sample Resolution
- CEQA Compliance Form (CE, Negative Declaration, EIR)
- Aerial Strip Map w/ Existing and Proposed Improvements Shown
  - Include right-of-way Improvements and Parcels to be Acquired
- Preliminary Construction Layout Plans*
- ADT and LOS Calculations

Construction

- CTFP Online Application – submitted through OCFundtracker
- Project Construction Specifications
- Cost Estimate for Complete Project - ALL PHASES
- General Application Sample Resolution
- CEQA Compliance Form (CE, Negative Declaration, EIR)
- Project Development Documents - Project Report or Materials Report *
- Approved Project Construction Plans*
- ADT and LOS Calculations

NOTE: To qualify for the 10 percent local match discount for measurable improvement of PCI, please include documentation from the last two PMP biennial Measure M Eligibility submittals that provide average PCI for Overall System.

Items are due after first application review. OCTA staff will contact you regarding those projects that will require this additional information.

Exhibit 7-2

Intersection Capacity Enhancement (ICE)

CTFP Application Checklist Guide

Planning – Environmental & Engineering

- CTFP Online Application – submitted through OCFundtracker
- Project Description, Scope of Work and Project Limits
- Cost Estimate for Complete Project - ALL PHASES
- General Application Sample Resolution
- Peak Hour Turning Movement Counts, LOS Calculations, and ADT for each leg of the intersection
- Aerial Photo w/ Proposed Improvements Shown

Right-of-Way

- CTFP Online Application – submitted through OCFundtracker
- Project Description Detail (include plat maps and legal descriptions for proposed acquisitions)
- Detailed right-of-way Acquisition/Disposal Plan using the OCTA provided right-of-way acquisition/disposal plan form available for download at https://ocfundtracker.octa.net.
- Cost Estimate for Complete Project - ALL PHASES
  - Estimated right-of-way Cost by Parcel (Land, Improvements Taken, Severance, Goodwill, Incidental Expenses) *
- General Application Sample Resolution
- Peak Hour Turning Movement Counts, LOS Calculations, and ADT for each leg of the intersection
- CEQA Compliance Form (CE, Negative Declaration, EIR)
- Aerial Strip Map w/ Existing and Proposed Improvements Shown
  - Include right-of-way Improvements and Parcels to be Acquired
- Preliminary Construction Layout Plans*

Construction

- CTFP Online Application – submitted through OCFundtracker
- Project Construction Specifications
- Cost Estimate for Complete Project - ALL PHASES
- General Application Sample Resolution
- Peak Hour Turning Movement Counts, LOS Calculations, and ADT for each leg of the intersection
- CEQA Compliance Form (CE, Negative Declaration, EIR)
- Project Development Documents - Project Report or Materials Report *
- Approved Project Construction Plans*

NOTE: To qualify for the 10 percent local match discount for measurable improvement of PCI, please include documentation from the last two PMP biennial Measure M Eligibility submittals that provide average PCI for Overall System.

Items are due after first application review. OCTA staff will contact you regarding those projects that will require this additional information.

Exhibit 7-3

Freeway Arterial/Streets Transition (FAST)

CTFP Application Checklist Guide

Planning – Environmental & Engineering

- CTFP Online Application – submitted through OCFundtracker
- Project Description, Scope of Work and Project Limits
- Cost Estimate for Complete Project - ALL PHASES
- General Application Sample Resolution
- Peak Hour Turning Movement Counts, LOS Calculations, ADT for arterial and ramp exit volumes
- Caltrans Letter of Support
- Aerial Photo w/ Proposed Improvements Shown

Right-of-Way

- CTFP Online Application – submitted through OCFundtracker
- Project Description Detail (include plat maps and legal descriptions for proposed acquisitions)
- Detailed right-of-way Acquisition/Disposal Plan using the OCTA provided right-of-way acquisition/disposal plan form available for download at https://ocfundtracker.octa.net.
- Cost Estimate for Complete Project - ALL PHASES
  - Estimated right-of-way Cost by Parcel (Land, Improvements Taken, Severance, Goodwill, Incidental Expenses) *
- General Application Sample Resolution
- Peak Hour Turning Movement Counts, LOS Calculations, and ADT for each leg of the intersection
- CEQA Compliance Form (CE, Negative Declaration, EIR)
- Aerial Strip Map w/ Existing and Proposed Improvements Shown
  - Include right-of-way Improvements and Parcels to be Acquired
- Preliminary Construction Layout Plans*

Construction

- CTFP Online Application – submitted through OCFundtracker
- Project Construction Specifications
- Cost Estimate for Complete Project - ALL PHASES
- General Application Sample Resolution
- Peak Hour Turning Movement Counts, LOS Calculations, and ADT for each leg of the intersection
- CEQA Compliance Form (CE, Negative Declaration, EIR)
- Project Development Documents - Project Report or Materials Report*
- Approved Project Construction Plans*
- ~~Draft Freeway Agreement, Freeway Maintenance Agreement and Cooperative Funding Agreement between lead agency and Caltrans~~Appropriate agreements between Caltrans and the project lead agency need to be in draft form and/or in place.

NOTE: To qualify for the 10 percent local match discount for measurable improvement of PCI, please include documentation from the last two PMP biennial Measure M Eligibility submittals that provide average PCI for Overall System.

****Items are due after first application review. OCTA staff will contact you regarding those projects that will require this additional information.***

Attachments

OC Fundtracker Application

Agencies must submit a copy of the OCFundtracker application and scoring information with all application submittals. This document is created within the OCFundtracker web-based application.

"Project Cost Estimate" Form

Include a separate attachment listing all expenditures and costs for the project. Accurate unit prices and a detailed description of work, including design, will be critical when the candidate project is reviewed. For example, design applications should include major tasks that will be performed. Right-of-way cost estimate should include parcel information (including project area needed), improvements taken, severance damages, right-of-way engineering, appraisal and legal costs. Construction should include a listing of all bid items including a maximum 10 percent allowance for contingencies and a maximum 15 percent allowance for construction engineering/project management. The anticipated disbursement of costs (e.g., Agency, Other, Non-Eligible) must also be completed. Agencies should reference the program from which funding is expected to be allocated when completing this portion of the form. Each of the funding programs described in these guidelines may have differing matching fund requirements.

If more than one project phase is requested to be funded, a separate project cost estimate form is to be completed for each phase, or each phase must be clearly indicated and a subtotal prepared on this form. Separate forms should also be prepared if funding for project phases is being requested over multiple fiscal years.

"Sample Resolution" Form

A resolution or minute action must be approved by the local jurisdiction's governing body prior to the Board approval of grant funds. A sample resolution is included as Exhibit 7-4 local agencies, at a minimum, must include items a-h. The mechanism selected shall serve as a formal request for CTFP funds and states that matching funds will be provided by the agency, if necessary. All project requests must be included in this action. **If a *draft* copy of the resolution is provided, the local jurisdiction must also provide the date the resolution will be finalized by the local jurisdiction's governing body.**

Right-of-way Acquisition/Disposal Plan

For all projects requesting right-of-way phase funding, a detailed plan for acquisition/disposal of excess right-of-way, along with any reasonable labor costs expected, must be included. The right-of-way acquisition/disposal plan and labor cost

estimate must be submitted using the "right-of-way acquisition/disposal plan" form provided by OCTA and available for download at https://ocfundtracker.octa.net.

Project Summary Information

For each application that is recommended for funding, the agency shall submit a PowerPoint presentation summarizing the pertinent project information for TAC review and discussion purposes. The presentation shall be no more than three (3) slides and should contain, at a minimum, a project description, project benefits, location map, and cost estimate. **OCTA staff will request the PowerPoint when/if a project is recommended for funding.**

Pavement Management Supporting Documentation

The M2 Ordinance provides for a 10 percent reduction in the required local match if the agency can either:

a. Show measurable improvement of paved road conditions during the previous reporting period defined as an overall weighted (by area) average system improvement of one Pavement Condition Index (PCI) point with no reduction in the overall weighted (by area) average PCI in the Master Plan of Arterial Highways (MPAH) or local street categories;

or

b. Road pavement conditions during the previous reporting period within the highest 20% of the scale for road pavement conditions in conformance with OCTA Ordinance No. 3, defined as a PCI of 75 or higher, otherwise defined as in "good condition".

If an agency is electing to take the 10 percent local match reduction, **supporting documentation indicating either the PCI improvement or PCI scale must be provided.**

Additional Information

The following documentation should be included with your completed project application:

If a project includes more than one jurisdiction and is being submitted as a joint application, one agency shall act as lead agency and must provide a resolution of support from the other agency.

1. Letters of support for the candidate project (optional).
2. Geotechnical\materials reports for all applicable candidate projects (e.g., widening, intersection improvement, new roadway). The reports should contain sufficient detail

for an accurate assessment of improvements needed and costs, since funding will be jeopardized if a project is unable to meet proposed schedule and costs.

3. Preliminary plans, if available for the project. The plans (1"=40' preferred) should include:
   a. Existing and proposed right-of-way (include plat maps and legal descriptions for proposed acquisitions).
   b. Agency boundaries, dimensions and station numbers.
   c. Existing and proposed project features such as: pavement width and edge of pavement, curb, gutter and sidewalk, raised median, driveway reconstruction, signal pole locations, etc.
   d. Typical cross sections.
   e. Proposed striping.
   f. Structural sections per the materials report.
   g. Proposed traffic signals, storm drains, bridges, railroad crossing improvements, safety lighting, etc.
   h. If requesting funds for traffic signals, include a traffic signal warrant(s) prepared by the City Traffic Engineer or City Engineer.
   i. If the project includes construction, relocation, alteration or widening of any railroad crossing or facility, include a copy of the letter of intent sent to the railroad, a copy of which must be sent to the Public Utilities Commission (PUC). Any project including work of interest to a railroad will not be considered for eligibility until the railroad and PUC have been notified.
   j. If the project is proposed as a staged project and additional funds will be necessary in subsequent calls for projects, the preliminary project statement should be accompanied with a complete preliminary estimate and schedule for the completion of the entire project.
   k. If the project is proposed as a safety improvement, provide justifying accident data for the past three years and show the expected decrease in intersection or mid-block accident rate.
4. Current 24-hour traffic counts (taken for a typical mid-week period within the preceding 12-month period) for the proposed segment. Projects submitted without "current counts" will be considered incomplete and non-responsive.

Exhibit 7-4

Sample Resolution for Candidate Orange County Comprehensive Transportation Programs Projects

A resolution of the _____ City Council approving the submittal of _____ improvement project(s) to the Orange County Transportation Authority for funding under the Comprehensive Transportation Program

THE CITY COUNCIL OF THE CITY OF _____ HEREBY RESOLVES, DETERMINES, AND ORDERS AS FOLLOWS THAT:

(a) WHEREAS, the City of _____ desires to implement the transportation improvements listed below; and

(b) WHEREAS, the City of _____ has been declared by the Orange County Transportation Authority to meet the eligibility requirements to receive M2 "Fair Share" funds; and

(c) WHEREAS, the City's Circulation Element is consistent with the County of Orange Master Plan of Arterial Highways; and

(d) WHEREAS, the City of _____ will not use M2 funds to supplant Developer Fees or other commitments;

(e) WHEREAS, the City/County must include all projects funded by Net Revenues in the seven-year Capital Improvement Program as part of the Measure M2 Ordinance eligibility requirement.

(f) WHEREAS, the City of _____ will provide a minimum in __% in matching funds for the _____ project as required by the Orange County Comprehensive Transportation Funding Programs Guidelines; and

(g) WHEREAS, the Orange County Transportation Authority intends to allocate funds for transportation improvement projects, if approved, within the incorporated cities and the County; and

(h) WHEREAS, the City/County authorizes a formal amendment to the seven-year Capital Improvement Program to add projects approved for funding upon approval from the Orange County Transportation Authority Board of Directors, if necessary.

NOW, THEREFORE, BE IT RESOLVED THAT:

The City Council of the City of _____ hereby requests the Orange County Transportation Authority allocate funds in the amounts specified in the City's application to said City from the Comprehensive Transportation Funding Programs. Said funds, if approved, shall be matched by funds from said City as required and shall be used as supplemental funding to aid the City in the improvement of the following street(s):

ADOPTED BY THE CITY COUNCIL on _____, 20____.

SIGNED AND APPROVED on _____, 20____.

_____ City Clerk

_____ Mayor

*Required language a-h

Application Review Process

OCTA staff will conduct a preliminary review of all applications for completeness and accuracy, request supplemental information (i.e., plans, aerial/strip maps, CEQA forms) for projects that appear to rank well during initial staff evaluations, and prepare a recommended program for the TSC. In addition, OCTA may hire a consultant(s) to verify information within individual applications such as, but not limited to, project scope, cost estimates, ADT and LOS. These applications will be selected through a random process.

The following guidelines will be used in reviewing project applications. Any application that does not meet these minimum guidelines must include an explanation of why the guidelines were not met:

1. The travel lane width should be no less than 11 feet (12 feet if adjacent to a raised median or other obstruction) for all arterial highways.
2. For divided roadways, the minimum median width should be no less than 10 feet to allow for turning movements. Divided roadways are defined as those with either a painted or raised median.
3. Arterial highways that are designated for uses in addition to automobile travel (e.g., bicycle, pedestrian, parking) shall provide additional right-of-way consistent with local jurisdiction standards to facilitate such uses.
4. An eight-lane roadway should provide for a continuous median, protected dual or single left-turn pockets as warranted at signalized intersections, single left-turn pockets at non-signalized intersections, and a right-turn lane at signalized intersections where determined necessary by traffic volumes. Right-of-way for a free right-turn lane should be provided at locations warranted by traffic demand.
5. A six-lane divided roadway should provide a continuous median, protected dual or single left-turn pockets as warranted by existing traffic at all signalized intersections, and single left-turn pockets at non-signalized intersections. A right-turn option lane should also be provided as warranted by traffic demand.
6. A four-lane divided roadway should provide a continuous median, protected dual or single left-turn pockets at all signalized intersections, and a left-turn pocket at all non-signalized intersections. A right-turn lane should also be provided as warranted by traffic demand.
7. A four-lane undivided roadway shall provide for a single left-turn pocket at all intersections as warranted by traffic demand.

Applications will be reviewed by OCTA for consistency, accuracy and concurrence. Applications determined complete in accordance with the program requirements will be

scored, ranked and submitted to the TSC, TAC and Board for consideration and funding approval.

Local agencies awarded funding will be notified as to which projects have been funded and from what sources after the Board takes action. A tentative call schedule is detailed below:

Board authorization to issue call: August 2018

Application submittal deadline: October 18, 2018

TSC/TAC Review: February/March 2019

Committee/Board approval: May 2019

Funding

M2 Project O funding will be used for this call.

The CTFP Guidelines include a provision that allows applicants to request right of way (ROW) and/or construction funding prior to completion of the planning phase (including final design) provided that the phase is underway, substantially complete and the agency will complete the activities within six months of the start of the new phase programmed year. A thorough review of eligible activities is not always possible during the call for projects evaluation period. As a result, it is possible that cost elements contained within an application and included in a funding recommendation may ultimately be deemed ineligible for program participation. The applicant is responsible for ensuring projects are implemented according to eligible activities contained within the program guidelines.

Arterial Capacity Enhancements (ACE)

Overview

The MPAH serves as the backbone of Orange County's arterial street network. Improvements to the network are required to meet existing needs and address future traffic demand. The ACE improvement category complements freeway improvement initiatives underway, supplements development mitigation activities and enables improvements based upon existing deficiencies.

Projects in the ACE improvement category are selected on a competitive basis. Projects must meet specific criteria in order to compete for funding through this program.

Objectives

- Complete MPAH network through gap closures and construction of missing segments
- Relieve congestion by providing additional roadway capacity where needed
- Provide timely investment of M2 Revenues
- Leverage funding from other sources

Project Participation Categories

The ACE category provides capital improvement funding (including planning, design, right-of-way acquisition and construction) for capacity enhancements on the MPAH for the following:

- Gap closures – the construction of a roadway to its full MPAH build-out for the purpose of connecting two existing ends of that roadway by filling in a missing segment or for completing the terminus of an MPAH roadway. This applies to increased roadway capacity only as it relates to vehicular traffic.
- Roadway widening where additional capacity is needed
- New roads / extension of existing MPAH facility

Eligible Activities

- Planning, environmental clearance
- Design
- Right-of-way acquisition
- Construction (including curb-to-curb, lighting, drainage, etc.)

Potentially Eligible Items

Below is a list of potentially eligible items. However, final determination of the eligibility of all project related costs will be made at the time of reimbursement. Prior to the submittal of an application for funding, or at any point in the project life cycle, local agencies may meet with OCTA staff to review the eligibility of project related costs. Application review and approval does not guarantee the eligibility of all items.

- Direct environmental mitigation for projects funded by ACE (subject to limitations identified in precepts)
- Storm drains/catch basins/detention basins/bioswales/other pollutant discharge mitigation devices
- Sound walls (in conjunction with roadway improvement mitigation measures)
- Aesthetic improvements including landscaping within the project right-of-way (eligible improvements up to 10 percent of construction costs, provided costs are reasonable for the transportation benefit)
- ITS infrastructure (advance placement in anticipation of future project)
- Rehabilitation and/or resurfacing of existing pavement when necessitated by proposed improvement (such as change in profile and cross section)
- Improvements to private property if part of a right-of-way settlement agreement
- Utility relocation where the serving utility has prior rights as evidenced by a recorded legal document
- Roadway grading within the right-of-way (inclusive of any temporary construction easements and/or right-of-way agreement related improvements) should not exceed a depth for normal roadway excavation (e.g. structural section). Additional grading (e.g. over excavation for poor soil conditions) will be considered on a case by case basis. Agencies shall provide supporting documentation (e.g. soils reports, right-of-way agreements) to justify the additional grading.
- Additional right-of-way to accommodate significant pedestrian volumes or bikeways shown on a Master Plan of Bikeways or in conjunction with the "Complete Streets" effort. These will be considered for eligibility on a case by case basis during the application process.
- Installation of a pedestrian activated traffic signal where necessitated by pedestrian traffic warrants or other engineering criteria.

Environmental mitigation will be allowed only as required for the proposed roadway improvement, and only as contained in the environmental document. Program participation in environmental mitigation shall not exceed 25 percent of the total eligible construction costs.

Longitudinal storm drains are eligible for program participation when the storm drain is an incidental part (cost is less than 25 percent of the total eligible construction cost) of an eligible improvement. Program participation shall not exceed 10 percent of the cost of storm drain longitudinal/parallel and main lines. Storm drain inlets, connectors, laterals and cross culverts shall have full participation in ACE Program funding. Storm drains outside standard MPAH right-of-way widths are not eligible, excluding catch basins within reasonable distance and in general proximity to a project intersection (e.g. within ten feet of the curb return). Catch basins and drainage systems extending into adjacent areas (including public streets) shall not be eligible past the first catch basin designated by aforementioned criteria.

The relocation of detention basins/bioswales are potentially eligible dependent on prior rights and will be given consideration on a case by case basis (see utility relocations below).

Soundwalls are eligible only if they are required as part of the environmental mitigation for the proposed project and the Measure M contribution to the cost of soundwalls shall not exceed 25 percent of the total eligible construction costs. Aesthetic enhancements and landscaping in excess of minimum environmental mitigation requirements are subject to limitations described in this section above.

Roadway grading will be eligible for structural sections within the roadway right of way. Additional grading required within the project limits will be subject to OCTA's review. OCTA will make the determination based on the additional documentation provided to demonstrate local agency's financial obligation to pay for such improvements. Rough roadway grading must be complete prior to project start.

Utility Relocations

The expenses associated with the relocation of utilities are eligible for RCP reimbursement only when all conditions listed below have been met:

- The relocation is made necessary due to conflict with proposed improvements.
- The facility to be relocated is within the project right-of-way.
- It has been determined that the local agency is legally liable for either a portion of or all of the relocation costs.

Liability can be determined by property rights, franchise rights/agreements, state and local statutes/ordinances, permits, a finding by the local agency's counsel, or other recorded legal document. Documentation providing proof of the local agency's liability for the costs of utility relocation must be submitted with an initial payment request (see Chapter 9). Utilities funded through enterprise funds shall not be eligible for reimbursement.

If a relocation is eligible to be reimbursed, and to be performed by the utility owner or by the utility owner's contractor, the work should be included in the right-of-way phase costs and clearly identified in the project application submittal. For eligible relocations to be performed during the construction phase by the local agency's contractor, the work should be included in the plans and specifications similar to other construction activities. Adjustment of existing utilities to grade (e.g. water valves, manhole frames and covers), due to new roadway cross sections are not eligible in the construction phase subject to the limitations previously described. New or relocated fire hydrants are ineligible.

In all cases, eligible costs shall only include "in-kind" relocation. No reimbursements will be made for betterments above the cost of "in-kind" relocation. Additionally, costs submitted for program reimbursement must include any salvage credits received.

