



COLORADO

Department of Transportation

Office of the Chief Engineer

4201 E. Arkansas Ave., Room 262
Denver, CO 80222

DATE: August 19, 2015
TO: Transportation Commission
FROM: Josh Laipply, Chief Engineer
Maria Sobota, Chief Financial Officer
Richard Zamora, Office of Program Management Director
SUBJECT: Program Management Workshop

Purpose

The Program Management Workshop provides the Transportation Commission with an update on the delivery of programs and significant projects. This month there is a focus on the Flood and RAMP Local Agency Programs.

Details

A primary performance objective related to the integration of Cash Management and Program Management is a reduction of the cash balance. Total program spending has a significant impact on CDOT's cash balance. Included in the PMO deck is a bar chart projecting the impact of total program spending for Fiscal Year 2016 on individual cash fund balances and federal cash equivalents.

Last month, this information was provided to the TC in a new format. For the purpose of providing detailed information related to the new diagram to new TC members and those who were not able to attend the July TC meeting, information related to the diagram is repeated in this memo. Information related to July performance versus the July forecast presented last month is also included.

The cash balance in the chart is split out by fund with the Capital Construction Fund (Fund 400) being the most relevant as its activity includes the receipt of Highway User Tax Fund (HUTF) transfers, receipt of FHWA reimbursements, and the majority of CDOT's construction spending. The projected Fund 400 cash balance at July 31, 2015 was approximately \$740 million. The actual Fund 400 cash balance at July 31, 2015 was approximately \$698 million - a difference of \$42 million. Overall, the Fund 400 continues trending downward slowly as Cash Management and Program Management implementation continues and is on target.

The projected Bridge Enterprise Fund (Fund 538) cash balance at July 31, 2015 was approximately \$265 million. The actual Fund 538 cash balance at July 31, 2014 was approximately \$255 million - a difference of \$10 million. The majority of Fund 538 cash is reserved for the I-70 Viaduct project.



Included in Other Funds are cash balances related to Aeronautics, HPTE, and the State Infrastructure Bank, among other smaller funds. Other Funds generally do not fluctuate significantly from month to month.

A related measure is the federal obligation limitation, or cash equivalents balance. The projected ending balance for cash equivalents at July 31, 2015, was \$120 million. The actual ending balance for cash equivalents at July 31, 2015, was approximately \$90 million. The federal obligation, which is CDOT's authorization to bill FHWA for reimbursement of expenditures, is the main driver of cash equivalents. The timing and amount of federal notices received impact CDOT ability to spend down its Fund 400 cash balance. In general, CDOT does not begin to spend down the Fund 400 cash balance until the federal obligation has been exhausted. This is because as long as CDOT has federal obligation available, it will receive reimbursement for approximately 80 percent of any qualifying expenditures.

In a normal year, CDOT receives federal obligation of approximately \$500.0 million for the entire year in October. Due to the Continuing Resolution impacting FHWA, CDOT is expecting to receive its federal obligation in prorated amounts this year. In late July, FHWA informed all DOTs of a three-month extension to the federal authorization bill (MAP-21). As a result, CDOT expects to receive approximately \$83 million in additional obligation limit through September 30, 2015.

There is still a possibility that federal cash reimbursements may slow in upcoming months due to FHWA restrictions. We will continue to stay on top of any decisions made that may impact the cash balance and report on any changes related to the revised 2016 forecast established in July.

We are continuing to monitor program delivery at the statewide level using the expenditure performance index (XPI) to evaluate actual construction expenditure performance as compared to planned. This month the cumulative and monthly XPI for the FY16 Capital Engineering Program was a 0.74, which is below the anticipated target for July. The current XPI of 0.74 reflects the disparity between the actual expenditure of \$77,860,112 and the expenditure target of \$104,723,085. Future expenditure must exceed the monthly targets for the Capital Program to reach its annual target of \$790,000,000 in fiscal year 2016.

The PMO Reporting Overview slide provides a status update of the four main programs being reported on by the Program Management Office. The SPI for Flood returned to a 0.94 from 0.90 last month, while the RAMP Partnership and Operations program decreased slightly to a 0.95 from 0.96 last month. The SPI for CDOT administered projects decreased slightly to 0.95 and Local Agency segments increased to a 0.94 this month. The RAMP Partnership and Operations program continues to show steady growth in expenditures and encumbrances as more projects are being budgeted and advertised.



Region 4 is presenting its recommendation for the US 287 Conifer to Laporte Bypass RAMP Partnership project, as well as, Greeley's US 85 and US 34 Adaptive Signal Controls RAMP Operations projects. For more information on these projects, please refer to the attached memorandum and this month's budget supplement.

The Safety program focuses on projects with HSIP and FASTER funds within the Fiscal Year Range (2010-Present). The slide provided is a snapshot of how these individual programs are performing at delivering projects.

CDOT is also implementing tools and processes to improve our project cost estimates and communicate the level of confidence associated with them. This includes using statistical information to develop a range of costs and adjusting project cost estimates based on forecasted economic conditions at the time of project advertisement. Additional Information is contained within the attached Powerpoint presentations.