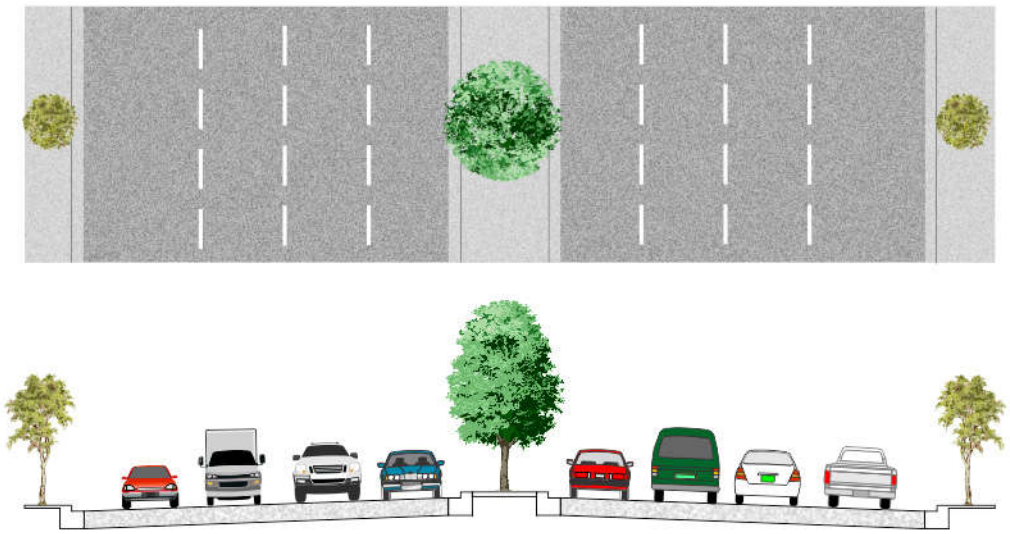
Ineligible Expenditures

Items that are not eligible under the ACE Program are:

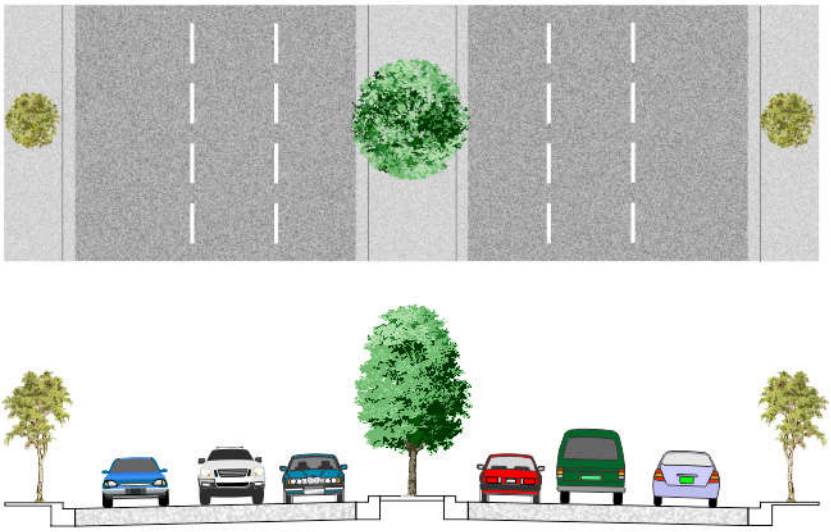
- Grading outside of the roadway right-of-way not related to a temporary construction easement or right-of-way agreement.
- Rehabilitation (unless performed as component of capacity enhancement project)
- Reconstruction (unless performed as component of capacity enhancement project)
- Grade Separation Projects
- Enhanced landscaping and aesthetics (landscaping that exceeds that necessary for normal erosion control and ornamental hardscape)
- Right-of-way acquisition and construction costs for improvements greater than the typical right-of-way width for the applicable MPAH Roadway Classification. (See standard MPAH cross sections in Exhibit 7-5) Where full parcel acquisitions are necessary to meet typical right-of-way requirements for the MPAH classification, any excess parcels shall be disposed of in accordance with the provisions of these guidelines, State statutes as outlined in Article XIX and the California State Controllers Guidelines Relating to Gas Tax Expenditures.
- Utility Betterments
- Construction of new utilities

Exhibit 7-5

Standard MPAH Cross Sections



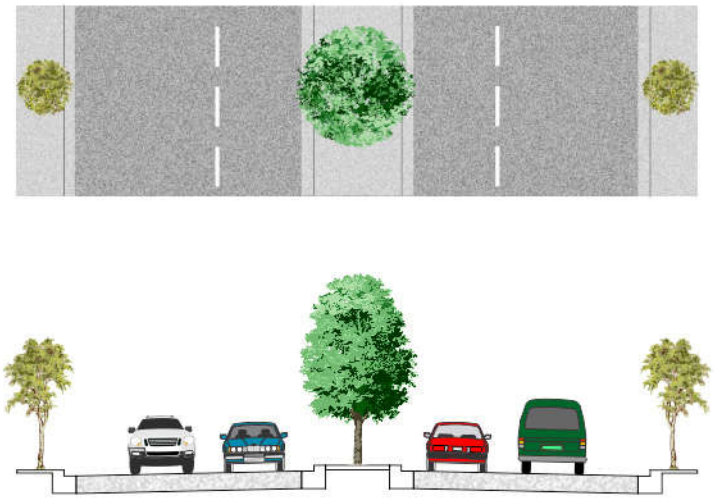
PRINCIPAL
144 FT
(8 LANES, DIVIDED)



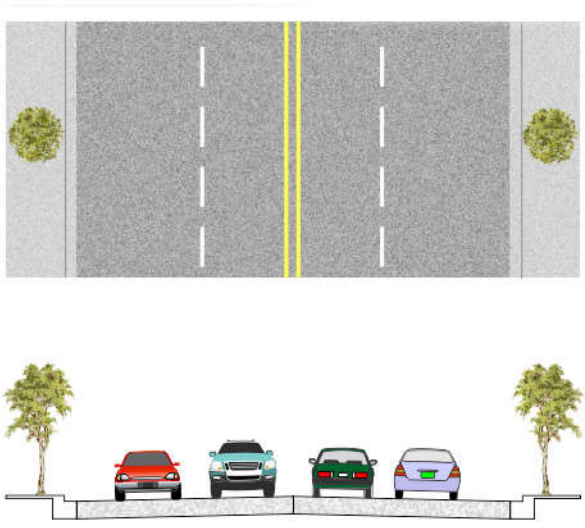
MAJOR
120FT
(6 LANES, DIVIDED)

Exhibit 7-5 *continued*

Standard MPAH Cross Sections



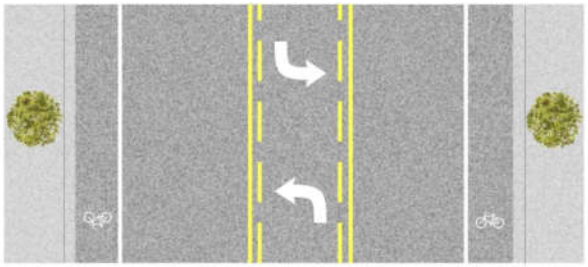
PRIMARY
100 FT
(4 LANES, DIVIDED)

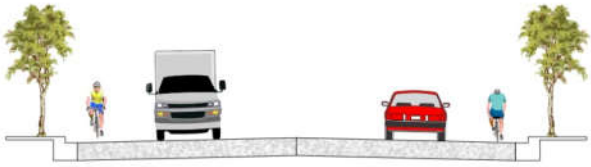


SECONDARY
80 FT
(4 LANES, UNDIVIDED)

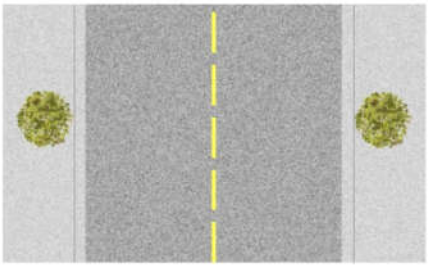
Exhibit 7-5 *continued*

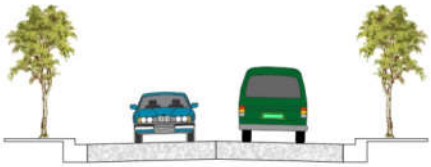
Standard MPAH Cross Sections





DIVIDED COLLECTOR
80 FT
(2 LANES, DIVIDED)





COLLECTOR
56 FT
(2 LANES, UNDIVIDED)

Master Plan of Arterial Highway Capacities

Below are the approximate roadway capacities that will be used in the determination of level of service:

	Level of Service				
Type of Arterial	**A** .51 - .60 v/c	**B** .61 - .70 v/c	**C** .71 - .80 v/c	**D** .81 - .90 v/c	**E** .91 - 1.00 v/c
8 Lanes Divided	45,000	52,500	60,000	67,500	75,000
6 Lanes Divided	33,900	39,400	45,000	50,600	56,300
4 Lanes Divided	22,500	26,300	30,000	33,800	37,500
4 Lanes (Undivided)	15,000	17,500	20,000	22,500	25,000
2 Lanes Divided	9,000	12,000	15,000	20,000	22,000
2 Lanes (Undivided)	7,500	8,800	10,000	11,300	12,500

Note: Values are maximum Average Daily Traffic

Selection Criteria

Specific selection criteria will be used to evaluate competitive program project applications. Emphasis is placed on existing usage, proposed Vehicle Miles Traveled (VMT), level of services benefits, local match rate funding and overall facility importance. Technical categories and point values are shown on Tables 7-1 and 7-2. Data sources and methodology are described below.

Projected/Current Average Daily Trips (ADT): Current ADT is the preferred method of measuring congestion. However, traffic counts projected to the year of opening for the project will be allowed as part of the competitive evaluation. These must be submitted along with current 24-hour traffic counts for the proposed segment for comparison purposes. The agency must submit the project projected ADT, current ADT, the delta, and justification of the increase. Regarding "current" counts, these are defined as those taken for a typical mid-week period within the preceding 12-months. Projects submitted without "current counts" will be considered incomplete and non-responsive. Project applications using projected ADT must use traffic counts taken within the preceding 12 months. Project applications not using projected ADT may use traffic counts taken within the 36 months preceding the ~~application submittal date~~release date of the current call. **Note:** New facilities must be modeled through OCTAM and requests should be submitted to OCTA a minimum of six (6) weeks prior to application submittal deadline. **This**

deadline is September 7, 2018 for the 2019 Call for Projects. If modeling requests are not submitted six (6) weeks prior to the application submittal deadline, the application will not be considered. For agencies where event, weekend, or seasonal traffic presents a significant issue, Average Annual Daily Traffic (AADT) counts can be used, provided the agency gives sufficient justification for the use of AADT.

VMT: Centerline length of segment proposed for improvement multiplied by the existing ADT for the proposed segment length. Measurement must be taken proximate to capacity increase. VMT for improvements covering multiple discrete count segments are calculated on a weighted average basis.

Current Project Readiness: This category is additive. Points are earned for the highest qualifying designation at the time applications are submitted. Local agency should select the most current phase of the project.

- Right-of-Way (All easements and titles) – applies where no right-of-way is needed for the project or where all right-of-way has been acquired/dedicated.
- Right-of-Way (all offers issued) – applies where offers have been made for every parcel where acquisition is required and/or offers of dedication or orders of immediate possession have been received by the jurisdiction.
- Final Design (PS&E) – applies where the jurisdiction's City engineer or other authorized person has approved the final design.
- Preliminary design (35 percent level) – will require certification from the City Engineer and is subject to verification.
- Environmental Approvals – applies where all environmental clearances have been obtained on the project.

Cost Benefit: Total project cost (including unfunded phases) divided by the existing ADT (or modeled ADT for new segments).

Funding Over-Match: The percentages shown apply to match rates above a jurisdiction's minimum local match rate requirement. M2 requires a 50 percent local match for RCP projects. This minimum match can be reduced by up to 25 percentage points if certain eligible components are met. If a jurisdiction's minimum match target is 30 percent and a local match of 45 percent is pledged, points are earned for the 15 percent over-match differential. The pledged amount is considered the committed match rate and will be required, at a minimum, from the local agency throughout the life of the project.

Transportation Significance: Roadway classification as shown in the current MPAH.

~~MPAH Needs Assessment Category: Segment designation as shown in the RCP Needs Assessment study.~~

Operational Attributes (within the roadway): This category is additive. Each category, except Active Transit Routes, must be a new feature added as a part of the proposed project.

- Pedestrian Facilities: Placement of a new sidewalk where **none currently exists** along an entire segment of proposed project.
- Meets MPAH configuration: Improvement of roadway to full MPAH standard for the segment classification.
- Active Transit Route(s): Segments served by fixed route public transit service.
- Bus Turnouts: Construction of bus turnouts.
- Bike Lanes: Installation of new bike lanes
- Median (Raised): Installation of a mid-block raised median where none exists today. Can be provided in conjunction with meeting MPAH standards.
- Remove On-street Parking: Elimination of on-street parking in conjunction with roadway widening project. Can be provided in conjunction with meeting MPAH standards and installation of new bike lanes.
- Sustainability Elements: Includes the use of recycled materials during the roadway construction process (recycled aggregate or rubberized asphalt) or the installation of solar lighting within the roadway cross section. Other elements of sustainability may be considered on a case by case basis.
- Water Conservation: Includes elements that reduce water consumption, compared to current usage within project limits, such as the replacement of existing landscaping with hardscape and/or "California Native" drought tolerant type landscaping; the replacement of existing sprinklers with drip irrigation systems; the installation of new "grey" or recycled water systems where such does not currently exist.
- Safety Improvements: Project features that increase the safety of pedestrians. These elements can include the new installation of: median barriers, curb extensions, residential traffic diverters, pedestrian crossing islands, pedestrian activated signals, crosswalk enhancements, safety signage, and the addition, modification, or improvement of existing pedestrian signals. Other elements of safety may be considered on a case by case basis.
- Other (Golf cart paths in conformance with California Vehicle Code and which are demonstrated to remove vehicle trips from roadway).

Improvement Characteristics: Select one characteristic which best describes the project:

- Gap Closures: the construction of a roadway to its full MPAH build-out for the purpose of connecting two existing ends of that roadway by filling in a missing segment or for completing the terminus of an MPAH roadway. This applies to increased roadway capacity only as it relates to vehicular traffic.

- New Facility/Extensions: Construction of new roadways.
- Bridge crossing: Widening of bridge crossing within the project limits.
- Adds capacity: Addition of through traffic lanes.
- Improves traffic flow: Installation of a median, restricting cross street traffic, adding midblock turn lanes, or elimination of driveways.

LOS Improvement: This category is a product of the existing or projected LOS based upon volume/capacity– or v/c -- and LOS improvement "with project". **Projects must meet a minimum existing or projected LOS of "D" (.81 v/c) "without project" condition to qualify for priority consideration for funding.** Existing LOS is determined using current 24-hour traffic counts ~~(averaging AM/PM peaks)~~ for the proposed segment. However, for projects where traffic volumes follow unconventional patterns, unidirectional volumes may be proposed as an acceptable alternate methodology for determining LOS. If unidirectional volumes are used for level of service calculations, ADT for the proposed direction of improvement shall serve as the basis for ADT, cost benefit and vehicle miles travelled (VMT) scoring categories. Projects that do not meet the minimum LOS "D" can be submitted, but are not guaranteed consideration as part of the competitive process.

If during the competitive process, it is determined that additional programming capacity exists after all eligible projects with LOS "D" have been funded, a consideration of projects with a minimum LOS "C" (.71 v/c) may be undertaken. Such consideration will be at the discretion of OCTA. Projects with an LOS better than "C" (.70 v/c) will not be considered.

Application Process

Project grants are determined through a competitive application process. Local agencies seeking funding must complete a formal application and provide supporting documentation that will be used to evaluate the project proposal as outlined below. Detailed instructions and checklists are provided in this chapter.

Complete application

- Funding needs by phase and fiscal year
- Local committed match funding source, confirmed through city council resolution or minute order
- Supporting technical information (including current traffic counts)
- Project development and implementation schedule
- Right-of-way status and detailed plan for acquisition/disposal of excess right-of-way. The right-of-way acquisition/disposal plan must be submitted using the "right-of-way acquisition/disposal plan" form provided by OCTA and available for download at https://ocfundtracker.octa.net.

- Any additional information deemed relevant by the applicant
- Grants subject to Master Funding Agreement

Calls are expected to be issued on an annual basis, or as determined by the Board. Complete project applications must be submitted by the established due date to be considered eligible for consideration.

Minimum Eligibility Requirements

Projects must have an existing or projected LOS "D" (.81 v/c) or worse to qualify for priority consideration for funding in this program.

All project roadways must be identified on the MPAH network. Local streets not shown on the MPAH are not eligible for funding through this program.

New Facilities

New facilities must be modeled through OCTAM. A local agency planning on submitting a request for funding for a new facility must submit a modeling request a minimum of six (6) weeks prior to the application submittal deadline. If modeling requests are not submitted six (6) weeks prior to the application submittal deadline, the application associated with the related project will not be considered. Any request for modeling **must be submitted to OCTA no later than September 7, 2018** for the 2019 Call for Projects.

Facility Modeling: For consistency purposes, all proposed new facilities will be modeled by OCTA using the most current version of OCTAM. Applicants may supplement their application with a locally-derived model with OCTAM used for validation purposes. The facility will be modeled with the lane capacity reflected in the application.

Average Daily Trips Determination: OCTAM will provide an "existing" ADT using a "with project" model run under current conditions. The ADT for the proposed segment will serve as the ADT value to be considered in the application.

LOS Improvement: LOS on existing facilities may be positively or negatively affected by a proposed new roadway segment through trip redistribution. A current condition model run is generated "with" and "without" the proposed project. The intent is to test the efficacy of the proposed segment. A comparison of these before and after project runs (using current traffic volumes) yields potential discernable changes in LOS. The greatest benefit is generally on a parallel facility directly adjacent to the proposed project. Trip distribution changes generally dissipate farther from the project. For evaluation purposes, the segment LOS (determined through a simple volume / capacity calculation) for the "with" and "without project" will be used for the existing LOS and LOS improvement calculations.

Matching Funds

Local agencies are required to provide local match funding for each phase of the project. As prescribed by the M2 Ordinance, the minimum local match requirement is 50 percent with potential to reduce this amount if certain eligibility requirements are met. The amount pledged during the application process is considered the committed match rate and will be required, at a minimum, from the local agency throughout the life of the project. Actual project contributions by the local agency are dependent on final project costs and may not be equal to the committed match rate in the event of cost overruns. OCTA will not increase the funding grant to cover cost overruns. Ineligible expenditures do not contribute to the local match rate.

Other Application Materials

Supporting documentation will be required to fully consider each project application. In addition to the funding plan described above, local agencies will be required to submit the following materials:

Council Approval: A Council Resolution or Minute Order action authorizing request for funding consideration with a commitment of local match funding must be provided with the project application. **If a *draft* copy of the resolution is provided, the local agency must also provide the date the resolution will be finalized by the local agency's governing body.** A final copy of the City Council approved resolution must be provided at least four (4) weeks **PRIOR** to the consideration of programming recommendations by OCTA's Board of Directors.

Project Documentation: If proposed project has completed initial planning activities (such as Project Study Report (PSR) or equivalent, Environmental Impact Report (EIR), or design), evidence of approval should be included with the application. Satisfactory evidence includes project approval signature page, engineer-stamped site plan, or other summary information to demonstrate completion or planning phases. An electronic copy of the PSR and/or environmental document must be supplied as applicable. The applicant will be asked for additional detailed information if necessary to adequately evaluate the project application.

Project Summary Information: With each application being recommended for funding, the agency shall submit a PowerPoint presentation summarizing the pertinent project information for review and discussion purposes. The presentation shall be no more than three (3) slides and should contain, at a minimum, a project description, project benefits, location map, and cost estimate. **OCTA staff will request the PowerPoint when/if a project is recommended for funding.**

Reimbursements

This program is administered on a reimbursement basis for capital improvements, planning, design, and right-of-way acquisition. Reimbursements will be disbursed upon review and approval of an acceptable initial payment submittal, final report, and consistency with Master Funding Agreement or cooperative agreement if federal funds are awarded. The reimbursement process is more fully described in Chapter 9 of this manual.

Project Cancellation

If a local agency decides to cancel a project, for whatever reason, the agency shall notify OCTA as soon as possible. Projects deemed infeasible during the planning phase shall bring that phase to a logical conclusion, file a final report, and cancel remaining phases so that remaining funds can be reprogrammed without penalty. All right-of-way funding received for property acquisition prior to cancellation shall be repaid upon cancellation even if property has been acquired. All construction funding received prior to cancellation shall be repaid upon cancellation.

Cancelled projects will be eligible to reapply upon resolution of issues that led to original project termination. Agencies can resubmit an application for funding consideration once either the cancellation of the existing funding grant has been approved by the OCTA Board or is in the process of approval through the semi-annual review. In the event the OCTA Board does not approve the cancellation, the lead agency will be required to withdraw the application.

Audits

All M2 payments are subject to audit. Local agencies must follow established accounting requirements and applicable laws regarding the use of public funds. Failure to submit to an audit in a timely manner may result in loss of future funding. Misuse or misrepresentation of M2 funding will require remediation, which may include repayment, reduction in overall grant, and/or other sanctions to be determined. Audits shall be conducted by OCTA's Internal Audit department or other authorized agent either through the normal annual process or on a schedule to be determined by the Board (see Chapter 10).

Proceeds from the sale of excess right-of-way acquired with program funding must be paid back to the project fund as described in Chapter 9 and the Master Funding Agreement.

Table 7-1
Regional Capacity Program
Street Widening

Category	Points Possible	Percentage
Facility Usage		**30%**
Existing ADT	10	10%
Existing VMT	10	10%
Current Project Readiness	10	10%
Economic Effectiveness		**15%**
Cost Benefit	10	10%
Funding Over-Match	5	5%
Facility Importance		**20%**
Transportation Significance	10~~5~~	10~~5~~%
~~MPAH Assessment Category~~	~~5~~	~~5%~~
Operational Efficiency	10	10%
Benefit		**35%**
Improvement Characteristics	10	10%
Level of Improvement and Service	25	25%
Total	**100**	**100%**

Table 7-2

ACE SCORING CRITERIA
Point Breakdown for Arterial Capacity Enhancement Projects
Maximum Points = 100

Facility Usage — **Points: 30**

Existing ADT Range		Points
45+	thousand	10
40 - 44	thousand	8
35 - 39	thousand	6
30 - 34	thousand	5
25 - 29	thousand	4
20 - 24	thousand	3
15 - 19	thousand	2
10 – 14	thousand	1
<10	thousand	0

VMT Range		Points
31+	thousand	10
26 - 30	thousand	8
22 - 25	thousand	6
18 - 21	thousand	5
14 - 17	thousand	4
11 - 13	thousand	3
8 - 10	thousand	2
4 - 7	thousand	1
<4	thousand	0

Current Project Readiness	Max Points: 10
Environmental Approvals	2
Preliminary Design (35%)	2
ROW (All offers issued)	2
Final Design (PS&E)	4
ROW (All easement and titles)	5

Points are additive. Design and Right of Way (ROW) limited to highest qualifying designation.

Economic Effectiveness — **Points: 15**

Cost Benefit (Total $/ADT)

Range*	Points
< 99	10
3 – 149	9
6 – 199	7
9 – 249	5
12 – 299	4
15 – 349	3
18 – 399	2
21 – 499	1
500+	0

Funding Over-Match (local match/project cost) minus minimum local match requirement

Range*	Points
25+%	5
20 – 24%	4
15 – 19%	3
10 – 14%	2
5 – 9%	1
0 – 4%	0

*Range refers to % points above agency minimum requirement.

Facility Importance — **Points: 20**

Transportation Significance Range	Points
Principal or CMP Route	~~10~~5
Major	~~8~~4
Primary	~~6~~3
Secondary	~~4~~2
Collector	~~2~~1

~~MPAH Assessment Category~~

~~Range~~	~~Points~~
~~Category 1~~	~~5~~
~~Category 2~~	~~4~~
~~Category 3~~	~~3~~
~~Category 4~~	~~2~~
~~Category 5~~	~~1~~

Operational Attributes (within the roadway)	Max Points: 10
Pedestrian Facilities (New)	3
Meets MPAH Configs.	3
Bike Lanes (New)	3
Active Transit Route(s)	2
Bus Turnouts	2
Median (Raised)	2
Remove On-Street Parking	2
Water Conservation Elements	2
Safety Improvements	2
Sustainability	2
Other	2

Benefit — **Points: 35**

Improvement Characteristics	Points
Gap Closure	10
New Facility/Extension	8
Bridge Crossing	8
Adds Capacity	6
Improves Traffic Flow	2

LOS Improvement — Max Points: 25

Existing LOS Starting Point Range (LOS Imp x LOS Starting Pt)	Points
1.01+	5
.96 – 1.00	4
.91 – .95	3
.86 – .90	2
.81 – .85	1
< .81	0

LOS Improvement with Project (exist. Volume)

Existing LOS Starting Point Range	Points
.20+	5
.16 – .19	4
.1 – .15	3
.05 – .09	2
.01 – .05	1
< .01	0

Intersection Capacity Enhancements (ICE)

Overview

The MPAH serves as the backbone of Orange County's arterial street network. Intersections at each intersecting MPAH arterial throughout the County will continue to require improvements to mitigate current and future needs. The ICE improvement category complements roadway improvement initiatives underway and supplements development mitigation opportunities.

Projects in the ICE improvement category are selected on a competitive basis. Projects must meet specific criteria in order to compete for funding through this program.

For the purposes of the ICE improvement category, the limits of an intersection shall be defined as the area that includes all necessary (or planned) through lanes, turn pockets, and associated transitions required for the intersection. Project limits of up to a maximum of 600 feet for each intersection leg are allowable. Projects that, due to special circumstances, must exceed the 600-foot limit, shall include in their application the request for a technical variance. The project shall be presented to the Technical Steering Committee by the local agency to request approval of the variance.

Objectives

- Improve MPAH network capacity and throughput along MPAH facilities
- Relieve congestion at MPAH intersections by providing additional turn and through lane capacity
- Improve connectivity between neighboring jurisdiction by improving operations
- Provide timely investment of M2 revenues

Project Participation Categories

The ICE category provides capital improvement funding (including planning, design, right-of-way acquisition and construction) for intersection improvements on the MPAH network for the following:

- Intersection widening – constructing additional through lanes and turn lanes, extending turn lanes where appropriate, and signal equipment
- Street to street grade separation projects

Eligible Activities

- Planning, environmental clearance
- Design (plans, specifications, and estimates)
- Right-of-way acquisition
- Construction (including bus turnouts, curb ramps, median, and striping)

Potentially Eligible Items

Below is a list of potentially eligible items. However, final determination of the eligibility of all project related costs will be made at the time of reimbursement. Prior to the submittal of an application for funding, or at any point in the project life cycle, local agencies may meet with OCTA staff to review the eligibility of project related costs. Application review and approval does not guarantee the eligibility of all items.

- Required environmental mitigation for projects funded by ICE
- Storm drains/catch basins/detention basins/bioswales/other pollutant discharge mitigation devices
- Sound walls (in conjunction with roadway improvement mitigation measures)
- Aesthetic improvements including landscaping within the project right-of-way (eligible improvements up to 10 percent of construction costs, provided costs are reasonable for the transportation benefit)
- Signal equipment (as incidental component of program), including the installation or upgrade of pedestrian countdown heads
- Bicycle detection systems
- Rehabilitation and/or resurfacing of existing pavement when necessitated by proposed improvement (such as change in profile and cross section)
- Improvements to private property if part of a right-of-way settlement agreement
- Utility relocation where the serving utility has prior rights as evidenced by a recorded legal document and are located within the roadway right-of-way.
- Roadway grading within the right-of-way (inclusive of any temporary construction easements and/or right-of-way agreement related improvements) should not exceed a depth for normal roadway excavation (e.g. structural section). Additional grading (e.g. over excavation for poor soil conditions) will be considered on a case by case basis. Agencies shall provide supporting documentation (e.g. soils reports, right-of-way agreements) to justify the additional grading.

Ineligible Items

- Grading outside of the roadway right-of-way not related to a temporary construction easement or right-of-way agreement.

- Right-of-way acquisition greater than the typical right-of-way width for the applicable MPAH Roadway Classification. Additional turn lanes not exceeding 12 feet in width needed to maintain an intersection LOS D requiring right-of-way in excess of the typical right-of-way width for the applicable MPAH classification shall be fully eligible. Where full parcel acquisitions are necessary to meet typical right-of-way requirements for the MPAH classification any excess parcels shall be disposed of in accordance with State statutes and the acquisition/disposal plan submitted in accordance with these guidelines.
- Enhanced landscaping and aesthetic improvements (landscaping that exceeds that necessary for normal erosion control and ornamental hardscape).

Environmental mitigation will be allowed only as required for the proposed roadway improvement and only as contained in the environmental document. Program participation in environmental mitigation shall not exceed 25 percent of the total eligible project costs.

Longitudinal storm drains are eligible for program participation when the storm drain is an incidental part (cost is less than 25 percent of the total eligible improvement cost) of an eligible improvement. Program participation shall not exceed 10 percent of the cost of storm drain longitudinal/parallel and main lines. Storm drain inlets, connectors, laterals and cross culverts shall have full participation in ICE improvement category funding. Storm drains outside standard MPAH right-of-way widths are not eligible, excluding catch basins within reasonable distance and in general proximity to a project intersection (e.g. within ten feet of the curb return). Catch basins and drainage systems extending into adjacent areas (including public streets) shall not be eligible past the first catch basin.

Soundwalls are eligible only if they are required as part of the environmental clearance for the proposed project and shall not exceed 25 percent of the total eligible project costs. Aesthetic enhancements and landscaping in excess of minimum environmental mitigation requirements are subject to limitations described in the "Potentially Eligible Item" section above.

The relocation of detention basins/bioswales/other pollutant discharge mitigation devices are potentially eligible dependent on who has prior rights and will be given consideration on a case by case basis (see utility relocations below).

Roadway grading is eligible for structural sections. OCTA assumes rough roadway grading is complete prior to project start and is considered an ineligible item.

Utility Relocations

The expenses associated with the relocation of utilities are eligible for RCP reimbursement only when all conditions listed below have been met:

- The relocation is made necessary due to conflict with proposed improvements.
- The facility to be relocated is within the project right-of-way.
- It has been determined that the local agency is legally liable for either a portion of or all of the relocation costs.

Liability can be determined by property rights, franchise rights/agreements, state and local statutes/ordinances, permits, a finding by the local agency's counsel, or other recorded legal document. Documentation providing proof of the local agency's liability for the costs of utility relocation must be submitted with an initial payment request (see Chapter 9). Utilities funded through enterprise funds shall not be eligible for reimbursement.

If a relocation is eligible to be reimbursed, and to be performed by the utility owner or by the utility owner's contractor, the work should be included in the right-of-way phase costs and clearly identified in the project application submittal. For eligible relocations to be performed during the construction phase by the local agency's contractor, the work should be included in the plans and specifications similar to other construction activities. Adjustment of existing utilities to grade (e.g. water valves, manhole frames and covers), due to new roadway cross sections are generally eligible in the construction phase.

In all cases, eligible costs shall only include "in-kind" relocation. No reimbursements will be made for betterments above the cost of "in-kind" relocation. Additionally, costs submitted for program reimbursement must include any salvage credits received.

Selection Criteria

Specific selection criteria will be used to evaluate competitive program project applications. Emphasis is placed on existing usage, LOS benefits, local match funding, and overall facility importance. Technical categories and point values are shown on Tables 7-3 and 7-4. Data sources and methodology are described below.

Projected/Current Average Daily Trips (ADT): Current ADT is the preferred method of measuring congestion. However, traffic counts projected to the year of opening for the project will be allowed as part of the competitive evaluation. These must be submitted along with current 24-hour traffic counts for the proposed segment for comparison purposes. The agency must submit the project projected ADT, current ADT, the delta, and justification of the increase. Regarding "current" counts, these are defined as those taken for a typical mid-week period within the preceding 12-months. Project applications using projected ADT must use traffic counts taken within the preceding 12 months. Project applications not using projected ADT may use traffic counts taken within the preceding 36 months. Project applications without "current" counts will be deemed

incomplete and non-responsive. Average ADT for the east and west legs of the intersection will be added to the average ADT for the north and south legs.

For agencies where event or seasonal traffic presents a significant issue, Average Annual Daily Traffic (AADT) counts can be used, provided the agency gives sufficient justification for the use of AADT.

Current Project Readiness: This category is additive. Points are earned for each satisfied readiness stage at the time applications are submitted. Local agency should select the most current phase of the project.

- Right-of-Way (all easements and titles) – applies where no right-of-way is needed for the project or where all right-of-way has been acquired/dedicated.
- Right-of-Way (all offers issued) – applies where offers have been made for every parcel where acquisition is required and/or offers of dedication or orders of immediate possession have been received by the jurisdiction. Documentation of right-of-way possession will be required with application submittal.
- Final Design (PS&E) – applies where the jurisdiction's City Engineer or other authorized person has approved the final design.
- Preliminary design (35 percent level) – will require certification from the City Engineer and is subject to verification.
- Environmental Approvals – applies where all environmental clearances have been obtained on the project.

Cost Benefit: Total project cost (included unfunded phases) divided by the existing ADT (or modeled ADT for new segments).

Funding Over-Match: The percentages shown apply to match rates above a jurisdiction's minimum match rate requirement. M2 requires a 50 percent local match for RCP projects. This minimum match can be reduced by up to 25 percentage points if certain eligible components are met. If a jurisdiction's minimum match target is 30 percent and a local match of 45 percent is pledged, points are earned for the 15 percent over-match. The pledged amount is considered the committed match rate and will be required, at a minimum, from the local agency throughout the life of the project.

Coordination with Contiguous project: Projects that complement a proposed arterial improvement project with a similar implementation schedule earn points in this category. This category is intended to recognize large projects that segregate intersection components from arterial components for funding purposes.

Transportation Significance: Roadway classification as shown in the current MPAH.

~~MPAH Needs Assessment Category: Segment designation as shown in the RCP Needs Assessment study.~~

Operational Attributes (within the roadway): This category is additive. Each category must be a new feature added as a part of the proposed project.

- Bike Lanes: Extension of bike lanes through intersection
- Bus Turnouts: Construction of a bus turnout as a new feature.
- Lowers density: Addition of through travel lanes.
- Channels traffic: Addition and/or extension of turn pockets (other than free right turn).
- Free right turn: installation of new free right or conversion of an existing right turn to free right
- Protected/permissive left turn: Convert from protected to protected/permissive
- Pedestrian Facilities: Placement of a new sidewalk if none currently exists.
- Grade separations: Street to street grade separations and do not apply to rail grade separation projects which are covered by the grade separation program category.
- Sustainability Elements: Includes the use of recycled materials during the roadway construction process (recycled aggregate or rubberized asphalt) or the installation of solar lighting within the roadway cross section. Other elements of sustainability may be considered on a case by case basis.
- Water Conservation: Includes elements that reduce water consumption. Such as the replacement of existing landscaping with hardscape and/or "California Native" drought tolerant type landscaping; the replacement of existing sprinklers with drip irrigation systems; the installation of new "grey" or recycled water systems where such does not currently exist.
- Safety Improvements: Project features that increase the safety of pedestrians. These elements can include the new installation of: median barriers, curb extensions, residential traffic diverters, pedestrian crossing islands, pedestrian activated signals, crosswalk enhancements, safety signage, and the addition, modification, or improvement of existing pedestrian signals. Other elements of safety may be considered on a case by case basis.

LOS Improvement: This category is a product of the existing or projected LOS based upon volume/capacity– or v/c -- and LOS improvement "with project" using Intersection Capacity Utilization (ICU) calculation with 1,700 vehicles per lane per hour and a .05 clearance interval. Calculations will be based upon "current" arterial link and turning movement counts projected to opening year. **Projects must meet a minimum existing or projected LOS of "D" (.81 v/c) to qualify for priority consideration for funding.** Existing LOS is determined using ~~current 24-~~peak hour traffic counts/turning movements ~~(averaging~~ AM/PM peak periods) for the proposed segment

utilizing Intersection Capacity Utilization (ICU) methodology and using 1,700 vehicles per lane/per hour and a .05 clearance interval.

For projects where traffic volumes follow unconventional patterns (e.g. unidirectional congestion, large disparity between AM and PM peaks, etc.) HCM 2010 may be proposed as an alternate methodology for determining LOS. HCM calculations must use SYNCHRO and be supported with complete calculation documentation using standard industry approaches and current signal timing plans. If an alternative methodology is proposed, all analysis **must be submitted to OCTA for review no later than September 7, 2018** for the 2019 Call for Projects. OCTA will contract with an independent third-party firm to review the technical analysis. The cost for the review will be charged to the applicant.

Projects that do not meet the minimum LOS "D" can be submitted but are not guaranteed consideration as part of the competitive process.

If during the competitive process, it is determined that additional programming capacity exists after all eligible projects with LOS "D" have been funded, a consideration of projects with a minimum LOS "C" (.71 v/c) may be undertaken. Such consideration will be at the discretion of OCTA. Projects with a LOS better than "C" (.70 v/c) will not be considered.

Application Process

Project grants are determined through a competitive application process. Local agencies seeking funding must complete a formal application and provide supporting documentation that will be used to evaluate the project proposal as outlined below. Detailed instructions and checklists are provided in this chapter.

- Complete application
  - Funding needs by phase and fiscal year
  - Local match funding source, confirmed through city council resolution or minute order
  - Supporting technical information (including current arterial link and turning movement counts)
  - Project development and implementation schedule
  - Right-of-way status and a detailed plan for acquisition/disposal of excess right-of-way. The right-of-way acquisition/disposal plan must be submitted using the "right-of-way acquisition/disposal plan" form provided by OCTA and available for download at https://ocfundtracker.octa.net.
  - Any additional information deemed relevant by the applicant
- Grants subject to master funding agreement

Calls for projects are expected to be issued on an annual basis, or as determined by the Board. Complete project applications must be submitted by the established due date to be considered eligible for consideration.

Minimum Eligibility Requirements

Projects must have an existing or projected LOS "D" (.81 v/c) or worse to qualify for priority consideration for funding in this program.

All project roadways must be identified on the MPAH network. Local streets not shown on the MPAH are not eligible for funding through this program.

Matching Funds

Local agencies are required to provide local match funding for each phase of the project. As prescribed by the M2 Ordinance, the minimum local match requirement is 50 percent with potential to reduce this amount if certain eligibility requirements are met. The amount pledged during the application process is considered the committed match rate and will be required, at a minimum, from the local agency throughout the life of the project. Actual project contributions by the local agency are dependent on final project costs and may not be equal to the committed match rate in the event of cost overruns. OCTA will not increase the funding grant to cover cost overruns. Ineligible expenditures do not contribute to the local match rate.

Other Application Materials

Supporting documentation will be required to fully consider each project application. In addition to the funding plan described above, local agencies will be required to submit the following materials:

Council Approval: A Council Resolution or Minute Order action authorizing request for funding consideration with a commitment of local match funding must be provided with the project application. **If a *draft* copy of the resolution is provided, the local agency must also provide the date the resolution will be finalized by the local agency's governing body.** A final copy of the City Council approved resolution must be provided at least four (4) weeks **PRIOR** to the consideration of programming recommendations by OCTA's Board of Directors.

Project Documentation: If proposed project has completed initial planning activities (such as PSR or equivalent, EIR, or design), evidence of approval should be included with the application. Satisfactory evidence includes project approval signature page, engineer-stamped site plan, or other summary information to demonstrate completion or planning phases. An electronic copy of the PSR and/or environmental document must be supplied

as applicable. The applicant will be asked for additional detailed information only if necessary to adequately evaluate the project application.

Project Summary Information: With each application being recommended for funding, the agency shall submit a PowerPoint presentation summarizing the pertinent project information for review and discussion purposes. The presentation shall be no more than three (3) slides and should contain, at a minimum, a project description, project benefits, location map, and cost estimate. **OCTA staff will request the PowerPoint when/if a project is recommended for funding.**

Reimbursements

This program is administered on a reimbursement basis for capital improvements, planning, design, and right-of-way acquisition. Reimbursements will be disbursed upon review and approval of an acceptable initial payment submittal, final report and consistency with Master Funding Agreement or cooperative agreement. The reimbursement process is more fully described in Chapter 9 of this manual.

Project Cancellation

If a local agency decides to cancel a project, for whatever reason, the agency shall notify OCTA as soon as possible. Projects deemed infeasible during the planning phase shall bring that phase to a logical conclusion, file a final report, and cancel remaining phases so that remaining funds can be reprogrammed without penalty. Right-of-way funding received for property acquisition prior to cancellation shall be repaid upon cancellation even if property has been acquired. Construction funding received prior to cancellation shall be repaid upon cancellation.

Cancelled projects will be eligible for re-application upon resolution of issues that led to original project termination.

Audits

All M2 payments are subject to audit. Local agencies must follow established accounting requirements and applicable laws regarding the use of public funds. Failure to submit to an audit in a timely manner may result in loss of future funding. Misuse or misrepresentation of M2 funding will require remediation which may include repayment, reduction in overall grant, and/or other sanctions to be determined. Audits shall be conducted by OCTA's Internal Audit department or other authorized agent either through the normal annual process or on a schedule to be determined by the Board (see Chapter 10).

Proceeds from the sale of excess right-of-way acquired with program funding must be paid back to the project fund as described in Chapter 9 and the Master Funding Agreement.

Table 7-3
Regional Capacity Program
Intersection Improvement

Category	Points Possible	Percentage
Facility Usage		**25%**
Existing ADT	15	15%
Current Project Readiness	10	10%
Economic Effectiveness		**20%**
Cost Benefit	10	10%
Funding Over-Match	5	5%
Coordination with Contiguous Project	5	5%
Facility Importance		**30%**
Transportation Significance	~~5~~10	~~5~~10%
~~MPAH Assessment Category~~	~~5~~	~~5%~~
Operational Efficiency	20	20%
Benefit		**25%**
LOS Improvement	25	25%
Total	**100**	**100%**

Table 7-4

ICE SCORING CRITERIA
Point Breakdown for Intersection Capacity Enhancement Projects
Maximum Points = 100

Facility Usage — Points: 25

ADT Range*		Points
60+	thousand	15
55 - 59	thousand	13
50 - 54	thousand	11
45 – 49	thousand	9
40 – 44	thousand	7
35 – 39	thousand	5
30 – 34	thousand	3
25 – 29	thousand	1

*AVG ADT for east and west legs plus AVG ADT for north and south legs of intersection

Current Project Readiness	Max Points: 10
Environmental Approvals	2
Preliminary Design (35%)	2
ROW (All offers issued)	2
Final Design (PS&E)	4
ROW (All easement and titles)	5

Points are additive. Design and Right of Way (ROW) limited to highest qualifying designation.

Economic Effectiveness — Points: 20

Cost Benefit (Total $/ADT)

Range*	Points
< 20	10
21 – 30	9
31 – 50	7
51 – 75	5
76 – 100	3
>100	1

*=Total Cost/Average ADT

Funding Over-Match (local match/project cost) minus minimum local match requirement

Range*	Points
25+%	5
20 – 24%	4
15 – 19%	3
10 – 14%	2
5 – 9%	1
0 – 4%	0

Coordination with Contiguous Project

Range	Points
Yes	5
No	0

Coordination with ACE project with similar implementation schedule.

Facility Importance — Points: 30

Transportation Significance Range	Points
Principal or CMP Route	~~5~~10
Major	48
Primary	~~3~~6
Secondary	~~2~~4
Collector	~~1~~2

~~MPAH Assessment Category~~

~~Range~~	~~Points~~
~~Category 1~~	~~5~~
~~Category 2~~	~~4~~
~~Category 3~~	~~3~~
~~Category 4~~	~~2~~
~~Category 5~~	~~1~~

Operational Attributes (within the roadway)	Max Points: 20
Grade Separations	10
Bus Turnouts	4
Bike Lanes	4
Ped. Facilities (New)	4
Free Right	4
Lowers Density	3
Channels Traffic	3
Protected/Permissive Left Turn	2
Water Conservation Elements	2
Safety Improvements	2
Sustainability	2

Benefit — Points: 25

LOS Improvement — Max Points: 25

Calculation: LOS Imp x LOS Starting Pt.

Existing LOS (Peak Hour) Range	Points
1.01+	5
.96 – 1.00	4
.91 – .95	3
.86 – .90	2
.81 – .85	1
< .81	0

LOS Reduction w/ Project (exist. volume) Range	Points
.20+	5
.16 – .19	4
.1 – .15	3
.05 – .09	2
.01 – .05	1
< .01	0

Freeway Arterial/Streets Transitions (FAST)

Overview

The MPAH serves as the backbone of Orange County's arterial street network. Current and future needs at existing interchanges along MPAH highways and freeways will need to be addressed in order to improve connectivity between freeways and MPAH arterials. The interchange improvement program complements roadway improvement initiatives underway as well, and supplements development mitigation opportunities.

Projects in the FAST improvement category are selected on a competitive basis. Projects must meet specific criteria in order to compete for funding through this program.

Objectives

- Improve transition to and from Orange County freeways with emphasis on MPAH performance
- Provide timely investment of M2 revenues

Project Participation Categories

The FAST category provides capital improvement funding (including planning, design, right-of-way acquisition and construction) for interchange improvements on the MPAH network for the following:

- MPAH facility interchange connections to Orange County freeways (including on-ramp, off-ramp and arterial improvements)

Eligible Activities

- Planning, environmental clearance
- Design
- Right-of-way acquisition
- Construction (including ramps, intersection and structural improvements/reconstruction incidental to project)
- Signal equipment (as incidental component of the program)

Potentially Eligible Items

Below is a list of potentially eligible items. However, final determination of the eligibility of all project related costs will be made at the time of reimbursement. Prior to the submittal of an application for funding, or at any point in the project life cycle, local agencies may meet with OCTA staff to review the eligibility of project related costs. Application review and approval does not guarantee the eligibility of all items.

- Direct environmental mitigation for projects funded by FAST (details below)
- Storm drains/catch basins/detention basins/bioswales/other pollutant discharge mitigation devices (details below)
- Aesthetic improvements including landscaping within the project right-of-way (eligible improvements up to 10 percent of construction costs, provided costs are reasonable for the transportation benefit)
- Rehabilitation and/or resurfacing of existing pavement when necessitated by proposed improvement (such as change in profile and cross section)
- Improvements to private property if part of a right-of-way settlement agreement
- Utility relocation where the serving utility has prior rights as evidenced by a recorded legal document
- Roadway grading within the right-of-way should not to exceed a depth for normal roadway excavation (e.g. structural section) or as required by temporary construction easements, and/or right-of-way agreement related improvements. Additional grading (e.g. over excavation for poor soil conditions) will be considered on a case by case basis.
- Auxiliary lanes if necessitated by interchange improvements
- Soundwalls (in conjunction with roadway improvement mitigation measures)

Environmental mitigation will be allowed only as required for the proposed roadway improvement, and only as contained in the environmental document. Program participation in environmental mitigation shall not exceed 25 percent of the total eligible project costs.

Longitudinal storm drains are eligible for program participation when the storm drain is an incidental part (cost is less than 25 percent of the total eligible improvement cost) of an eligible improvement. Program participation shall not exceed 10 percent of the cost of storm drain longitudinal/parallel and main lines. Storm drain inlets, connectors, laterals and cross culverts shall have full participation in FAST improvement category funding. Storm drains outside standard MPAH right-of-way widths are not eligible, excluding catch basins within reasonable distance and in general proximity to a project intersection (e.g. within ten feet of the curb return). Catch basins and drainage systems extending into adjacent areas (including public streets) shall not be eligible past the first catch basin.

Soundwalls are eligible only if they are required as part of the environmental mitigation for the proposed project and shall not exceed 25 percent of the total eligible project cost. Aesthetic enhancements and landscaping in excess of minimum environmental mitigation requirements are eligible at up to 10 percent of the total eligible construction costs, provided costs are reasonable for the transportation benefit.

The relocation of detention basins/bioswales are potentially eligible dependent on prior rights and will be giving consideration on a case by case basis (see utility relocations below).

Roadway grading is eligible for structural sections if within the standard MPAH cross section for the facility (inclusive of any temporary construction easements). OCTA assumes rough roadway grading is complete prior to project start and is considered an ineligible item.

Utility Relocations

The expenses associated with the relocation of utilities are eligible for RCP reimbursement only when:

- The relocation is made necessary due to conflict with proposed improvements.
- The facility to be relocated is within the project right-of-way.
- It has been determined that the local agency is legally liable for either a portion of or all of the relocation costs.

Liability can be determined by property rights, franchise rights/agreements, state and local statutes/ordinances, permits, a finding by the local agency's counsel, or other recorded legal document. Documentation providing proof of the local agency's liability for the costs of utility relocation must be submitted with an initial payment request (see Chapter 9). Utilities funded through enterprise funds shall not be eligible for reimbursement.

If a relocation is eligible to be reimbursed, and to be performed by the utility owner or by the utility owner's contractor, the work should be included in the right-of-way phase costs and clearly identified in the project application submittal. For eligible relocations to be performed during the construction phase by the local agency's contractor, the work should be included in the plans and specifications similar to other construction activities. Adjustment of existing utilities to grade (e.g. water valves, manhole frames and covers), due to new roadway cross sections are generally eligible in the construction phase.

In all cases, eligible costs shall only include "in-kind" relocation. No reimbursements will be made for betterments above the cost of "in-kind" relocation. Additionally, costs submitted for program reimbursement must be reduced by any salvage credits received.

Ineligible Projects

- Seismic retrofit projects (unless combined with eligible capacity enhancements)
- Enhanced landscaping and aesthetics (landscaping that exceeds that necessary for normal erosion control and ornamental hardscape).

Selection Criteria

Specific selection criteria will be used to evaluate competitive program project applications. Emphasis is placed on existing usage, level of services benefits, local match funding and overall facility importance. Technical categories and point values are shown on Tables 7-5 and 7-6. Data sources and methodology are described below.

Projected/Current Average Daily Trips (ADT): Current ADT is the preferred method of measuring congestion. However, traffic counts and ramp volumes projected to the year of opening for the project will be allowed as part of the competitive evaluation. These must be submitted along with current 24-hour traffic counts for the proposed segment for comparison purposes. The agency must submit the project projected ADT, current ADT, the delta, and justification of the increase. Regarding "current" counts, these are defined as those taken for a typical mid-week period within the preceding 12-months. Project applications using projected ADT must use traffic counts taken within the preceding 12 months. Project applications not using projected ADT may use traffic counts taken within the preceding 36 months. Project applications without "current" counts will be deemed incomplete and non-responsive. Average ramp intersection volume for each interchange ramp will be used for the current counts. New facilities will rely on projected ramp volume based upon Caltrans approved projection.

For agencies where event or seasonal traffic presents a significant issue, Average Annual Daily Traffic (AADT) counts can be used, provided the agency gives sufficient justification for the use of AADT.

Current Project Readiness: This category is additive. Points are earned for each satisfied readiness stage at the time applications are submitted. Local agency should select the most current phase of the project.

- Right-of-Way (all easements and titles) – applies where no right-of-way is needed for the project or where all right-of-way has been acquired/dedicated).
- Right-of-Way (all offers issued) – applies where offers have been made for every parcel where acquisition is required and/or offers of dedication have been received by the jurisdiction.
- Final Design (PS&E) – applies where the jurisdiction's City engineer or other authorized person has approved the final design.
- Preliminary design (35 percent level) – will require certification from the City engineer and is subject to verification.
- Project Approvals/Environmental Documentation (PA/ED) – applies where a Project Report-level analysis has been completed and environmental approvals have been attained.

Cost Benefit: Total project cost (including unfunded phases) divided by the existing ADT (or modeled ADT for new segments).

Funding Over-Match: The percentages shown apply to match rates above a jurisdiction's minimum local match requirement. M2 requires a 50 percent local match for RCP projects. This minimum match can be reduced by up to 25 percentage points if certain eligible components are met. If a jurisdiction's minimum match target is 30 percent and a local match of 45 percent is pledged, points are earned for the 15 percent over-match. The pledged amount is considered the committed match rate and will be required, at a minimum, from the local agency throughout the life of the project.

Coordination with Freeway Project: Interchanges planned to coincide with or accommodate programmed freeway improvements receive points in this category.

Transportation Significance: Roadway classification as shown in the current MPAH.

~~MPAH Needs Assessment Category: Segment designation as shown in the RCP Needs Assessment study.~~

Operational Efficiencies: This category is additive. Each category, except Active Transit Routes, must be a new feature added as a part of the proposed project.

- Eliminate left turn conflicts: Ramp intersection reconfiguration which does not permit left turns onto ramps.
- Coordinated signal: Ramp intersections within a coordinated corridor where coordination did not previously exist.
- Add turn lanes: Increase in number of turn lanes on arterial.
- Add traffic control: Signalization of ramp intersection.
- Enhanced ramp storage: Extension or widening of existing ramp to improve off-street storage capacity.
- Pedestrian facilities: Add crosswalk and/or sidewalk to ramp or bridge crossing within context of interchange improvements.
- Active Transit Route: facility contains a currently active OCTA transit route
- Sustainability Elements: Includes the use of recycled materials during the roadway construction process (recycled aggregate or rubberized asphalt) or the installation of solar lighting within the roadway cross section. Other elements of sustainability may be considered on a case by case basis.
- Water Conservation: Includes elements that reduce water consumption. This includes the replacement of existing landscaping with hardscape and/or "California Native" drought tolerant type landscaping; the replacement of existing sprinklers with drip irrigation systems; the installation of new "grey" or recycled water systems where such does not currently exist.

- Safety Improvements: Project features that increase the safety of pedestrians. These elements can include the new installation of: intersection median barriers, curb extensions, pedestrian crossing islands, crosswalk enhancements, safety signage, and the addition, modification, or improvement of existing pedestrian signals. Other elements of safety may be considered on a case by case basis.

LOS Improvement: This category is a product of the existing or projected LOS based upon volume/capacity– or v/c -- and LOS improvement "with project" for arterial based improvements and ICU for intersection based improvements. **Projects must meet a minimum existing or projected LOS of "D" (.81 v/c) to qualify for priority consideration for funding.** Existing LOS is determined using current 24-hour traffic counts for arterials and ~~/~~peak hour turning movements at intersections ~~(averaging AM/PM peaks)~~ for the proposed segment. However, for projects where traffic volumes follow unconventional patterns (e.g. unidirectional congestion, large disparity between AM and PM peaks, etc.) alternate methodologies for determining LOS can be proposed. If HCM 2010 is proposed for intersections as an alternative methodology, all analysis **must be submitted to OCTA no later than September 7, 2018** and the cost for independent review shall be reimbursed by the applicant. Projects that do not meet the minimum LOS "D" can be submitted, but are not guaranteed consideration as part of the competitive process.

If during the competitive process, it is determined that additional programming capacity exists after all eligible projects with LOS "D" have been funded, a consideration of projects with a minimum LOS "C" (.71 v/c) may be undertaken. Such consideration will be at the discretion of OCTA. Projects with an LOS better than "C" (.70 v/c) will not be considered.

Improvement Characteristics: Select the attribute that best fits your project definition.

- New facility: New interchange where none exists.
- Partial facility: New interchange which does not provide full access.
- Interchange reconstruction: improvement of existing interchange to provide additional arterial capacity (widening of overcrossing or undercrossing).
- Ramp reconfiguration: Widening of ramp or arterial to improve turning movements or other operational efficiencies.
- Ramp metering: Installation of metering on ramp.

Application Process

Project grants are determined through a competitive application process. Local agencies seeking funding must complete a formal application and provide supporting documentation that will be used to evaluate the project proposal as outlined below.

- Complete application

  - Funding needs by phase and fiscal year
  - Local match funding source
  - Supporting technical information
  - Project development and implementation schedule
  - Right-of-way status and a detailed plan for acquisition/disposal of excess right-of-way. The right-of-way acquisition/disposal plan must be submitted using the "right-of-way acquisition/disposal plan" form provided by OCTA and available for download at https://ocfundtracker.octa.net.
  - Any additional information deemed relevant by the applicant
- Grants subject to a Master Funding Agreement or cooperative agreement if federal funds are awarded

Calls for projects are expected to be issued on an annual basis, or as determined by the OCTA Board of Directors. Complete project applications must be submitted by the established due date to be considered eligible for consideration.

Minimum Eligibility Requirements

Projects must have an existing or projected LOS "D" (.81 v/c) or worse to qualify for priority consideration for funding in this program. Worst peak hour period is used for this evaluation and eligibility purposes.

Matching Funds

Local agencies are required to provide local match funding for each phase of the project. As prescribed by the M2 Ordinance, a 50 percent minimum local match is required. A lower local match may be permitted if certain eligibility criteria are met. The amount pledged during the application process is considered the committed match rate and will be required, at a minimum, from the local agency throughout the life of the project. Actual project contributions by the local agency are dependent on final project costs and may not be equal to the committed match rate in the event of cost overruns. OCTA will not increase the funding grant to cover cost overruns. Ineligible expenditures do not contribute to the local match rate.

Reimbursements

This program is administered on a reimbursement basis for capital improvements, planning, design, and right-of-way acquisition. Reimbursements will be disbursed upon review and approval of an acceptable initial payment submittal, final report and consistency with Master Funding Agreement. The reimbursement process is described in Chapter 9.

Caltrans Coordination

Caltrans is not eligible to submit applications or receive payment under this program. Only cities or the County of Orange may submit applications and receive funds. This program was designed to benefit local agencies.

Coordination with Caltrans will be essential for most, if not all, of the projects submitted for this program. Local agencies should therefore establish contacts with the Caltrans District 12 Office (Project Development Branch) to ensure that candidate projects have been reviewed and approved by Caltrans. All other affected agencies should be consulted as well.

Agencies submitting projects for this program must have confirmation from Caltrans that the proposed improvement is consistent with other freeway improvements as evidenced by an agreement or other formal document.

Applications should be submitted so that interchange projects are done in conjunction with construction of other freeway improvements whenever possible. However, if the interchange project can be done in advance of the freeway project, verification and/or supporting documentation must be submitted showing the interchange improvement has merit for advanced construction and that it will be compatible with the freeway design and operation. Additionally, the interchange improvements should take into account the ultimate freeway improvements if the interchange is to be improved in advance.

Project Cancellation

If a local agency decides to cancel a project, for whatever reason, the agency shall notify OCTA as soon as possible. Projects deemed infeasible during the planning phase shall bring that phase to a logical conclusion, file a final report, and cancel remaining phases so that remaining funds can be reprogrammed without penalty. Right-of-way funding received for property acquisition prior to cancellation shall be repaid upon cancellation even if property has been acquired. Construction funding received prior to cancellation shall be repaid upon cancellation.

Cancelled projects will be eligible for re-application upon resolution of issues that led to original project termination.

Audits

All M2 payments are subject to audit. Local agencies must follow established accounting requirements and applicable laws regarding the use of public funds. Failure to submit to an audit in a timely manner may result in loss of future funding. Misuse or misrepresentation of M2 funding will require remediation which may include repayment, reduction in overall grant, and/or other sanctions to be determined. Audits shall be

conducted by OCTA's Internal Audit department or other authorized agent either through the normal annual process or on a schedule to be determined by the Board (see Chapter 10).

Proceeds from the sale of excess right-of-way acquired with program funding must be paid back to the project fund as described in Chapter 9 and Master Funding Agreement.

Other Application Materials

Supporting documentation will be required to fully consider each project application. In addition to the funding plan described above, local agencies will be required to submit the following materials:

Council Approval: A Council Resolution or minute order authorizing request for funding consideration with a commitment of local match funding must be provided with the project application. **If a *draft* copy of the resolution is provided, the local agency must also provide the date the resolution will be finalized by the local agency's governing body.** A final copy of the City Council approved resolution must be provided at least four (4) weeks **PRIOR** to the consideration of programming recommendations by OCTA's Board of Directors.

Project Documentation: If proposed project has completed initial planning activities (such as PSR or equivalent, EIR, or design), evidence of approval should be included with the application. Satisfactory evidence includes project approval signature page, engineer-stamped site plan, or other summary information to demonstrate completion of planning phases. An electronic copy of the PSR and/or environmental document must be supplied as applicable. The applicant will be asked for additional detailed information only if necessary to adequately evaluate the project application.

Project Summary Information: With each application being recommended for funding, the agency shall submit a PowerPoint presentation summarizing the pertinent project information for review and discussion purposes. The presentation shall be no more than three (3) slides and should contain, at a minimum, a project description, project benefits, location map, and cost estimate. **OCTA staff will request the PowerPoint when/if a project is recommended for funding.**

Table 7-5
Freeway/Arterial Street Transitions
Interchange Improvements

Category	Points Possible	Percentage
Facility Usage		**20%**
Existing ADT	10	10%
Current Project Readiness	10	10%
Economic Effectiveness		**25%**
Cost Benefit	10	10%
Matching Funds	10	10%
Coordination with Freeway Project	5	5%
Facility Importance		**25%**
Transportation Significance	~~5~~10	~~5~~10%
~~MPAH Assessment Category~~	~~5~~	~~5%~~
Operational Efficiencies	15	15%
Benefit		**30%**
Existing LOS	10	10%
LOS Reduction w/ Project	10	10%
Improvement Characteristics	10	10%
Total	**100**	**100%**

Table 7-6

FAST SCORING CRITERIA
Point Breakdown for Freeway/Arterial Street Transitions Projects
Maximum Points = 100

Facility Usage — **Points: 20**

ADT Range*		Points
55+	thousand	10
50 – 54	thousand	9
45 – 49	thousand	8
40 – 44	thousand	6
35 – 39	thousand	4
30 – 34	thousand	3
25 – 29	thousand	2
20 – 24	thousand	1
<10 – 19	thousand	0

*Arterial plus daily ramp exit volume

Current Project Readiness	Max Points: 10
ROW (All easement and titles)	6
ROW (All offers issued)	4
Final Design (PS&E)	4
PA/ED	2
Project Study Report or Equiv.	1

Points are additive. Right of Way (ROW is the highest qualifying designation.

Economic Effectiveness — **Points: 25**

Cost Benefit (Total $/ADT) Range*	Points
< 20	10
20 – 39	8
40 – 79	6
80 – 159	4
160 – 319	2
320 – 640	1
>640	0

Funding Over-Match (local match/project cost) minus minimum local match requirement Range*	Points
30+%	10
25 – 29%	8
20 – 24%	6
15 – 19%	4
10 – 14%	2
0 – 9%	1

Range refers to % points above agency minimum requirement

Coordination with Freeway Project Range	Points
Yes	5
No	0

Facility Importance — **Points: 25**

Transportation Significance Range	Points
Principal or CMP Route	~~5~~10
Major	~~4~~8
Primary	~~3~~6
Secondary	~~2~~4
Collector	~~1~~2

~~MPAH Assessment Category Range~~	~~Points~~
~~Category 1~~	~~5~~
~~Category 2~~	~~4~~
~~Category 3~~	~~3~~
~~Category 4~~	~~2~~
~~Category 5~~	~~1~~

Operational Attributes (within the roadway)	Max Points: 15
Eliminate Left Turn Conflict	3
Coordinated Signal	2
Add Turn Lanes	3
Add Traffic Control	1
Enhanced Ramp Storage	3
Pedestrian Facilities (New)	3
Water Conservation Elements	2
Safety Improvements	2
Sustainability	2

Benefit — **Points: 30**

LOS Improvement — Max Points: 20
Calculation: Ave LOS Imp + Ave LOS Starting Pt.

LOS Reduction w/ Project (exist. Volume) Range	Points
.20+	10
.16 – .19	8
.1 – .15	6
.05 – .09	4
<.05	2

Existing LOS Range	Points
1.06+	10
1.01 – 1.05	8
.96 – 1.00	6
.91 – .95	4
.86 – .90	2
.81 – .85	1

Improvement Characteristics	Points
New Facility (Full Interchange)	10
New Facility (Partial Interchange)	8
Interchange Reconstruction	6
Ramp Reconfiguration	4
Ramp Metering	2

Regional Grade Separation Program (RGSP)

Background

Seven rail crossing projects along the Master Plan of Arterial Highways (MPAH) network were identified by the CTC to receive Trade Corridors Improvement Funds (TCIF). These TCIF allocations required an additional local funding commitment. To meet this need, the Board approved the commitment of $160 million in Regional Capacity Program funds to be allocated from M2. The RGSP captures these prior funding commitments.

Future calls for projects for grade separations are not anticipated.

Chapter 8 - Regional Traffic Signal Synchronization Program (Project P)

Overview

The Project P - Regional Traffic Signal Synchronization Program (RTSSP) includes competitive funding for the coordination of traffic signals across jurisdictional boundaries including Project based operational and maintenance funding. OCTA will provide funding priority to programs and projects, which are multi-jurisdictional in nature.

The RTSSP is based on the Traffic Signal Synchronization Master Plan (Master Plan). The Board adopted the Master Plan as an element of the MPAH on July 26, 2010. The Master Plan defines the foundation of the RTSSP. The Master Plan consists of the following components:

- Regional signal synchronization network
- Priority corridors for accelerated signal synchronization
- Definition of Traffic Forums
- Model agreements presenting roles and responsibilities for Project P
- Signal synchronization regional assessment every three years
    - NOTE: For Call for Projects 2019, Priority Corridors are not an eligible inclusion and no additional points will be awarded. A Priority Corridor is on the Signal Synchronization Network.

The Master Plan will be reviewed and updated by OCTA every three years and will provide details on the status and performance of the traffic signal synchronization activities over that period. Local agencies are required to adopt and maintain a Local Traffic Signal Synchronization Plan (Local Plan) that is consistent with the Master Plan and shall issue a report on the status and performance of its traffic signal synchronization activities. Details on both the Master Plan and requirements for Local Plan development are available in the "Guidelines for the Preparation of Local Signal Synchronization Plans". A hard copy of these guidelines can be requested from OCTA.

The remainder of this chapter details the key components of the RTSSP:

- Funding guidelines for the competitive call for projects
- 2019 Call for Projects

Projects compete for funding as part of the RTSSP. Projects submitted by local agencies as part of the call must meet specific criteria. Projects are rated based on scoring criteria and are selected based on their competitive ratings.

Objectives

- Synchronize traffic signals across jurisdictions
    - Monitor and regularly improve the synchronization.
    - Synchronize signals on a corridor or route basis reflecting existing traffic patterns in contiguous zones or road segments that have common operations.

2019 Call for Projects

The 2019 Call for Projects (call) for Project P – the Regional Traffic Signal Synchronization Program (RTSSP) – under M2 will provide approximately **$8 million** for signal coordination across Orange County. The following information provides an overview of the 2019 RTSSP Call for Projects:

1. Projects must result in new, optimized, and field-implemented coordination timing.
2. Project may be a single contiguous corridor or set of contiguous corridors related to each other. Multiple corridors, related systems of corridors, and corridors that form a "grid" may be submitted as a single optimized timing project. However, the total number of corridors per project will be limited to two (2) and the total number of intersections between the two corridors is limited to fifty (50).
3. Projects selected will be programmed after July 1 of the programmed year (July 1 – June 30).
4. Project delays resulting in a time extension request will fall within the process outlined in the CTFP Guidelines.
5. Projects are funded for a grant period of three (3) years and are divided into two phases:
   a. Primary Implementation – includes the required implementation of optimized signal timing as well as any signal improvements proposed as part of a project.
   b. Ongoing Operations and Maintenance (O&M) – includes the required monitoring and improving optimized signal timing in addition to any optional communications and/or detection support. O&M will begin after the optimized signal timing is implemented and be required for the remainder of the project (typically 2 Years). A project final report is required at the conclusion of this phase to document work completed during the O&M phase.
6. Projects shall include a Before and After Study. This study shall collect morning, mid-day, and evening peak periods using travel times, average speeds, green lights to red lights, stops per mile, and the derived corridor system performance index (CSPI) metric. This information shall be collected both before any signal timing changes have been made and after the Primary Implementation. The study shall compare the information collected both before and after the timing changes. Comparisons shall identify the absolute and percent differences for the entire corridor, by segment, direction, and time period. Segments will be defined by major traffic movements as observed during the project (e.g. commuting segments between freeways, pedestrian-friendly segments in a downtown area, etc.). The ~~report~~B~~B~~efore and A~~a~~fter study shall also include field inventory, count data, modeling data, and Greenhouse Gas calculations. The Before and After Study shall be submitted after the Primary Implementation phase is completed.
7. Any corridor or portion of a corridor funded through this call cannot re-apply for funding until the three-year grant period or commitment to operate signal

synchronization beyond the three-year grant period is completed, whichever ends later.

8. This chapter identifies the selection criteria for projects, eligible activities, minimum project requirements, data compatibility required as part of any funded project, and other key information.

Additional details the specific program's intent, eligible project expenditures, ineligible project expenditures, and additional information that may be needed when applying for funds are included in this chapter. Each section should be read thoroughly before applying for funding. Application should be prepared for the program that best fits the proposed project.

For specifics on the funding policies that apply to this call, refer to the Program Precepts as found in Section IV of these guidelines.

Applications

In order for OCTA to consider a project for funding, applications will be prepared by the local agency responsible for the project application. OCTA shall require agencies to submit applications for the call for projects by **5:00 p.m. on ~~Friday~~Thursday, October ~~19~~18, 2018**. Late and/or incomplete submittals will not be reviewed or considered. The local agency responsible for the project application must submit the application and any supporting documentation via OCFundtracker as outlined below.

A separate application package must be completed for each individual project and uploaded to OCFundtracker. **Three (3) unbound printed copies and one electronic copy on a CD or USB** of each complete application shall also be mailed or delivered to:

Orange County Transportation Authority
550 South Main Street
P.O. Box 14184
Orange, California 92863-1584
Attn: Jodie McCann

Application Process

Project grants are determined through a competitive application process administered by OCTA. Agencies seeking funding must complete an online application, a supplemental application, and provide supporting documentation that will be used to evaluate the project proposal as outlined below. Key information to be provided as part of the application process includes:

- Funding needs by phase and fiscal year
- Percent match rate including funds type, source, and description (minimum 20 percent)
- Lead agency Option 1 (default – local agency) or Option 2 (OCTA)
- Lead and supporting agencies names
- Supporting technical information
- Project development and implementation schedule
- Environmental clearances and other permits
- Any additional information deemed relevant by the applicant
- Complete photographic field review (including cabinet interiors and communication facilities) for all projects that either exceed one million dollars in capital improvements or request OCTA serve as lead agency regardless of capital improvement budget. Original photos shall be uploaded to OCFundtracker or included with electronic copy of application.
- Current City Specifications (including specific equipment specifications, inspection requirements, etc.) if OCTA is requested to be the lead agency. Refer to the 2019 Supplemental Application for additional information. This shall be uploaded to OCFundtracker or included with electronic copy of application.

A call for projects for the funding cycle will be issued as determined by the Board. Complete project applications must be submitted by the established due dates to be considered eligible for consideration.

An application should be submitted for a single corridor or route corridor project. Multiple corridors~~, related systems of corridors, and corridors~~ that form a "grid" may be submitted as separate or single project(s). However, the total number of corridors per route corridor project will be limited to two (2) and the total number of intersections between the two corridors is limited to fifty (50). A single corridor project not proposed as a connected route or grid project may be submitted and is not subject to the ~~50 intersection~~50-intersection limit. The following instructions should be used in developing project applications.

Applications will be reviewed by OCTA for consistency, accuracy, and concurrence. Once applications have been completed in accordance with the Program requirements, the projects will be scored, ranked, and submitted to the TSC, TAC, and the Board for

consideration and funding approval. OCTA reserves the right to evaluate submitted project costs for reasonableness as part of the review and selection process and suggest potential revisions to make the cost more appropriate. Grants will be subject to funding agreements with OCTA.

Other Application Materials

Supporting documentation is required to fully consider each project application. A Supplemental Application Template is required to be completed for each project application. Note: There is a new section for all costs, on a line item basis, in excel format for both project phases. The template is distributed with other application materials at the issuance of the Call for Projects. In addition to the funding plan described above, local agencies will be required to submit the following materials:

Lead Agency: Lead agency for the project must be identified: local agency or OCTA.

Participating Agencies: All participating agencies must be identified and adopted City Council resolutions or Minute Order actions authorizing the participating agency's support of the project under the lead agency must be included. **If a *draft* copy of these resolutions of support are provided, the local agency must also provide the date the resolution will be finalized by the participating agency's governing body.** A final copy of the City Council approved resolution must be provided at least four (4) weeks **PRIOR** to the consideration of programming recommendations by OCTA's Board of Directors.

Council Approval: A Council Resolution or Minute Order action authorizing request for funding consideration with a commitment of project local match funding must be provided with the project application from all participating agencies. **If a *draft* copy of the resolution is provided, the local agency must also provide the date the resolution will be finalized by the local agency's governing body.** A final copy of the City Council approved resolution must be provided at least four (4) weeks **PRIOR** to the consideration of programming recommendations by OCTA's Board of Directors.

Project Support: If proposed project has completed initial planning activities (such as project study report or equivalent, environmental impact report, or design), evidence of approval should be included with the application. Satisfactory evidence includes project approval signature page, engineer-stamped site plan, or other summary information to demonstrate completion or planning phases. The applicant will be asked for detailed information only if necessary to adequately evaluate the project application.

Lead Agency

This Program is administered through a single lead agency: a local city or OCTA.

Local Agency Lead: Only the lead agency will receive payments in accordance with the CTFP Guidelines regarding payment for costs related to project for optimized signal timing development, capital improvements, planning, and related design. Payments will be disbursed consistent with Chapter 9. The lead agency is responsible for reimbursing other agencies as part of the effort. Additionally, the lead agency is also responsible for ensuring

that all agencies participating in the project provide the local match proposed in the project application.

OCTA Lead: OCTA may, at the request of the involved local agencies, act as the lead agency for RTSSP projects. If the involved local agencies would like OCTA to implement a project on the signal synchronization network, the local agency shall work cooperatively with OCTA to develop the scope of work and cost elements of the project. The lead local agency shall contact OCTA with **a written request at least four weeks prior to deadline for submittal of the project grant application**. Projects nominated for OCTA lead shall be discussed at the Traffic Forum. Applications must include a complete photographic field review (as outlined above) when submitted. The application will be scored using the criteria outlined in the previous sections. Based on local agency interest and OCTA resource availability, a limited number of projects will be developed and implemented by OCTA.

If any projects that are designated as OCTA lead are awarded funding, OCTA will then be responsible for implementation of the project including optimized signal timing development, capital improvements, planning, and related design. OCTA will implement the project based on the cost estimates developed in the application. Project elements may be modified based on final costs with the agreement of all participating agencies. OCTA will be responsible for ensuring that all agencies participating in the project provide the local match as identified in the project application (minimum 20 percent).

Additionally, for projects designating OCTA as lead agency, a consultant traffic engineering firm may be contracted to provide staff and services to implement the project. Therefore, in-kind match designated as staffing commitment under an OCTA lead agency option shall be limited. The following will be used as a guide for staffing commitment, when the local agency develops the application:

- Primary Implementation (PI) (12 months)
  - Project Administration - Each local agency traffic engineer or equivalent participates in approximately 10-15 hours per month of project administration (meetings, review of reports, minutes, and other administration).
  - Signal Synchronization Timing - Each local agency traffic engineer or equivalent reviews consultant developed draft and final timing plans for intersections within the local agency, approximately 2-4 hours per local agency intersection.
  - Before and After Study - Each local agency traffic engineer or equivalent reviews consultant developed draft and final project Before and After Study, approximately 2-5 hours per local agency.
  - Engineering design/review - Each local agency traffic engineer or equivalent reviews consultant developed engineer design within the local agency, approximately 2-4 hours per affected local agency intersection.

  - System integration - Each local agency traffic engineer or equivalent provides support for this function (hours vary depending on improvements).
  - Construction management - Each local agency traffic engineer or equivalent provides construction management support including inspection (hour vary depending on improvements.
- Ongoing Operations and Maintenance (O&M) (24 months) - Each local agency's traffic engineer or equivalent participates in continued project level meetings of 2-5 hours per local agency per month to review consultant traffic engineering progress. In addition, each local agency's traffic engineer or equivalent reviews consultant developed draft and final project report.

For projects designating a local agency as lead, the above may be used as a guide with additional local match related to implementation, development, design, monitoring and other costs that the local agency may choose to include as local match. For instance, O&M may be performed by in-house staff and be calculated using a different formula (e.g., 2-5 hours per local agency signal for 24 months).

OCFundtracker Application Components

Final applications MUST be submitted via OCFundtracker and in hard copy format. Selection criteria must be inputted as part of the OCFundtracker online application and includes the following categories of information:

- Vehicle Miles Traveled
- Cost Benefit
- Project Characteristics
- Transportation Significance
- Maintenance of Effort
- Project Scale
- Number of Local agencies
- Current Project Readiness
- Funding Match Rate

Application Review and Program Adoption

OCTA staff will conduct a preliminary review of all applications for completeness and accuracy, may request supplemental information for projects during initial staff evaluations, and prepare a recommended program of projects for the TSC. In addition, OCTA may hire a consultant(s) to verify information within individual applications including, but not limited to, project scope, cost estimates, vehicle miles traveled, and average daily traffic.

Final programming recommendations will be provided to the TSC and TAC for approval. Recommendations will be presented to the Board, who will approve projects for funding under the CTFP.

OCTA shall distribute copies of the approved program to each participating local jurisdiction with any qualifying conditions stipulated for the jurisdiction's funded project(s). Local agencies awarded funding will be notified as to which projects have been funded and from what sources after the Board takes action. A tentative call schedule is detailed below:

Board authorization to issue call: August 2018
Application submittal deadline: October 189, 2018
TSC/TAC Review: February/March 2019
Committee/Board approval: May 2019

Checklist Guide

The "Project P Regional Traffic Signal Synchronization Program Application Checklist" has been provided for the RTSSP (Exhibit 8-1). The checklist identifies the basic documentation required for the program. In addition to items required at the time of project submittal, additional items that are not specified may be requested later. The checklist should be provided as a cover sheet for **each** application submitted. For any items that are required for the candidate project or program that are missing or incomplete, an explanation should be included in a cover letter with the application.

Sample Resolution Form

A resolution or minute action must be approved by the local agency's governing body. A sample resolution is included as Exhibit 8-2. The mechanism selected shall serve as a formal request for RTSSP funds and states that matching funds will be provided by the agency, if necessary. All project requests (i.e., multiple corridors proposed for RTSSP funds) must be included in this action.

Project Definition

Local agencies are required to submit complete projects that, at minimum, result in field-implemented coordinated timing. Project tasks that are eligible for funding can consist of design, engineering, construction, and construction management. Partial projects that design improvements, but do not field implement the improvements are ineligible.

Projects must consist of a corridor along the priority corridor network, signal synchronization network, or the Master Plan of Arterial Highways (MPAH). Projects previously awarded RTSSP funding must be complete with a final report submitted and approved by OCTA. Projects can be the full length of the corridor or a segment that complies with the project requirements identified later in the chapter. **Communication system improvements that directly benefit signal synchronization along the project corridor limits, but are not physically within the project corridor, are eligible for inclusion in a project.**

Applicant agency and owning agency must demonstrate through simulation, or actual vehicle counts showing Origin – Destination that proposed linked corridors form a route. Two linked corridors may also combine at the point of intersection to form a single local Master offset Control Point (T_0) for future Zone operations.

Multimodal consideration of bicyclists and pedestrians along or crossing the intersection or roadway may enhance overall circulation. Therefore, active transportation elements may be included as part of the project.

Eligible Activities

The primary purpose of the Program is to provide funding for projects that develop and maintain corridor-based, multi-jurisdictional signal synchronization along corridors throughout Orange County. All projects funded by this Program must be corridor-based and have a signal coordination component that includes the following:

- Signal Coordination
  - Developing and implementing new signal synchronization timing parameters based on current travel patterns, and federal and state MUTCD traffic signal timing mandates and guidance
  - Monitor, maintain (minimum quarterly/maximum monthly) and/or regularly improve the newly implemented signal synchronization timing and parameters for the remainder of the project
  - "Before" and "after" studies for the project comparing travel times, average speeds, ratio of green lights passed to red lights stopped (greens per red), average stops per mile, and emissions of greenhouse gases

In addition to developing optimized signal timing, a project may include other improvements as long as they contribute to the goal of multi-agency signal synchronization of corridors throughout Orange County. These improvements are restricted to the signal synchronization project limits, but may include traffic signalized intersections on intersecting corridors where new optimized timing has occurred within the past three years; maximum distance for either direction from crossing arterial intersection in 2,700 feet. Gap closure communications links that are installed from a central location and/or communications hub to the project corridor are eligible. All improvements must be designed to enhance the specific project. The following are a list of potentially eligible items as part of a signal coordination project:

- New or upgraded vehicle and pedestrian detection
  - Upgrade detection along the signal synchronization corridors to ensure necessary conditions for signal synchronization: inductive loops, video detection, radar, sonar, thermal, hybrids thereof, and other types of detection systems
- New or upgraded communication systems
  - New contemporary communication system improvements (e.g. Ethernet) including all conduits, pull boxes, fiber optic and/or copper cabling, network switches and distribution systems. These systems should be sufficiently sized for the need capacity of the Intelligent Transportation System (ITS) network. Excess capacity is deemed non-participating.
  - Replacement fiber optic or copper cabling for network communication
    - Fiber optic is the preferred medium and includes pull boxes, network switches and distribution systems
  - Software and hardware for system traffic control
  - Control and monitoring interconnect conduit (including upgrades or replacement of existing systems)
  - Gap closure systems of conduit, cable, and associated equipment that are outside of project limits but complete a designated communications link to an existing network for the Advanced Transportation Management System (ATMS) for an agency or agencies.
  - Communications Support~~and detection support~~
    - Monitor, maintain, and repair signal communication systems and infrastructure along synchronized corridors to ensure necessary conditions for signal synchronization including interconnect and Central Systems and Local Systems communications equipment (two years after Primary Implementation acceptance)

- Detection Support
  - Monitor, maintain, and repair all detection systems and infrastructure associated with the PI Phase of a specific project along synchronized corridors to ensure necessary conditions for signal synchronization including local intersection and System Sampling Detection equipment (two years after Primary Implementation acceptance)

- Intersection/field system modernization and replacement
  - Traffic signal controller replacement of antiquated units with Advanced Transportation controller (ATC) units. ATC shall comply with version 6.24 or better of ATC standard 5201 and ATC standard 5401 Applications Programming Interface with Referenced Implementations (APIRI)
  - Controller cabinet (assemblies) replacements that can be shown to enhance signal synchronization
  - Closed circuit television (CCTV (also can perform video detection))
  - Uninterruptible power supply (UPS) for ATMS and intersection field equipment
    - For ATMS, UPS shall solely provide electrical power for ATMS Server(s), one dedicated workstation (console terminal) and related communications devices
      - Limited cost and scale
      - UPS not intended to provide power to entire TMC
      - Approval of request for UPS is at the sole discretion of the AUTHORITY
- Minor signal operational improvements (new)
  - Emergency vehicle preempt (EVP) intersection control equipment only
  - Transit signal priority (TSP) intersection control equipment only
  - Channelization (signing, striping, raised pavement markers, in lane flashing guidance or warning marking systems, and legends) improvements required for traffic signal phasing. ~~but not requiring street construction~~
  - Traffic signal phasing improvements that will improve traffic flow and system performance including protective permissive left turn phasing and shared pedestrian phasing
  - Improvements to comply with new federal or state standards (MUTCD) for traffic signal design as related to signal synchronization including pedestrian, bicycle, and vehicular timing intervals.
  - ~~o~~ ADA compliant Pedestrian Signal countdown heads
- Traffic management center (TMC)/traffic operations centers (TOC) and motorist information

  - New TMCs or TOCs (any project funded under this category must be planned or built to be center-to-center communication (C2C) "ready" with nearby agencies and/or OCTA
  - Upgrades to existing TMCs or TOCs (any project funded under this category must be planned or built to be center-to-center communication "ready" with nearby agencies and/or OCTA
  - Motorist information systems (up to 10 percent of total project costs)
  - Video display equipment, including wall monitors, screens, mounting cabinets, and optical engines (up to 10 percent of total construction costs for PI phase only)
- Real-time traffic actuated operations and demonstration projects
  - Adaptive traffic signal systems
- Caltrans encroachment permits and agency to Caltrans Cooperative Agreement fees
  - Includes eligible Caltrans labor, capital, and permitting fees and expenses
- Active Transportation/Pedestrian Safety related elements
  - Installation of new and/or improved traffic control devices to improve the accessibility, mobility and safety of the facility for pedestrians and bicyclists
    - ADA compliant ~~Accessibility~~ Accessible Pedestrian Push Button Systems
    - High-Intensity Activated cross~~W~~walk signaling systems (HAWK)

In addition, expenditures related to the design of systems, permitting, and environmental clearance are eligible for funding.

Ineligible Expenditures

- Isolated traffic signal improvements
- Traffic hardware (pole, mast arms, lights, electrical, signs, etc.)
- Regular signal operation and maintenance (such as replacement of light bulbs)
- Field display equipment (Traffic signal heads~~/~~ other than ~~not~~ pedestrian ~~signal~~ countdown, or special bicycle, or Transit Vehicle signal heads)
- Feasibility studies
- Relocation of utilities except for electrical service requirements
- Right-of-way

Funding Estimates

The streets and roads component of M2 is to receive 32 percent of net revenues, 4 percent of which are allocated for the RTSSP. The RTSSP will make an estimated $270 million (2009 dollars) available over the course of the 30-year M2 Program. Programming

estimates are developed in conjunction with a call for projects cycle corresponding to concurrent funding agreements with all local agencies.

The RTSSP targets over 2,000 intersections across Orange County for coordinated operations. Because of the limited amount of funds available for the RTSSP, project cap of $75,000 per signal or $250,000 per project corridor mile included as part of each project (whichever is higher) has been established for this call for projects.

Selection Criteria

Specific selection criteria will be used to evaluate competitive program project applications. Emphasis is placed on furthering the overall goal of multi-jurisdictional, corridor-based signal synchronization.

Vehicle Miles Traveled (VMT): Centerline length of segment(s) on the corridor proposed for synchronization multiplied by the existing average daily traffic (ADT) for the proposed segment(s) length. For instance, for a three-mile segment with one-mile interval ADT data at of 200 vehicles, 300 vehicles, and 400 vehicles, the VMT would be calculated as:

*200 vehicles * 1 mile + 300 vehicles * 1 mile + 400 vehicles * 1 mile = 900 vehicle miles.*

VMT should be calculated by the smallest segmentation on which the city typically collects ADT data. (maximum: 20 points)

ADT must be based upon actual count information taken within the 36 months preceding the application date. Data from the OCTA Traffic Flow Map may not be used.

Cost Benefit: Total project cost divided by Existing VMT. (maximum: 10 points)

Project Characteristics: Points are awarded based on the type and relevance of the proposed project. For instance, points accumulate if a signal synchronization project is combined with improvements as defined in the "Eligible Activities" section above. (maximum: 10 points)

Transportation Significance: Points are earned based on the corridor being on the signal synchronization network. (maximum: 5 points) (Priority signal network will not be a part of the 2019 Call for Projects. No points will be awarded for being on a Priority Corridor.)

Maintenance of Effort: Points are earned for a commitment to operate the project signal synchronization timing for a defined period of time beyond the three-year grant period. (maximum: 5 points)

Project Scale: Points are earned for including more intersections along signal synchronization network, or serving as a signal corridor "gap closure". (maximum: 10 points)

Number of Local Agencies: Points are earned for including multiple local agencies as part of the project. (maximum: 20 points)

Current Project Readiness: Points are earned based on the current status of the project development. Evidence of actual preliminary engineering performed for proposals requesting funding for implementation phases must be provided to qualify for points related to this attribute. (maximum for category: 10 points)

Funding Rate: The percentages shown in Table 8-1 apply to match rates above a local agency's minimum match requirement. M2 requires a 20 percent local match for RTSSP projects. Project match rates above 20 percent are limited to dollar match only. (maximum: 5 points)

Table 8-1

RTSSP SCORING CRITERIA
Point Breakdown for Regional Traffic Signal Synchronization Projects
Maximum Points = 100

Vehicle Miles Travelled (VMT) **Points: 20**

VMT Range		Points
250+	thousand	20
200 - 249	thousand	15
150 - 199	thousand	10
100 - 149	thousand	6
50 - 99	thousand	3
0 - 49	thousand	1

Calculation: ADT x segment length
(Applies only to coordinated segments of project)

Economic Effectiveness **Points: 10**

Cost Benefit (Total $/VMT) Range*	Points
< 3	10
3 - 5	9
6 - 8	8
9 - 11	7
12 - 14	6
15 - 17	5
18 - 20	4
21 - 23	3
24 - 26	2
27+	1

Project Characteristics **Points: 10**

Project Feature	Points
Timing only, no capital	10
TMC/TOC and motorist information	~~2~~1
New or upgraded communications systems	2
New or upgraded detection	~~2~~1
Intersection/field system modernization	2
Minor Signal operational improvements	2
New Protected/Permissive signals	~~3~~2
Adaptive traffic & demonstration projects	~~3~~4
TMC/~~CMC~~ TOC Connections between agencies	~~3~~4

Transportation Significance **Points: 10**

Corridor Type	Points
Signal Synchronization Corridor	5
Corridor "Gap Closure"	5

Maintenance of Effort **Points: 5**

MOE After Grant Period	Points
3 years	5
2 years	3
1 year	1
None	0

Project Scale **Points: 10**

Number of Signals Coordinated by Project Range	Points
50+	5
40 - 49	4
30 - 39	3
20 - 29	2
10 - 19	1
< 10	0

AND

Percent of Corridor Signals Being Retimed Range	Points
90% or above	5
80 - 89%	4
70 - 79%	3
60 - 69%	2
50 - 59%	1
< 50%	0

Calculation: Number of signals in project divided by total signals in full corridor length.

Number of Jurisdictions **Points: 20**

Total Number of Involved Jurisdictions Range	Points
5 or more	20
4	16
3	12
2	8
1	0

Current Project Readiness **Points: 10**

Project Status	Points
~~Preliminary Engineering Complete~~	~~5~~
Re-timing of prior RTSSP project	~~3~~5
Implementation within 12 months	5

Funding Match **Points: 5**

Overall Match %	Points
50+%	5
40 - 49%	4
35 - 39%	3
30 - 34%	2
25 - 29%	1
< 25%	0

Minimum Eligibility Requirements

All local agencies may participate in the RTSSP. Caltrans facilities are eligible for the RTSSP, but Caltrans cannot act as the lead agency. Local agencies will be required to provide a minimum of 20 percent matching funds for eligible projects (see definition of matching funds below).

The goal of the RTSSP is to provide regional signal synchronization that cross jurisdictional, geographical, or physical boundaries. To be eligible for funding through this Program, a project must meet the following requirements:

1. Be on a street segment that is part of the signal synchronization network, or the MPAH. The project must be consistent with Local Signal Synchronization Plans and support the Regional Traffic Signal Synchronization Master Plan goals.
2. Be multi-jurisdictional, have documented support from all participating local agencies (cities, County, or Caltrans) and a minimum of 20 signals

   or

   Be multi-jurisdictional, have documented support from all participating local agencies (cities, County, or Caltrans) and a minimum distance of five miles

   or

   Include at minimum three local agencies, have documented support from all participating local agencies (cities, County, or Caltrans), and have a minimum intersection density of four intersections per mile with a minimum of eight signals

   or

   Include the full length of the signal synchronization network corridor, or MPAH corridor

Matching Funds

Local agencies along the corridor are required to provide minimum local match funding of 20 percent for each project. As prescribed by the M2 Ordinance, this includes local sources, M2 Fair Share, and other public or private sources (herein referred to as a "cash match"). Projects can designate local matching funds as cash match, in-kind match provided by local agency staff and equipment, or a combination of both.

"In-kind match" is defined as those actions that local agencies will do in support of the project including staffing commitment and/or new signal system investment related to improved signal synchronization. Examples of staffing commitment include, but are not limited to, implementation of intersection or system timing parameters, review of timing documentation, meeting participation, conducting or assisting in before/after studies, and other similar efforts that directly enhance the signal synchronization project.

Administrative staff time for documentation of in-kind services is ineligible. Staff time charged to a project is limited to the caps as described in these guidelines. Allowable signal system investment would be improvements that are "eligible activities" per the funding guidelines, which can be shown to improve signal synchronization and would not include any prior investments made by the agency.

The specific matching requirement by project category type is listed below for city led projects:

Project category	**Type of matching allowed***
Signal coordination	In-kind match** or cash match
New or upgraded detection	In-kind match** or cash match
New or upgraded communications systems	In-kind match** or cash match
Communications and detection support	In-kind match** or cash match
Intersection/field system modernization and replacement	In-kind match** or cash match
Minor signal operational improvements	In-kind match** or cash match
Traffic management center/traffic operations centers and motorist information systems	Cash match
Real-time traffic actuated operations and demonstration projects	Cash match
Caltrans fees and expenses (labor and capital)	Cash match

* Project match beyond 20 percent is limited to cash match only.

** In-kind services are subject to audit.

In-kind match must be defined for each local agency as part of the supplemental application. In-kind match must be identified as staffing commitment and/or new signal system investment. The supplemental application template will include a section to input in-kind match type as well as additional data related to the match:

- Staffing commitment
  - Staff position
  - Number of hours

    - Hourly (fully burdened) rate
    - Total cost
- New signal system investment
    - Cost of any signal system investment
    - Benefit to project

Projects submitted as OCTA led require a 20 percent cash match for Primary Implementation activities with a nominal in-kind allowance for local agency oversight. Operations and Maintenance activities will be permitted in-kind match only for local agency oversight functions. Contract activities will require cash match. Local agency contributions identified as cash match in the application cannot be converted into in-kind match.

OCTA staff will review in detail the presented cash and in-kind match by local agency for reasonableness. Additional requirements on in-kind match as part of the upcoming call are provided in this chapter.

Project Cancellation

If a local agency decides to cancel a project, for whatever reason, the agency shall notify OCTA as soon as possible. Projects deemed infeasible shall bring that phase to a logical conclusion, file a final report, and cancel remaining phases so that remaining funds can be reprogrammed without penalty.

Cancelled projects will be eligible for re-application upon resolution of issues that led to original project termination.

If a lead agency decides to cancel a project before completion of the entire project, for whatever reason, the agency shall notify OCTA as soon as possible. It is the responsibility of the project lead agency to repay OCTA for any funds received.

Project Extensions

Local agencies are provided 36 months to expend the funds from the date of encumbrance. Agencies can request timely use of funds extensions through the SAR in accordance with the CTFP guidelines. Local agencies should issue a separate Notice to Proceed (NTP) while combining contracts for both the PI and O & M phases. NTP requirement should be identified in the initial contract/agreement to avoid obligation of both phases at the same time. If this procedure is followed by the local agency the NTP date will be considered the date of encumbrance for the O & M phase.

Audits

All M2 payments are subject to audit. Local agencies must follow established accounting requirements and applicable laws regarding the use of public funds. Failure to submit to

an audit in a timely manner may result in loss of future funding. Misuse or misrepresentation of M2 funding will require remediation which may include repayment, reduction in overall grant, and/or other sanctions to be determined. Audits shall be conducted by OCTA Internal Audit Department or other authorized agent either through the normal annual process or on a schedule to be determined by the Board.

Data Compatibility

All count data collected as part of any funded project shall be provided to OCTA in one of the two following digital formats: 1) NDS/Southland Car Counters style Excel spreadsheet; or 2) JAMAR comma separated value style text file. The data shall then be loaded into the OCTA Roadway Operations and Analysis Database System (ROADS). Any data files containing numeric intersection or node identifiers shall use the same node identification (ID) numbers as is stored in the ROADS database. OCTA shall provide a listing of intersections and corresponding unique node ID numbers. Each count data file shall adhere to the following file naming or csv. As an example, a turning movement count file for the intersection of Harbor Boulevard and Wilson Street in Costa Mesa would be given the filename CostaMesa_Harbor-Wilson_4534.csv.

All traffic signal synchronization data collected and compiled as part of any funded project for both existing (before) and final optimized (after) conditions shall be provided to OCTA in Synchro version 8/9 csv Universal Traffic Data Format (UTDF) format and version 7 combined data UTDF format. This data shall include the network layout, node, link, lane, volume, timing, and phase data for all coordinated times. All such data shall be consistent with the OCTA ROADS database.

Exhibit 8-1

Project P – Regional Traffic Signal Synchronization Program Application Checklist

Project P Application Checklist	Included
RTSSP Online Application – submitted through OCFundTracker 1. Vehicle Miles Traveled 2. Benefit Cost Ratio 3. Project Characteristics 4. Transportation Significance 5. Maintenance of Effort 6. Project Scale 7. Number of Jurisdictions 8. Current Project Readiness 9. Funding Over-Match	
Section 1: Key Technical Information a. Project limits of the corridor to synchronize b. Designation of the corridor to synchronize: priority corridor, signal synchronization network corridor, or master plan of arterial highways corridor c. Project start date and end date, including any commitment to operate signal synchronization beyond the three-year grant period d. Signalized intersections that are part of the project e. Traffic Forum members	
Section 2: Lead Agency	
Section 3: Resolutions of Support from the Project's Traffic Forum Members	
Section 4: Preliminary Plans for the Proposed Project The plans shall include details about both phases of the project: Primary Implementation and Ongoing Operations and Maintenance. The plan should be organized using the following setup: Primary Implementation shall include details about the following: a. Developing and implementing optimized signal synchronization timing (required) b. Producing a Before and After study for the proposed project (required) c. Proposed signal improvements (optional): i. New or upgraded detection ii. New or upgraded communication systems iii. Intersection/field system modernization and replacement iv. Minor signal operation improvements v. Traffic Management centers vi. Real-time traffic actuated operations and demonstration projects Ongoing Operations and Maintenance will begin after the Primary Implementation of the project is completed. It shall include details about the following: a. Monitoring and improving optimized signal timing (required) b. Communications and detection support (optional)	
Section 5: Total Proposed Project Cost by Task	
Section 6: Project Schedule by Tas for the 3 Year Grant Period	
Section 7: Matching Funds	
Section 8: Environmental Clearances and Other Permits	
Section 9: Calculations Used to Develop Selection Criteria Inputs	
Section 10: Any additional Information Deemed Relevant by the Applicant	

Exhibit 8-2

Sample Resolution for Orange County Regional Traffic Signal Synchronization Program Projects

A resolution of the _____ City Council approving the submittal of _____ improvement project(s) to the Orange County Transportation Authority for funding under the competitive Measure M2 Regional Traffic Signal Synchronization Program.

THE CITY COUNCIL OF THE CITY OF _____ HEREBY RESOLVES, DETERMINES, AND ORDERS AS FOLLOWS THAT:

a) WHEREAS, the Measure M2 Regional Traffic Signal Synchronization Program targets over 2000 signalized intersections across Orange County to maintain traffic signal synchronization, improve traffic flow, and reduce congestion across jurisdictions; and

b) WHEREAS, the City of ____ has been declared by the Orange County Transportation Authority to meet the eligibility requirements to receive revenues as part of Measure M2;

c) WHEREAS, the CITY must include all projects funded by Net Revenues in the seven-year Capital Improvement Program as part of the Renewed Measure M Ordinance eligibility requirement.

d) WHEREAS, the CITY authorizes a formal amendment to the seven-year Capital Improvement Program to add projects approved for funding upon approval from the Orange County Transportation Authority Board of Directors, if neccessary.

e) WHEREAS, the City of _____ has currently adopted a Local Signal Synchronization Plan consistent with the Regional Traffic Signal Synchronization Master Plan as a key component of local agencies' efforts to synchronizing traffic signals across local agencies' boundaries; and

f) WHEREAS, the City of _____ will provide matching funds for each project as required by the Comprehensive Transportation Funding Programs Procedures Manual; and

g) WHEREAS, the City of _____ will not use Renewed Measure M funds to supplant Developer Fees or other commitments; and

h) WHEREAS, the City of _____ desires to implement multi-jurisdictional signal synchronization listed below; and

NOW, THEREFORE, BE IT RESOLVED THAT:

The City Council of the City of _____ hereby requests the Orange County Transportation Authority allocate funds in the amounts specified in the City's application to said City from the Transportation Signal Synchronization Program. Said funds, if approved, shall be matched by funds from said City as required and shall be used as supplemental funding to aid the City in signal synchronization along the following street(s):

*Required language a-h

- Revised Cost Estimate (initial)
- Plans, Specifications, and Estimate (PS&E) Certification (initial and final)
- Certification of Phase (initial)
- Final Report Submission
- Division of Cost Schedule (final)
- Work Schedule - OCTA requires a complete project schedule, including expected start and competition dates for tasks in the Primary Implementation and Ongoing Maintenance and Operation phases (initial and final)
- Right-of-Way Documents - No requirements as Right-of-Way is not a part of RTSSP

Detail on other aspects on Initial Payment Requests for Primary Implementation including project advancement and reimbursement is available in this chapter.

Example of Initial Reimbursement for Primary Implementation:

CTFP Grant Allocation	OCTA Match Rate	Local Agency Match Rate
$900,000	80%	20%

Step 1

Eligible Expenses x OCTA Match Rate = Product

$ 900,000.00 X 80% = $ 720,000.00

Step 2

Check if Product is greater than or less than CTFP Allocation Amount: $900,000

Step 3

Use the lower of the Product or Allocation $ 720,000.00

In this case the $720,000 amount is less

Step 4

Then multiply the $720,000 amount by **75%** (Initial Payment Percentage)

$	720,000.00	X	75% =	$540,000.00
				Invoice Amount

COMMITTEE TRANSMITTAL

August 13, 2018

To: Members of the Board of Directors

From: Laurena Weinert, Clerk of the Board

Subject: Measure M2 Freeway Environmental Mitigation Program Update

Regional Planning and Highways Committee Meeting of August 6, 2018

Present: Directors Bartlett, Delgleize, M. Murphy, Pulido, and Steel
Absent: Directors Nelson and Spitzer

Committee Vote

This item was passed by the Members present.

Director Pulido was not present to vote on this item.

Committee Recommendation

Receive and file as an information item.

August 6, 2018

To: Regional Highways and Planning Committee

From: Darrell E. Johnson, Chief Executive Officer

Subject: Measure M2 Environmental Mitigation Program Update

Overview

Measure M2 includes a program to deliver comprehensive mitigation for the environmental impacts of 13 freeway projects in exchange for streamlined project approvals from the state and federal resources agencies. To date, the Environmental Mitigation Program has acquired conservation properties and provided funding for habitat restoration projects as part of the Natural Community Conservation Plan/Habitat Conservation Plan. On a parallel path, a similar approach was developed to obtain state and federal clean water permits to facilitate the implementation of the Measure M2 freeway projects as a co-benefit. A biannual status report of these efforts and program update is presented.

Recommendation

Receive and file as an information item.

Background

Measure M2 (M2) includes an innovative Environmental Mitigation Program (EMP) to address certain impacts of M2 freeway projects. This was achieved through a Natural Community Conservation Plan/Habitat Conservation Plan (Conservation Plan), approved by the California Department of Fish and Wildlife and the United States Fish and Wildlife Service (Wildlife Agencies). An endowment was also established for the maintenance and operation of the seven conservation properties (Preserves) as committed in the Conservation Plan. Deposits began in March 2017 for the endowment that is anticipated to be funded over a ten to 12-year period. These actions allow for streamlined permitting of M2 projects.

In a parallel process, the United States Army Corps of Engineers (Corps) and the State Water Resources Control Board (SWRCB) have also established a framework to streamline the regulatory permitting process. The goal of the EMP is to deliver more effective mitigation while supporting faster delivery of M2 freeway improvements.

The acquisition of seven conservation properties, as well as the funding of 12 habitat restoration projects, have largely met the mitigation needs for the M2 freeway projects. These Preserves and projects are depicted in Attachment A. Through the Conservation Plan, the Orange County Transportation Authority (OCTA) is well underway to satisfying these obligations. Many of the restoration projects are close to or have obtained approvals from the Wildlife Agencies. These projects are listed in Attachment B. Two of the previously funded restoration projects (North Coal Canyon and Chino Hills State Park [CHSP]) have experienced delays. A discussion of the collaboration with CHSP, the Wildlife Agencies, and the Environmental Oversight Committee (EOC) is presented in this staff report.

Discussion

Conservation Plan Update

The Conservation Plan was approved by the Board of Directors (Board) in 2016. In mid-2017, the Wildlife Agencies issued the permits to OCTA. As a result, the M2 environmental process will be streamlined, allowing OCTA to move forward with the M2 freeway projects (as described in the Conservation Plan).

As part of the Conservation Plan process, the establishment of a $34.5 million endowment is required to fund the long-term management of the Preserves. The California Community Foundation manages the non-wasting endowment. The first endowment deposit was made in March 2017, and a second following in August. Staff has been providing quarterly investment reports, with the latest provided to the Board in February 2018. On a go-forward basis, endowment deposits will be made near the beginning of the fiscal year during the August timeframe. Staff will continue to oversee and provide endowment updates to the Finance and Administration Committee and EOC on a regular basis.

In compliance with the Conservation Plan, resource management plans (RMPs) have been developed for each of the conservation properties. The RMPs provide guidelines for the management and monitoring of each Preserve in accordance with the goals and objectives outlined in the Conservation Plan. Key components

of the RMPs include guidance for ongoing protection, preservation, and adaptive management of the natural resources found within each Preserve.

In September 2017, five of the seven OCTA Preserve RMPs were finalized. These include Ferber Ranch, Hafen, MacPherson, O'Neill Oaks, and Saddle Creek South. OCTA released the remaining two Preserve RMPs (Aliso Canyon and Hayashi) in summer 2017. These RMPs were available for public review for a 90-day period. OCTA held two public meetings in the cities of Brea and Laguna Niguel to solicit public input and a workshop at the regularly scheduled EOC meeting on October 4, 2017. OCTA anticipates finalizing these RMPs by end of summer 2018.

In consultation with the local fire authority, staff will be preparing fire management plans (Plans) for the seven Preserves. The Plans will establish policies and approaches to maximize protection of biological resources during fire suppression activities, to the degree feasible. 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.

Restoration Project Updates

The North Coal Canyon and CHSP restoration projects were approved by the EOC and OCTA Board as part of the EMP's second round of restoration funding in 2012, and were incorporated into the OCTA Conservation Plan. Project level restoration plans have been developed and approved; however, additional on-the-ground restoration activities are necessary. As coordination to implement these projects progressed, it was determined the originally proposed contracting process was not feasible. This was due to limitations on the California Department of Parks and Recreation contracting process. The status of these projects was discussed with the EOC on June 6, 2018. During this meeting, the EOC directed staff to proceed with a competitive bidding process to identify a qualified entity(ies) to implement the North Coal Canyon and CHSP restoration projects. Using the Board-approved procurement procedures, staff will be soliciting bids from interested parties to perform the restoration work. A more detailed discussion of these projects is provided in Attachment C.

Clean Water Act Permits Update

The construction of the M2 freeway projects is anticipated to result in impacts to jurisdictional waters of the state and the United States. Due to these impacts, OCTA must obtain Sections 401 and 404 Clean Water Act permits from the regulatory agencies (i.e., Corps and SWRCB), which will require mitigation. To maximize the benefits of the Conservation Plan, OCTA utilized some of the same aforementioned programmatic mitigation to obtain authorizations from the regulatory agencies. These authorizations enable OCTA to utilize the mitigation, as well as lay out a standard process for project-level permits issuance. Funding to cover the regulatory agency requirements, in lieu of project-level permit funding, was authorized by the Board on September 11, 2017. On December 18, 2017, the Corps issued OCTA a Letter of Permission (LOP) Procedure Program (permit) pursuant to section 404 of the Clean Water Act. Similarly, the SWRCB provided an assurance letter to OCTA on January 22, 2018, which states that OCTA can expect to receive individual water quality certifications for each project in a timely manner as long as OCTA continues to follow the LOP Procedures and implement the EMP.

These agreements reflect years of collaboration among OCTA, the Corps, and the SWRCB, and constitute another groundbreaking milestone for the M2 EMP. This is the first ever Corps-approved advanced mitigation permit for multiple mitigation sites and projects spanning numerous watersheds. This permit charts out a predictable path to obtain project-level permits that address impacts in a proactive and comprehensive manner, and will result in better conservation outcomes.

Freeway Projects Update

To date, multiple freeway projects have utilized the EMP streamlining mechanisms (i.e., Conservation Plan and/or the Clean Water Act streamlined permitting process). The following projects are either in or near construction and were able to benefit from the EMP: Project K (Interstate 405 Improvement Project from State Route 73 to the Los Angeles County line), Project C (Interstate 5 Improvement Project from State Route 73 to El Toro Road), and Project M (Interstate 605 and Katella Interchange Project). If these mechanisms were not in place, it is anticipated that these projects would incur an additional $700,000 to $2.5 million in mitigation-related costs and unknown schedule risks. Furthermore, a strong partnership has been fostered through collaboration with the environmental community as exemplified by their participation on the EOC.

New Preserve Names

To better reflect the efforts taken to preserve the invaluable biological resources on each of the conservation properties, OCTA decided to rename the seven open space Preserves. In January 2018, OCTA sought public input by conducting a Preserve Naming Contest to help rename each of the properties. The public was given three options per Preserve that were representative of the local region and specific wildlife and habitat that live on the Preserve. The new names were announced at the first public hike of 2018 in February:

- Bobcat Ridge Preserve – formerly Hafen,
- Eagle Ridge Preserve – formerly Hayashi,
- Live Oak Creek Preserve – formerly Saddle Creek South,
- Pacific Horizon Preserve – formerly Aliso Canyon
- Silverado Chaparral – formerly MacPherson,
- Trabuco Rose Preserve – formerly Ferber Ranch, and
- Wren's View Preserve – formerly O'Neill Oaks.

OCTA will continue to manage the Preserves until a long-term manager(s) is in place. Staff will continue to monitor the progress of all restoration projects and provide status updates to the EOC until each project is implemented.

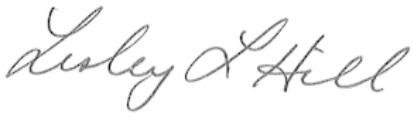
Summary

M2 includes an EMP that provides funding for programmatic mitigation to off-set impacts of the 13 freeway projects. To expedite the delivery of the freeway projects, this program was initiated to implement early project mitigation through property acquisition and habitat restoration. This program is administered through a Conservation Plan, which was completed and approved by the Board in November 2016. Recent restoration project collaboration with CHSP, the Wildlife Agencies, and the EOC has occurred. Staff will proceed with a competitive bidding process, utilizing the Board-approved procurement procedures, to identify a qualified entity(ies) to implement the North Coal Canyon and CHSP restoration projects. To maximize the benefits of the Conservation Plan, OCTA has utilized some of that same programmatic mitigation to obtain Clean Water Act permits. A status report on the program is presented.

Attachments

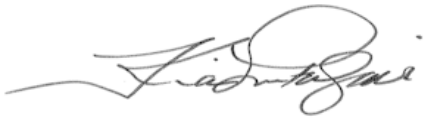
A. OCTA Preserves and Funded Restoration Projects
B. OCTA M2 EMP-Funded Restoration Projects Summary
C. Chino Hills State Park Restoration Projects Overview

Prepared by:



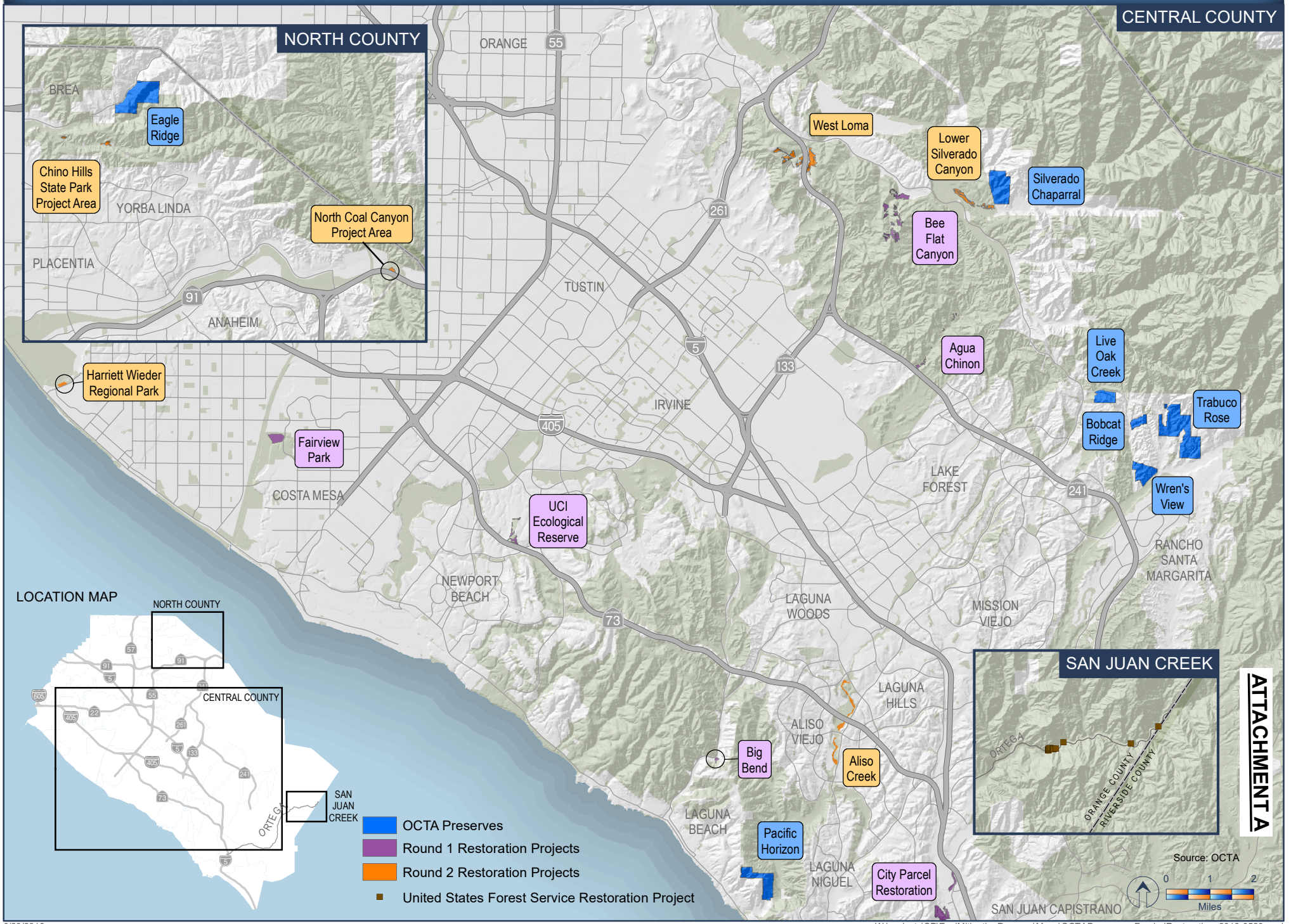
Lesley Hill
Project Manager, Environmental
Mitigation Program
(714) 560-5372

Approved by:



Kia Mortazavi
Executive Director, Planning
(714) 560-5741

OCTA Preserves and Funded Restoration Projects



6/29/2018

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ATTACHMENT B

OCTA M2 EMP-Funded Restoration Projects Summary

	Restoration Project	Sponsor	Proposed Cost	Approx. Acreage*	Geographic Area	General Habitat Types
2010 - Round One	City Parcel	City of San Juan Capistrano	$1,500,000	53	San Juan Capistrano	Riparian corridor, coastal sage scrub, oak woodland and native grassland
	Fairview Park	City of Costa Mesa	$2,000,000	23	Costa Mesa	Wetlands, native grassland, coastal sage scrub, willow scrub and oak woodland
	Irvine Ranch (Agua Chinon and Bee Flat Canyon)	Irvine Ranch Conservancy	$1,450,00 ($1,457,160)**	94.9 (90.1)**	Irvine	Chaparral, coastal sage scrub, coast live oak/sycamore, oak woodland, native grassland and riparian
	UCI Ecological Reserve	Nature Reserve of OC	$325,000	8.5	Irvine	Cactus scrub
	Big Bend	Laguna Canyon Foundation	$87,500	3.7	Laguna Beach	Coastal sage scrub and riparian woodland
2012 - Round Two	Aliso Creek	Laguna Canyon Foundation	$1,105,000	55	Laguna Niguel	Riparian
	Chino Hills State Park	Chino Hills State Park	$193,000	21	Yorba Linda	Willow riparian, oak-walnut woodland and cactus scrub
	Harriett Weider Regional Park	Bolsa Chica Conservancy	$475,000	8.2	Huntington Beach	Native grassland, coastal sage scrub and riparian
	Lower Silverado Canyon	Irvine Ranch Conservancy	$1,399,580 ($1,414,435)**	44 (28.4)**	County of Orange	Riparian
	North Coal Canyon	California Department of Parks and Recreation	$247,500	5.5	Yorba Linda	Coastal sage scrub
	West Loma	Irvine Ranch Conservancy	$1,296,000 ($1,322,800)**	80 (62.47)**	County of Orange	Scrub, riparian
2016	United States Forest Service Dam Removal	United States Forest Service	$185,000	14 dams removed	San Juan Capistrano	Creek bed and riparian

Note: shaded projects were funded as part of Round 1 and the unshaded projects were part of Round 2.
*Proposed acreage is subject to change and may be adjusted slightly once the restoration work is completed.
**Amounts depicted in the table were revised/amended and approved by the OCTA Board of Directors in June 2016.

Acronyms
EMP – Environmental Mitigation Program
M2 – Measure M2
OCTA – Orange County Transportation Authority
UCI – University of California, Irvine

ATTACHMENT C

Chino Hills State Park Restoration Projects Overview

Background: In 2012, the North Coal Canyon and Chino Hills State Park (CHSP) restoration projects were vetted by the Environmental Oversight Committee (EOC) and approved by the Orange County Transportation Authority (OCTA) Board of Directors (Board). These second round-funded restoration projects were incorporated into the OCTA Natural Community Conservation Plan/Habitat Conservation Plan (Conservation Plan). Two agreements were subsequently executed with the California Department of Parks and Recreation (i.e., CHSP). Although the restoration plans have been approved, additional on-the-ground restoration activities are necessary. Below is more specific description for each of these projects.

Restoration Project Descriptions

North Coal Canyon - The North Coal Canyon proposed restoration project will enhance and restore 5.5 acres of coastal sage scrub on the north side of State Route 91 (SR-91). The proposed restoration activities would occur within CHSP owned by the California Department of Parks and Recreation. This location provides a vital link between the surrounding Puente-Chino Hills to the north and the Cleveland National Forest and Santa Ana Mountains to the south. The project is expected to improve wildlife movement by making habitat north of SR-91 more attractive to wildlife and will complete the restoration of the entire Coal Canyon parcel by connecting three other restoration projects being funded by other entities. This bio-corridor is the only remaining link that allows dispersal of wildlife between CHSP and the more diverse Santa Ana Mountains. Coal Canyon provides habitat for the movement of the OCTA Conservation Plan Covered Species, such as the mountain lion and bobcat, and provides high-quality habitat for the coastal California gnatcatcher, as well as foraging habitat for the least Bell's vireo and the southwestern willow flycatcher.

Chino Hills State Park - The original CHSP restoration project proposed to enhance 21 acres of riparian, woodland, and cactus scrub habitats. It was later determined that a more intensive cactus scrub restoration project within CHSP would provide better ecological benefits. This project change was coordinated with, and approved by, the United States Fish and Wildlife Service and the California Department of Fish and Wildlife (Wildlife Agencies). The resulting proposed project is an intensive restoration of 11 acres of cactus scrub within CHSP on the slope overlooking Yorba Linda, south of the junction of Southridge Trail and Diemer Trail. The 11-acre cactus scrub restoration project will help return this area to its previous condition and benefit OCTA Conservation Plan Covered Species coastal California gnatcatcher and cactus wren.

Discussion: CHSP intended to have the Orange County Conservation Corps (OCCC) implement both the North Coal Canyon and CHSP projects. During the contract execution process, the OCCC determined that they would not be able to fulfil their contract obligations since much of the anticipated work had to be outsourced, which was not consistent with the mission of their organization. CHSP also contemplated working with

the California Conservation Corps (CCC) as an option. However, based on other experiences, this work was not in alignment with the capabilities of the CCC.

Nonetheless, CHSP contacted the CCC to determine whether they could perform the work and the CCC indicated it was outside their scope.

In response, CHSP approached a third entity, the Irvine Ranch Conservancy (IRC), to determine if it would be willing and able to implement the projects. CHSP has a similar contract with IRC at Crystal Cove State Park. However, the contract between CHSP and IRC did not allow the pass-through work, and IRC also indicated the budget might not be sufficient.

CHSP had no other feasible contracting mechanism to implement these projects and will need to dissolve the contracts with OCTA. They have assured OCTA that they fully support the restoration work and would allow another entity access to their park property to ultimately perform the restoration work.

Concurrently, staff has vetted this matter with its contracts department and the Wildlife Agencies to determine if it could continue to work with CHSP on the projects. Since the Board approved the restoration projects, budgets, and project sponsors, OCTA cannot reassign the contracts to IRC administratively. Furthermore, OCTA would need to amend the project scopes and budget if IRC was to implement the projects. The Wildlife Agencies recommended that these projects remain within the CHSP and for OCTA to re-solicit prospective project sponsors to remain generally within the original budget, given these projects have been integrated into the OCTA Conservation Plan. On June 6, 2018, the EOC directed staff to proceed with a competitive bidding process to identify a qualified entity(ies) to implement the North Coal Canyon and CHSP restoration projects.

COMMITTEE TRANSMITTAL

September 10, 2018

To: Members of the Board of Directors

From: Laurena Weinert, Clerk of the Board

Subject: Comprehensive Transportation Funding Programs - Measure M2 Environmental Cleanup Program Revised 2018 Tier 1 Projects

Regional Planning and Highways Committee Meeting of September 6, 2018

Present: Directors Delgleize, M. Murphy, Nelson, Pulido, and Steel
Absent: Directors Bartlett and Spitzer

Committee Vote

This item was passed by the Members present.

Director Steel was not present to vote on this item.

Committee Recommendation

Approve the revised 2018 Tier 1 Environmental Cleanup Program programming recommendations to fund 12 projects, in the amount of $2,460,363.

September 6, 2018

To: Regional Planning and Highways Committee

From: Darrell E. Johnson, Chief Executive Officer

Subject: Comprehensive Transportation Funding Programs – Measure M2 Environmental Cleanup Program Revised 2018 Tier 1 Projects

Overview

The Orange County Transportation Authority's Environmental Cleanup Program provides Measure M2 funding for water quality improvement projects to address transportation-generated pollution. The fiscal year 2018-19 Tier 1 Grant Program call for projects was issued on March 12, 2018. Evaluations are now complete, and a list of projects and funding allocations are presented for review and approval.

Recommendation

Approve the revised 2018 Tier 1 Environmental Cleanup Program programming recommendations to fund 12 projects, in the amount of $2,460,363.

Background

In May 2010, the Orange County Transportation Authority (OCTA) Board of Directors (Board) approved a two-tiered approach to fund the Measure M2 Project X Environmental Cleanup Program (ECP). The Tier 1 Grant Program is designed to mitigate the more visible forms of pollutants, such as litter and debris, which collect on the roadways and in the catch basins (i.e., storm drains) prior to being deposited in waterways and the ocean. The Tier 2 Grant Program consists of funding larger projects (treating catchment areas of 50 acres or greater) such as potentially multi-jurisdictional, capital-intensive structural treatment best management practice (BMP) projects.

Tier 1 funds are available for Orange County local governments to purchase equipment and upgrades for existing catch basins and other related BMPs that supplement current requirements. Examples include screens, filters, and inserts for catch basins, as well as other devices designed to remove the

above-mentioned pollutants. Proposed projects must demonstrate a direct nexus to the reduction of transportation-related pollution, as developed and defined by the OCTA Environmental Cleanup Allocation Committee (ECAC).

To date, the Board has approved funding for 154 Tier 1 projects, totaling approximately $20 million. An estimated 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 Grant Program in 2011.

The Board approved issuance of the 2018 ECP Tier 1 call for projects (call) on March 12, 2018. Up to $2.8 million was made available for the 2018 call.

Discussion

The 2018 ECP Tier 1 call deadline to submit applications was May 18, 2018. Sixteen applications were submitted from 15 local agencies (City of Santa Ana submitted two project applications). Applications were reviewed and evaluated by an evaluation committee consisting of OCTA staff, the ECAC Chairman, and an additional member of the ECAC. Project applications were ranked based on the following Board-approved criteria:

- Proposed project's effectiveness at removing trash and debris;
- Cost/benefit analysis of the proposed project;
- Drainage and flowrate analysis of the proposed project;
- Operations and maintenance plan adequate to maintain the efficiency of the proposed BMPs for regularly scheduled inspections, maintenance, and cleaning/disposal of pollutants;
- Clear and detailed work plan with a specific implementation period; and
- Project readiness.

The ECAC, which met and reviewed the evaluation committee's ranking on July 12, 2018, is recommending 12 projects for funding, in the amount of $2,460,363, based on final scores (Attachment A). These programming recommendations result in approximately $339,637 in program savings, which would be available for future calls.

The Tier 1 projects recommended for funding primarily consist of catch basin debris screen devices. More detailed project descriptions are outlined in Attachment A, and a brief overview of project types is provided below.

- Catch basin debris screen devices (ten projects): These screens prevent debris from entering the storm drain system. This recommendation would fund the construction of 1,293 connector pipe screens, 596 automatic retractable screens, and 55 curb inlet screens;
- Underground storm water detention and infiltration system (one project): This project consists of an underground, pre-manufactured detention and infiltration system, and repaving utilizing pervious surfaces. Reinforced concrete storm water conveyance pipes will direct visible trash and debris to the detention system; and
- Bioretention basin (one project): This project consists of a bioretention basin to intercept and infiltrate dry weather nuisance and stormwater flows. The bioretention basin will intercept flows and remove pollutants, effectively preventing their entry into the storm drain system.

As part of this grant program, local agencies agree to contribute a minimum cash match of 20 percent of the total project cost.

Given the competitive nature of this program, applications were evaluated and scored based upon the thoroughness of responses to application questions related to water quality benefits of the proposed project. For this call cycle, the recommendation is to program $2,460,363, which is less than what was authorized for this cycle. The projects that were not recommended for funding did not provide the same level of detail in terms of quantifying project benefits and requirements, compared to the projects that were ultimately recommended by the evaluation committee and the ECAC. These projects can be resubmitted in the next funding cycle.

After initially presenting this item at the August 6, 2018 Regional Planning and Highways Committee (RPH) meeting, staff discovered an error in Attachment A of the staff report, which when corrected, increased the overall programming recommendation by $260,000 (from $2,200,363 to $2,460,363). As result of this correction, the item was pulled from the August 13, 2018 Board agenda. Revised programming recommendations are being submitted for RPH and Board consideration and approval.

It should be noted that these proposed revisions do not affect project scoring or the number of projects being recommended for funding. These changes have also been shared with the City of Santa Ana (who was affected by the change) and the ECAC.

Next Steps

If the revised programming recommendation is approved by the RPH and Board respectively, each funded agency will be required to execute a letter amendment prior to project implementation. OCTA will continue to monitor project status and project delivery through the Comprehensive Transportation Funding Programs semi-annual review process.

Summary

Staff is seeking Board approval to program $2,460,363 to 12 projects through the Project X Tier I ECP call.

Attachment

A. Measure M2 Environmental Cleanup Program 2018 Tier 1 Call for Projects, Revised Programming Recommendations

Prepared by:

Brianna Martinez
Transportation Funding Analyst, Associate
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Approved by:

Kia Mortazavi
Executive Director, Planning
(714) 560-5741

Measure M2 Environmental Cleanup Program 2018 Tier 1 Call for Projects
Revised Programming Recommendations

Projects Recommended for Funding					
Agency	**Project**	**Project Description**	**Final Score**	**Funding**	**Cumulative**
Placentia	Catch Basin Insert Project, Phase V	Install 93 CPS units and 183 ARS units.	85	$ 160,000	$ 160,000
Laguna Hills	Laguna Hills CPS and ARS Screen Project Phase VII	Install 37 CPS units and 171 ARS units.	84	$ 100,000	$ 260,000
Tustin	Catch Basin Retrofit Program	Install 383 CPS units.	80	$ 152,794	$ 412,794
Laguna Niguel	Installation of Trash Control Devices on Storm Water Catch Basins	Install 125 CPS units and 125 ARS units.	80	$ 200,000	$ 612,794
Newport Beach	Newport Bay Trash Mitigation Project	Install 425 CPS units.	79	$ 125,726	$ 738,520
Fullerton	Installation of Full Capture Trash Devices in Catch Basins	Install 100 CPS units.	77	$ 82,280	$ 820,800
Anaheim	Modjeska Park Underground Storm Water Detention and Infiltration System	Install an underground, pre-manufactured detention and infiltration system.	76	$ 500,000	$ 1,320,800
Costa Mesa	2018 CPS Installation Project	Install 130 CPS units.	75	$ 39,864	$ 1,360,664
Santa Ana	Mabury Park Stormwater Capture Project	Construct one bioretention basin and a Portland Concrete Cement cross-gutter.	74	$ 380,000	$ 1,740,664
Huntington Beach	Huntington Beach Trash Removal Project, Phase I	Install one CDS unit.	74	$ 432,160	$ 2,172,824
Seal Beach	Fiscal Year 2018-19 Storm Water Pollutant Capture Project	Install 55 curb inlet BMP units.	73	$ 159,454	$ 2,332,278
Los Alamitos	Catch Basin Installation Project (Citywide)	Install 117 ARS units.	71	$ 128,085	$ 2,460,363

Projects Not Recommended for Funding					
Agency	**Project**	**Project Description**	**Final Score**	**Funding**	**Cumulative**
Mission Viejo	TRAP: Via Fabricante and Los Alisos West	Install 50 CPS units, 45 ARS units, and drip irrigation.	65	$ 316,805	$ 2,777,168
Santa Ana	Bristol Street Widening Water Quality Improvements Phase 3b - Washington Avenue to 17th Street	Install four modular wetlands bio-filtration basins with perforated pipe underdrains.	64	$ 120,000	$ 2,897,168
Orange	CDS and CPS BMP Installation	Install one Bio Clean debris separating baffle box, and ten CPS units.	63	$ 286,840	$ 3,184,008
Lake Forest	CPS Catch Basin Retrofit, Phase VIII	Install 121 CPS units.	62	$ 79,200	$ 3,263,208

Acronyms
ARS - Automatic Retractable Screen
BMP - Best Management Practice
CDS - Continuous Deflection Separator
CPS - Connector Pipe Screen
TRAP - Trash and Runoff Abatement Project

ATTACHMENT A

COMMITTEE TRANSMITTAL

September 5, 2018

To: Members of the Board of Directors

From: Laurena Weinert, Clerk of the Board

Subject: Interstate 405 Improvement Project Update

Regional Planning and Highways Committee Meeting of September 6, 2018

Present: Directors Delgleize, M. Murphy, Nelson, Pulido, and Steel
Absent: Directors Bartlett and Spitzer

Committee Vote

Following the discussion, no action was taken on this receive and file as an information item.

Staff Recommendation

Receive and file as information item.

OCTA

September 6, 2018

To: Regional Planning and Highways Committee

From: Darrell E. Johnson, Chief Executive Officer

Subject: Interstate 405 Improvement Project Update

Overview

The Orange County Transportation Authority is currently underway with the implementation of the Interstate 405 Improvement Project. This report provides a project update.

Recommendation

Receive and file as an information item.

Background

The Orange County Transportation Authority (OCTA), in cooperation with the California Department of Transportation, and the cities of Costa Mesa, Fountain Valley, Huntington Beach, Seal Beach, and Westminster, is implementing the Interstate 405 (I-405) Improvement Project between State Route 73 (SR-73) and Interstate 605 (I-605) (Project). The Project will add one general purpose lane from Euclid Street to I-605, consistent with Measure M2 Project K, and will add an additional lane in each direction that will combine with the existing high-occupancy vehicle lane to provide dual express lanes in each direction of I-405 from SR-73 to I-605, otherwise known as the 405 Express Lanes.

On November 14, 2016, the OCTA Board of Directors (Board) awarded the design-build (DB) contract to OC 405 Partners (OC405), a joint venture. OCTA executed the DB contract with OC405 and issued Notice to Proceed (NTP) No. 1 on January 31, 2017. NTP No. 1 was a limited NTP for mobilization, design, and administrative activities. On July 26, 2017, the Transportation Infrastructure Finance and Innovation Act (TIFIA) loan agreement was executed between OCTA and the United States Department of Transportation (USDOT). On July 27, 2017, OCTA issued NTP No. 2 to OC405. NTP No. 2 was a full NTP for all activities, including construction.

Discussion

A number of activities are ongoing as the final design, right-of-way (ROW) acquistion, and construction activities continue to advance. Additionally, the final baseline schedule, a detailed schedule of design and construction activities, was recently approved. The following provides a more detailed status of project activities:

Tolling Contracts

On February 26, 2018, the Board selected Kapsch TrafficCom USA, Inc., (Kapsch) to provide toll lanes system integration services for design, installation, operation, and maintenance of the electronic toll and traffic management system on both the 405 and 91 Express Lanes. Kapsch is currently under contract and working closely with the design-builder to deliver fully functional express lanes upon opening in 2023.

Staff has initiated the development of a request for proposals for the back office support and customer service center contract for the 405 Express Lanes, and plans to seek Board approval for its release in 2019.

TIFIA Loan

On July 26, 2017, OCTA executed a TIFIA loan agreement with the USDOT for up to $628.93 million. Pursuant to the terms identified in the loan agreement, OCTA staff submits periodic reimbursement requisitions to the USDOT Build America Bureau and Federal Highway Administration. OCTA received the first TIFIA loan reimbursement in April of this year. The next reimbursement is anticipated for the end of 2018.

Design

The final design is approximately 70 percent complete overall and is anticipated to be fully complete in mid-2019.

ROW Acquisition

Construction of the Project will impact 288 properties, including 179 residential properties, 71 commercial/industrial properties, 37 public properties, and one railroad property. There are 287 properties identified as partial acquisitions and one property identified as a full acquisition at the owner's request. The real property requirements for the partial acquisitions are comprised of a combination of fee acquisitions, permanent easements, temporary construction easements (TCE), and access control rights needed to construct the proposed

highway and express lane improvements for the Project. The full-fee acquisition, partial-fee acquisitions, permanent easements, and TCEs are required for roadway and bridge construction, soundwalls and retaining walls, drainage systems, and for the installation of above-ground and underground facilities, including electrical, telecommunication, water, sewer, gas, and storm drain systems.

The ROW acquisition program is currently on schedule. Of the 288 total parcels needed, the following summarizes the status of the ROW acquisition:

- 248 offers presented
- 188 agreements reached (65 percent of total properties needed)
- 43 resolutions of necessity approved

Utility Relocations

There are currently 102 utilities that require relocation as part of the Project. OCTA is coordinating with the 21 impacted utility companies to identify and resolve issues. There are several utility relocation challenges that staff continues to focus on as utilities are a shared risk between OCTA and OC405.

Construction

OC405 began construction on March 6, 2018. Initial construction activities included restriping portions of the freeway and setting up concrete barriers on the outside of the freeway to protect work areas for activities such as tree removals and grading. These initial construction activities are generally complete in the southbound direction and over 50 percent complete in the northbound direction. Clearing and grubbing, including tree and ground cover removal, has begun in earnest and rough grading activities have been initiated.

More significant roadway construction activities, such as installation of drainage systems and paving operations, are anticipated to begin in the fall.

Bridge construction began in August as the McFadden Avenue bridge was closed to traffic on both sides of I-405 and the bridge was demolished. The bridge will be closed for approximately 12 months as the new bridge is built at this location.

The Slater Avenue bridge over I-405 is anticipated to be closed to traffic and demolished in late September.

Settlement fills are anticipated to be placed adjacent to the abutments of the Goldenwest Street and Magnolia Street bridges over I-405 in September, and partial demolition of these two bridges is anticipated for November. Both of these bridges will be two-stage bridges, which means the bridge will be open to traffic during construction.

Public Outreach

OCTA hosted six open houses throughout the Project corridor in May and June 2018, focused on sharing general Project information and the preliminary schedule for bridge construction, and encouraging the public to sign up for construction updates and connect with the Project via social media. More than 55,000 door hangers about the meetings were distributed to residents and businesses near the Project area. In addition, staff utilized targeted social media advertisements, Chamber of Commerce and corridor city websites, and other communication media to invite the public to attend. More than 400 community members participated, and a video of the open house presentation and materials were posted on the Project website for those who were unable to attend.

OCTA began targeted outreach in early July in anticipation of the demolition and construction of the McFadden Avenue and Slater Avenue bridges. A detailed outreach plan was developed for each bridge, consisting of one-on-one briefings with nearby businesses and other key stakeholders, coordination meetings with emergency responders and city representatives, and weekend neighborhood meetings with area residents prior to bridges being closed.

Flyers were distributed to residents and business owners directly adjacent to the bridges to notify them of the neighborhood meetings, and again prior to major milestone activities such as demolition and pile driving. More than 150 community members have participated in the meetings to date. Staff also coordinated with OCTA's Bus Operations and Central Communications to ensure detour routes were in place in advance of the bridge closures and rider alerts were prepared.

Additional outreach efforts include attendance at events such as the City of Westminster's National Night Out, the City of Fountain Valley's Summerfest and Business Expo, and briefings with cities of Westminster and Fountain Valley High Schools, cities of Westminster and Fountain Valley School Districts, Goldenwest College, and the Goldenwest Neighborhood Association.

As construction has ramped up and following the open houses, staff has fielded nearly 400 calls and emails from the public, responding to inquiries about construction activities, detours, and Project plans and designs. As a result, OCTA has produced a robust set of online resources to keep the public informed, including a dedicated Project construction page that includes new features such as a printable PDF of closures and highlights of each bridge's construction.

In the coming weeks, the Project mobile app will launch. This free app will feature Project closure and detour information, photos and videos from the field, access to the interactive map, and ways to contact the outreach team. In the fall, staff will conduct a Stakeholder Working Group meeting, bringing together Project area community leaders for a comprehensive update, and to solicit feedback on construction progress and outreach efforts.

Next Steps

Staff will continue to work closely with the design-builder as design and construction continue. This involves completing portions of the final design, obtaining permits, utility relocation coordination, and construction activities. Additionally, the ROW acquisition program will continue as planned.

Summary

Final design continues and construction has been initiated. Currently, final design, right-of-way acquisition, public outreach, and other activities are in process to continue the construction phase of the Interstate 405 Improvement Project between State Route 73 and Interstate 605.

Attachment

None.

Prepared by:

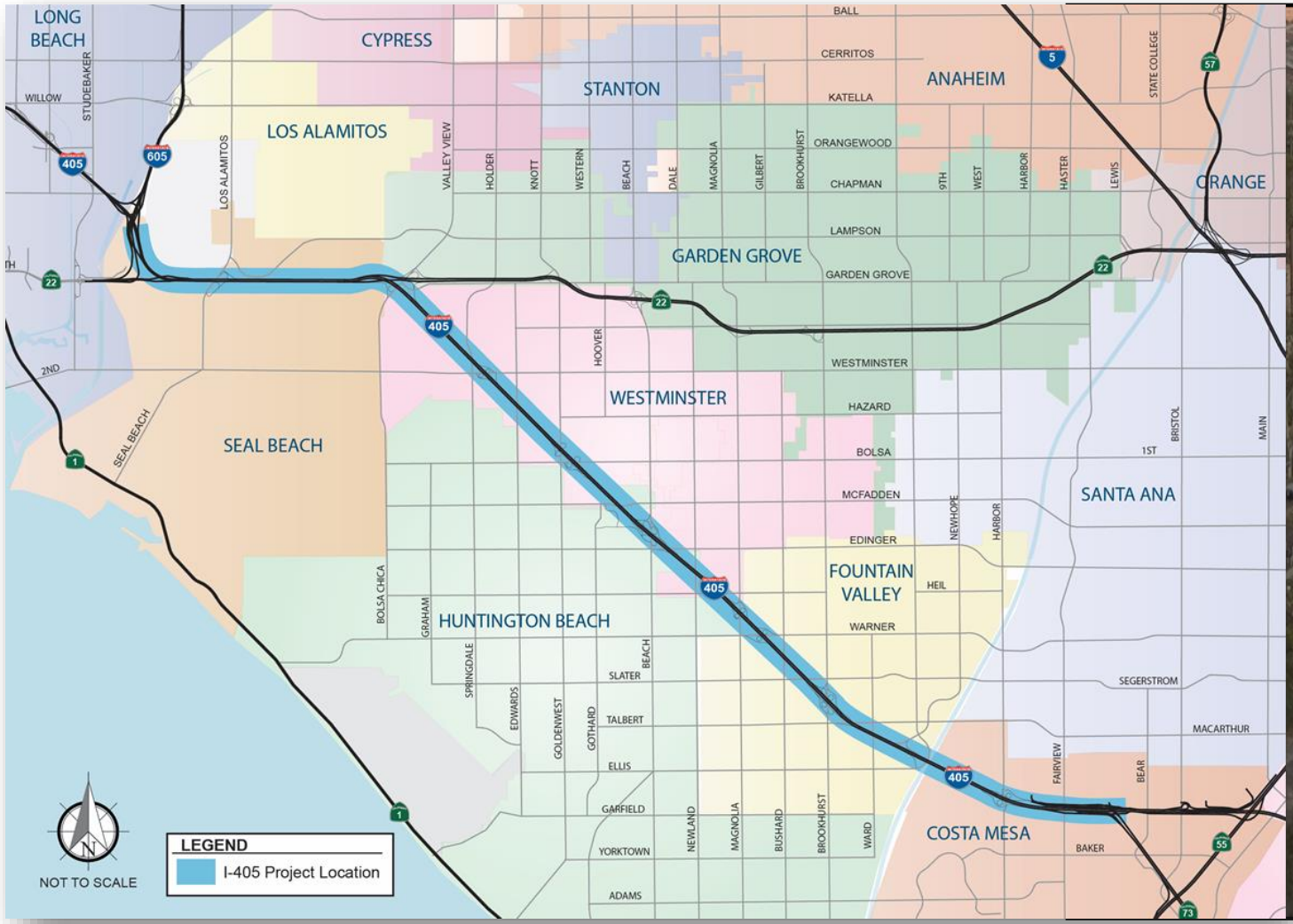
Jeff Mills, P.E.
Program Manager
(714) 560-5925

Approved by:

James G. Beil, P.E.
Executive Director, Capital Programs
(714) 560-5646

Interstate 405 Improvement Project Update

Project Location and Key Features



Background

- On November 14, 2016, the Orange County Transportation Authority (OCTA) Board of Directors (Board) awarded the design-build contract to OC 405 Partners (OC405)
- On January 31, 2017, OCTA executed the contract with OC405 and issued Notice to Proceed (NTP) No. 1
- On June 26, 2017, the Board approved the Transportation Infrastructure Finance and Innovation Act (TIFIA) loan
- On July 27, 2017, OCTA issued NTP No. 2 to OC405

Project Update

General

- Final baseline schedule approved
- Toll lanes system integrator under contract and working in project office
- $165 million TIFIA loan reimbursement received in April

Design

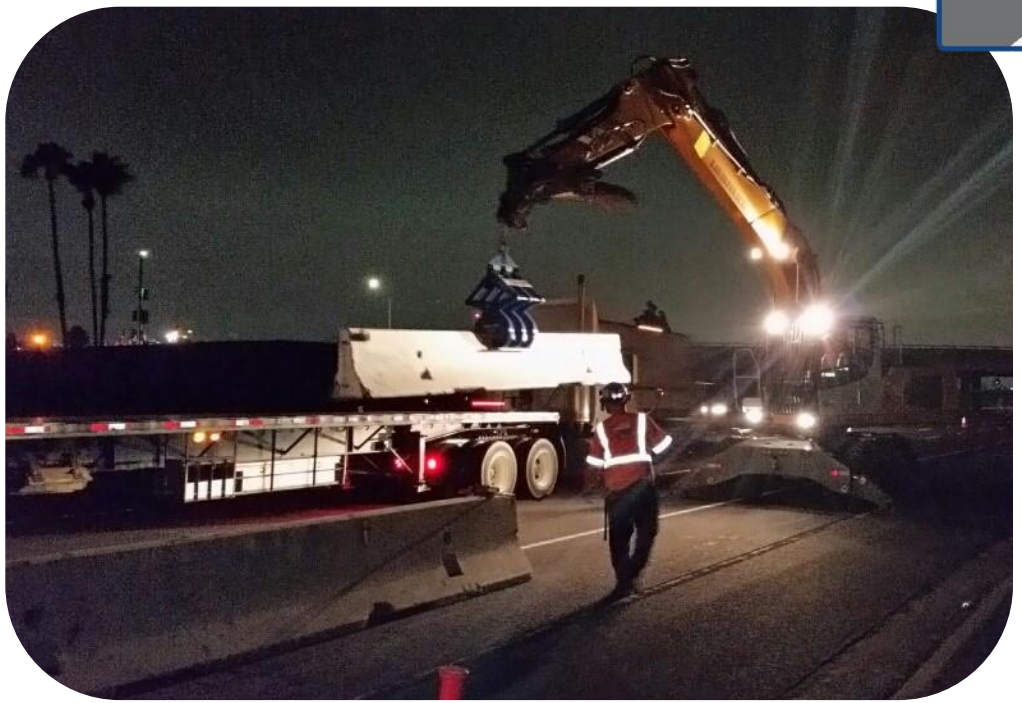
- Project design approximately 70 percent complete
- Design anticipated to be fully complete in mid-2019

Right-of-Way

- 288 properties impacted – on schedule overall
- 248 offers presented
- 188 agreements reached (65 percent of total properties needed)
- 43 resolutions of necessity adopted by the Board

Construction Update

Re-striping



Placing k-rail

Southbound work is generally complete, northbound is more than 50 percent complete

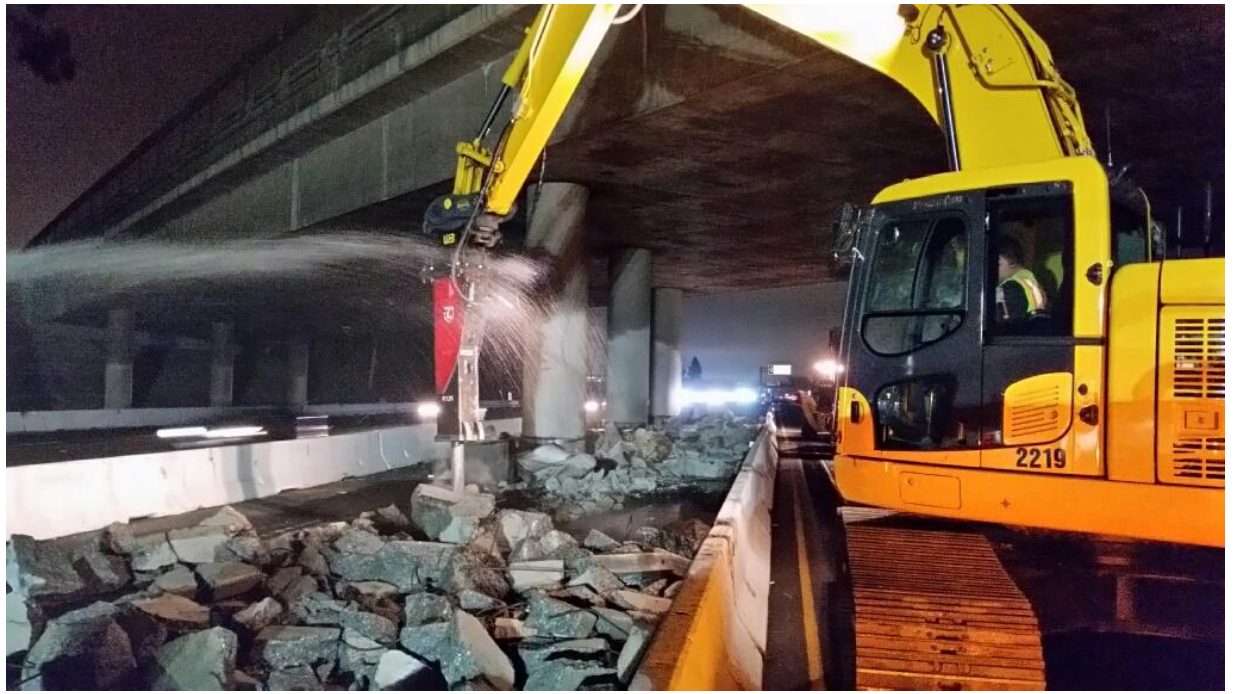
Construction Update

Clearing and grubbing

Temporary asphalt paving

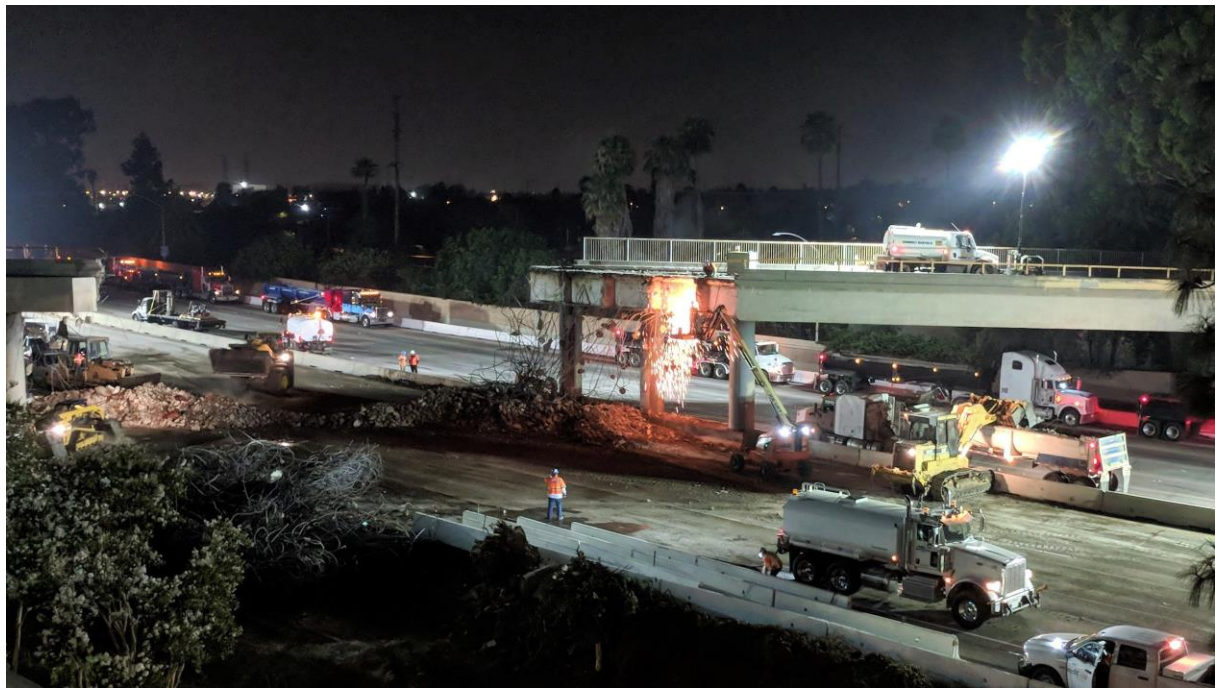
Construction Update

First utility relocation



Median concrete barrier removal

Construction Update



McFadden Avenue bridge demolition

Roadway Construction Look Ahead

- Continue freeway re-striping
- Continue installation of k-rail on outside of freeway
- Clearing and grubbing (tree and ground cover removal, etc.)
- Temporary paving
- Rough grading
- Concrete and asphalt paving and other roadway activities begin in fall

Upcoming Bridge Work

Slater Avenue
(Fountain Valley)

- Single-stage bridge (closed to traffic)
- Expected to close and be demolished in late September

Goldenwest Street
(Westminster)

- Two-stage bridge (open to traffic)
- 60-day settlement fill will be placed in September
- Partial demolition to follow in late November

Magnolia Street
(Fountain Valley/ Westminster)

- Two-stage bridge (open to traffic)
- 60-day settlement fill will be placed in September
- Partial demolition to follow in November

Bridge Construction Map

Open House Meetings

Please join the Orange County Transportation Authority and the California Department of Transportation to learn about the I-405 freeway construction.

There will be a presentation from 6:30 to 7 pm at each open house. Presentation topics will include a project overview, tentative bridge construction schedule, and an interactive map and Waze app demonstration.

THURSDAY MAY 10, 2018
6 to 8 pm
Westminster Senior Center
8200 Westminster Boulevard
Westminster, CA 92683

THURSDAY MAY 31, 2018
6 to 8 pm
Fountain Valley School District Board Room
10055 Slater Avenue
Fountain Valley, CA 92708

THURSDAY JUNE 7, 2018
6 to 8 pm
Rush Park Auditorium
3021 Blume Drive
Rossmoor, CA 90720

THURSDAY MAY 24, 2018
6 to 8 pm
VA Long Beach Facility
5901 E. 7th Street
Bldg 165, The Egg Auditorium
Long Beach, CA 90822

TUESDAY JUNE 5, 2018
6 to 8 pm
Senior Center in Central Park
18041 Goldenwest Street
Huntington Beach, CA 92648

THURSDAY JUNE 14, 2018
6 to 8 pm
Orange Coast College Student Center
2701 Fairview Road
Costa Mesa, CA 92626

STAY INFORMED
SIGN-UP TO RECEIVE PROJECT UPDATES AND ALERTS BY VISITING
www.octa.net/405improvement

Si prefiere recibir información en español, por favor llame a Evelyn French al (951) 972-2591.

Nếu bạn thích để nhận được thông tin này trong tiếng Việt, xin vui lòng liên hệ với Gia Ly (888) 662-6569.

(888) 400-8994
405project@octa.net
@405Improvement
facebook.com/405Improvement
@405_Improvement

Neighborhood Meetings

NEIGHBORHOOD MEETING

MCFADDEN AVENUE BRIDGE CONSTRUCTION

The Orange County Transportation Authority (OCTA) would like to invite you to attend a neighborhood meeting to learn more about the I-405 Improvement Project.

(See reverse side for locations and times)

The 405 Outreach Team will be available to answer questions regarding the upcoming McFadden Avenue bridge construction.

The McFadden Avenue bridge is tentatively scheduled for full demolition in mid- or late August 2018. The bridge will be closed during construction. Construction of the new bridge is anticipated to take approximately 12 months.

Please be advised that this work may be loud.

FOR MORE INFORMATION

PROJECT HELP LINE:	(888) 400-8994
PROJECT EMAIL:	405project@octa.net
WEBSITE:	octa.net/405improvement
FACEBOOK:	facebook.com/405Improvement
TWITTER:	@405Improvement
INSTAGRAM:	@405_Improvement
INTERACTIVE MAP:	octa.net/405map

Bilingual staff or professional interpreters will be available at the meeting.
Si prefiere recibir información en español, por favor llame a Evelyn French al (951) 972-2591.
Nếu quý vị muốn nhận được thông tin này bằng tiếng Việt, xin vui lòng liên lạc với cô Lý Gia (888) 662-6569.

▶ COLLEGE PARK MEETING

When: **Saturday, Aug. 4, 2018**
9 to 10 a.m.

Where: **College Park**
15422 Vermont St.,
Westminster, CA 92683

▶ JOHN F. LAND SCHOOL MEETING

When: **Saturday, Aug. 4, 2018**
11 a.m. to noon

Where: **John F. Land School**
15151 Temple St.,
Westminster, CA 92683

OCTA · Caltrans · OCGO Local Tax Dollars at Work

COMMITTEE TRANSMITTAL

September 24, 2018

To: Members of the Board of Directors

From: Laurena Weinert, Clerk of the Board

Subject: Environmental Mitigation Program Endowment Fund Investment Report For June 30, 2018

Finance and Administration Committee Meeting of September 12, 2018

Present: Directors Do, Hennessey, Jones, R. Murphy, and Steel
Absent: Director Spitzer

Committee Vote

This item was passed by the Members present.

Committee Recommendation

Receive and file as an information item.

September 12, 2018

To: Finance and Administration Committee

From: Darrell E. Johnson, Chief Executive Officer

Subject: Environmental Mitigation Program Endowment Fund Investment Report For June 30, 2018

Overview

The Orange County Transportation Authority has developed a Natural Community Conservation Plan/Habitat Conservation Plan, acquired conservation properties, and funded habitat restoration projects to mitigate the impacts of Measure M2 freeway projects. California Community Foundation manages the non-wasting endowment required to pay for the long-term management of the conservation properties. Each quarter, the California Community Foundation publishes a comprehensive report detailing the composition of the pool and its performance. Attached is the quarterly investment report for the Endowment Pool for the period ending June 30, 2018. The report has been reviewed and is consistent with the pool objectives.

Recommendation

Receive and file as an information item.

Background

On September 26, 2016, the Board of Directors approved the selection of the California Community Foundation (CCF) as an endowment fund manager for the Measure M2 Freeway Environmental Mitigation Program. Approximately $2.9 million on an annual basis will be deposited in the endowment. As of June 30, 2018, the Orange County Transportation Authority has made two deposits to the Endowment Pool, each in the amount of $2,877,000. The third deposit is scheduled to be made in August 2018, in the amount of $2,877,000. These annual deposits are expected to continue for ten to 12 years, or until the fund totals approximately $46.2 million.

Discussion

As of June 30, 2018, total pool assets in the CCF Endowment Pool were $1.06 billion. Total foundation assets were $1.70 billion. Performance for the Endowment Pool was -0.5 percent for the month, 0.20 percent below the benchmark; 0.7 percent for the quarter, below the benchmark by 0.1 percent. The one-year return was 8.3 percent, exceeding the benchmark by one percent.

The balance as of June 30, 2018, is $6,241,770. The number exceeds the projected balance of $5,934,232 due to higher than projected investment earnings and lower than projected fees. The projected annualized cost for endowment services was 0.75 percent based on indications received during the due diligence process. The program is currently paying 0.35 percent fee on a sliding scale. That fee will continue to be reduced as assets grow.

Summary

The Orange County Transportation Authority is submitting a copy of the California Community Foundation Investment Report to the Board of Directors. The report is for the quarter ending June 30, 2018.

Attachments

A. California Community Foundation Fund Statement - June 30, 2018
B. California Community Foundation Endowment Pool Investments – June 30, 2018

Prepared by:

Jennifer Matano
Department Manager
Treasury/Public Finance
714-560-56563

Approved by:

Andrew Oftelie
Executive Director,
Finance and Administration
714-560-5649

ATTACHMENT A

California COMMUNITY Foundation

Fund Name	OCTA - Measure M2 Environmental Mitigation Program Fund
Fund Start Date	2/28/2017
Investment Pool(s)	Endowment Pool

FUND STATEMENT

OCTA - Measure M2 Environmental Mitigation Program Fund (V398)

4/1/2018 - 6/30/2018

Fund Summary

	Report Period 4/1/2018 - 6/30/2018	Calendar YTD 1/1/2018 - 6/30/2018
Opening Fund Balance	$6,196,543.55	$6,220,553.14
Contributions	0.00	0.00
Investment Activity, net	45,226.71	38,816.79
Administration & Grant Management Fees	0.00	(17,599.67)
Net Changes to Fund	45,226.71	21,217.12
Ending Balance	**$6,241,770.26**	**$6,241,770.26**

Investment Pool Performance as of 06/30/2018

	This Qtr.	1-Year	3-Years	5-Years	10-Years
Endowment Pool	0.7%	8.3%	5.7%	6.5%	5.1%
Social Impact Endowment Pool	1.6%	7.5%	6.4%	7.4%	6.0%
Conservative Balanced Pool	1.3%	4.3%	4.1%	n/a	n/a
Short Duration Bond Pool	0.2%	-0.2%	0.8%	n/a	n/a
Capital Preservation Pool	0.5%	1.3%	0.7%	0.5%	0.6%

Endowment Pool - invested for long-term growth and appreciation while providing a relatively predictable stream of distributions that keeps pace with inflation over time. The target asset allocation is 50% equities, 14% hedge funds, 22% fixed income and 14% real assets. Investment management fees are 66 basis points.

Social Impact Endowment Pool - invested in a diversified pool aiming for capital growth for long-term grantmaking; underlying instruments undergo rigorous environmental and social analysis, with an asset allocation of approximately 60%-75% equities and 25%-40% fixed income. Investment management fees are 68 basis points.

Conservative Balanced Pool - designed to aim for moderate growth and to offer diversified exposure to the U.S. equity market and to investment grade fixed income with maturities from one to five years and an asset allocation of 70% fixed income and 30% equities investments. Investment management fees are 9 basis points.

Short Duration Bond Pool - invested to offer diversified exposure to investment grade fixed income with maturities from one to five years for the purposes of grants over a near-term one to four year horizon. Investment management fees are 5 basis points.

Capital Preservation Pool - designed to preserve principal and provide liquidity for present grantmaking needs through investment in short-term fixed income and cash instruments. Investment management fees are 10 basis points.

California COMMUNITY Foundation

Endowment Pool
June 2018

INVESTMENTS

The Endowment Pool returned -0.5% for the month of June 2018, 20 basis points behind its benchmark. For the trailing year, the pool returned 8.3% , 100 basis points ahead of its benchmark.

Total Pool Assets

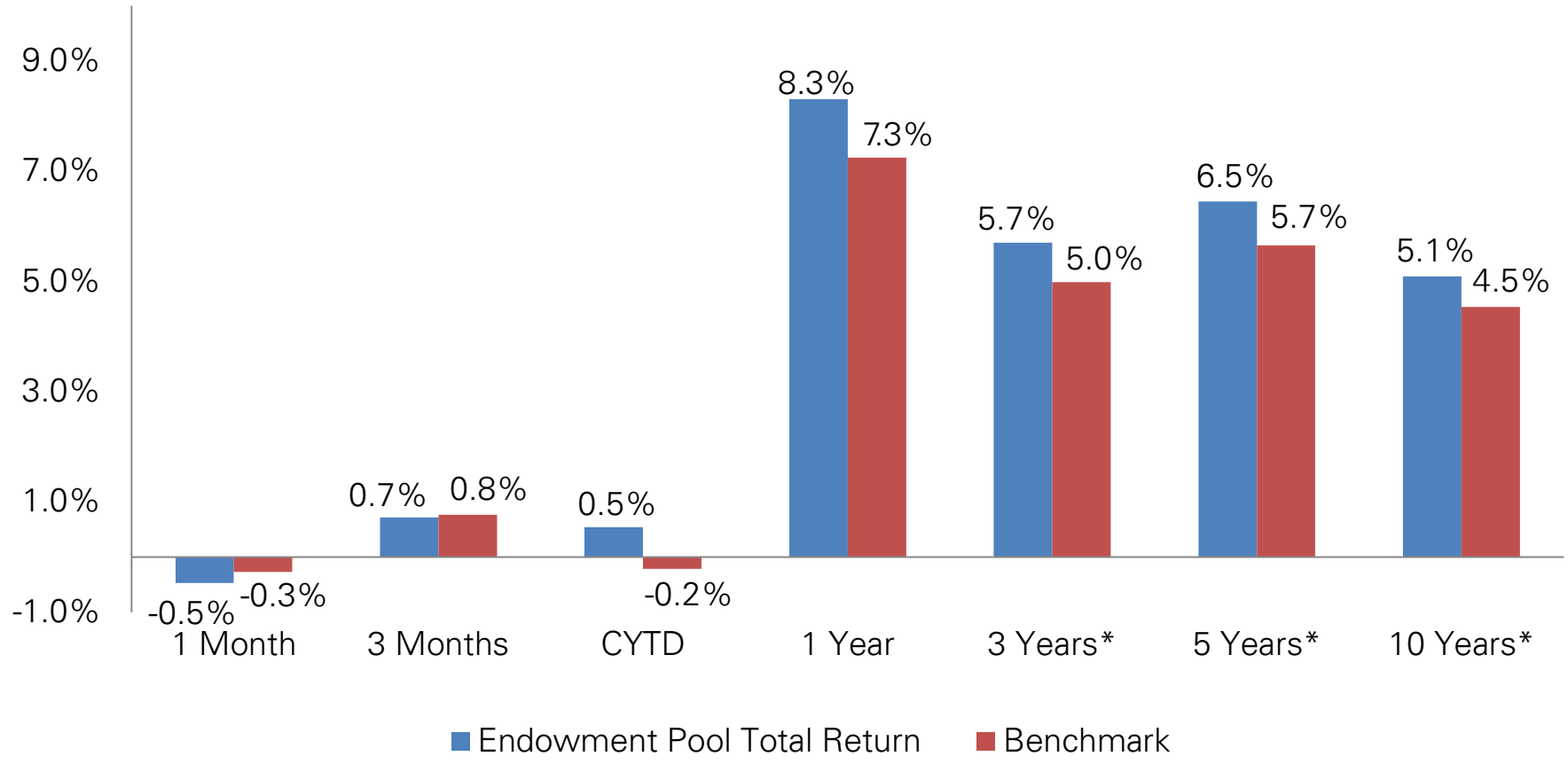
$1.058 billion (Endowment Pool), $1.70 billion (total foundation assets) as of June 30, 2018.

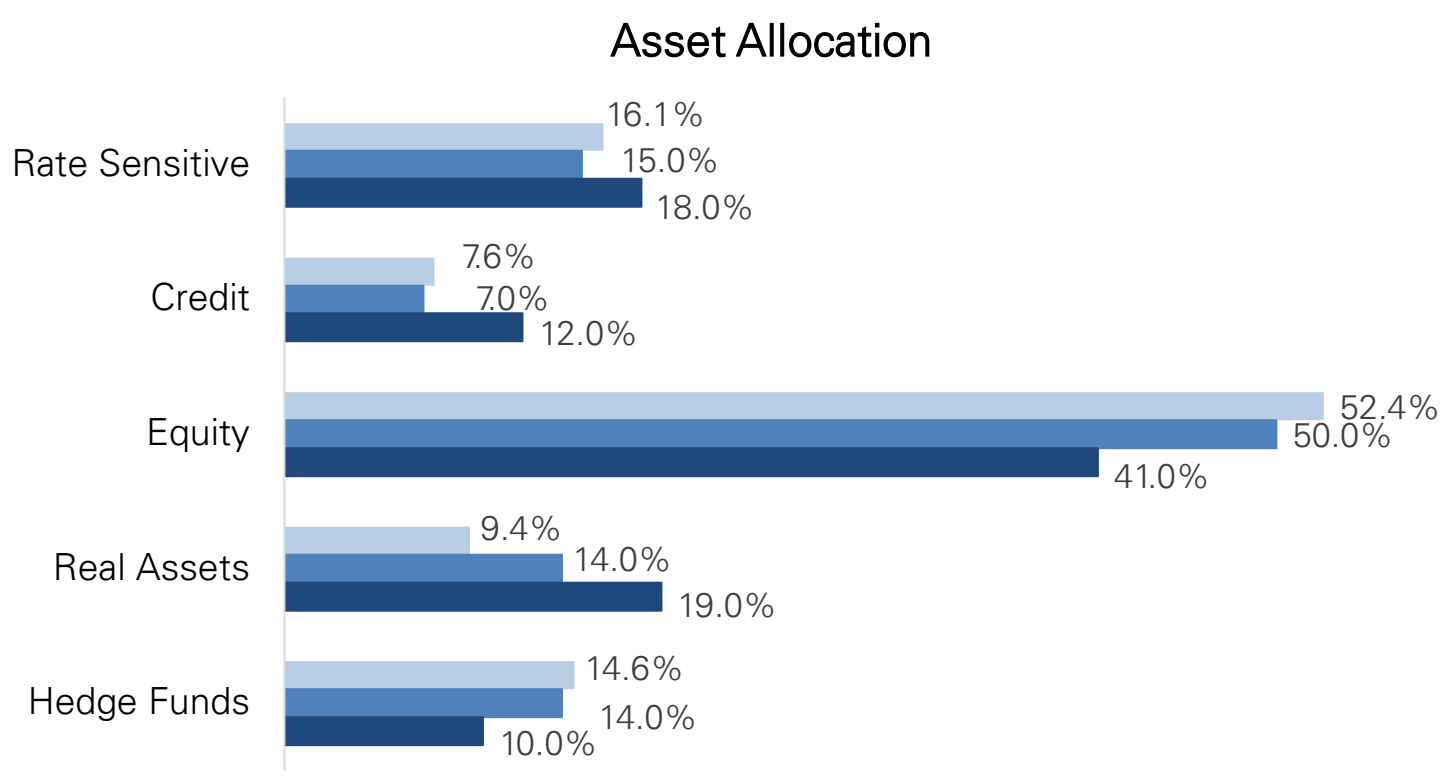
Pool Objective

Preserve the real (i.e., inflation-adjusted) purchasing power of the investment pool net of annual distributions for grants and expenses. An additional objective is to provide a relatively predictable, stable stream of distributions for grants and expenses that keep pace with inflation over time.

Investment Consultant

Meketa Investment Group





**Represents annualized returns.*

1) Investment expense ratio approximates 0.61%, excluding fund manager incentive fees.
2) Investment performance is presented net of investment expenses, inlcuding fund manager incentive fees.
3) Total Fund Benchmark is a combination of: 50% MSCI ACWI / 14% HFR FOF / 14% S&P Real Assets Indx / 15% Barc Agg. / 7% Barc High Yield.
4) Short-term target allocation is over 2-5 years, long-term target allocation is over 5-10 years.

Updated 7/23/2018