Attachments

1. Powerpoint Presentation
2. RAMP Partnership Program Controls Update (table)
3. US 287 Conifer to Laporte Bypass Memorandum
4. US 85 and US 34 Bypass Adaptive Signal Controls (Greeley) Memorandum



RAMP Partnership Program Controls Update

RAMP Partnership Program Controls Update										Aug 2015
PCN	Project Name	Original TC Approved Budget [A]	Current Forecasted Cost Estimate [C]	Total Project Cost Variance [A-C]	Prelim. Scalable Review	Additional Non-CDOT Contribution	Additional RAMP Contingency	Additional CDOT Contribution	Project Controls Comments	
19192	I-25/ARAPAHOE RD INTERCHANGE	\$74,000,000	\$76,000,000	(2,000,000)	Scalable to budget, with CMGC input.	Possible	Likely (\$2,000,000)	\$0	CMGC (ICE Consultant is part of the project team); An additional \$2.0M in estimated ROW costs anticipated; 60% Plans and ICE results to be discussed with RAMP Sponsor Coalition end of August; Planned Construction in 2016.	
19954	US 160 Turnouts	\$1,015,000	\$493,898	521,102	Estimated (\$600,000)	Unlikely	\$0	\$0	Project scope has been scaled back to a single decel lane; Alternatively, both decel lanes would cost over \$2.1 million; Scaled project is within original budget; Planned Advertisement for February 2016.	
19906	US50/Dozier/Steinmeier Intersection Improvement & Signal Improvements (companion Ops project 2-9)	\$2,500,000	\$2,500,000	0	Completed	Unlikely	\$0	\$0	Project is currently tracking within budget; FOR Level Estimate complete; Additional Local Contribution unlikely; Project is not scalable; Planned Advertisement in late September 2015.	
18331 19039	I-25 AND CIMARRON EXPRESSWAY	\$95,000,000	\$113,624,588	(18,624,588)	Completed (\$11,500,000)	\$2,050,000	\$2,531,138	\$14,043,450	Awarded; Apparent successful proposer was selected in February; TC Approved additional RAMP Contingency funds; \$2.5 M in savings from bid opening returned to RAMP Contingency	
19056 19751	US 50 / SH 45 Interchange, Wills to Purcell - Pueblo (companion Ops project 2-10)	\$11,200,000	\$11,075,452	124,548	Bundled Projects	\$0	\$0	\$0	Awarded; Total Project Cost proposed (Ramp + Surface Treatment) is \$13,426,152	
19094	I-70 Simba Run Underpass (Vail Underpass)	\$20,800,000	\$30,100,000	(9,300,000)	Completed	2,730,000	\$6,570,000	\$0	CMGC project; Additional Local Contribution approved by Town of Vail at matching percentage; TC Approved additional RAMP Contingency Funds in June 2015; Planned Advertisement in December 2015.	
19930	SH 9 - Frisco to Breckenridge: Iron Springs Alignment and Vail Pass Multi-use Path Devolution	\$21,985,000	\$27,487,269	(5,502,269)	Completed (\$4,200,000)	1,012,454	\$4,489,815	\$0	ICE complete; Additional Local Contribution approved by Summit County partners at matching percentage; TC Approved additional RAMP Contingency Funds in July 2015; Planned Advertisement for December 2015.	
19911	I-70 Exit 31 Horizon Drive Roundabouts	\$5,000,000	\$6,095,000	(1,095,000)	Complete	\$105,000 Local Match (\$317,000 Utility Co)	\$423,000	\$0	Awarded; Additional Local Contribution confirmed at matching percentage; TC Approved additional RAMP Contingency funds in May 2015; Advertisement in June 2015 (Letting on July 9th, 2015).	
19910	SH 9 CO River South Wildlife & Safety	\$46,000,000	\$52,627,747	(6,627,747)	Completed (\$4,200,000)	Completed	\$6,627,747	\$0	Awarded; Increased Local Contribution; TC Approved additional RAMP Contingency funds needed to Award	
12372 18401 19561 20632	US 287: Conifer to Laporte Bypass (Phase 1 - SH1 to Laporte Bypass) (Phases 2 & 3 - Local Agency)	\$36,000,000	\$42,353,800 \$43,833,509	(7,833,509)	Possible Completed (\$800,000)	Completed	\$8,000,000 \$7,833,509	Local Agency is contributing to the other 2 Phases	Project team has reevaluated the design; Local Agency Partner has increased its funding of the other 2 Phases as matching contribution; ICE results were valid; Requesting TC Approval for additional RAMP Contingency Funds of \$7.83M; Planned Re-advertisement for September 2015.	
19909	US 550 Sky Rocket Box Culvert Replacement	\$2,000,000	\$1,627,796	372,204	Complete	Unlikely	\$0	\$0	Project is currently tracking within budget; FOR complete; Bid alternates are not being considered at this time.	
19908	SH 172 / 151 SIGNALIZATION	\$1,800,000	\$1,729,562	70,438	Complete	Unlikely	\$0	\$0	Project is currently tracking within budget; FOR complete; HazMat and Geology test results could impact project cost; Bid alternates being considered.	
19397	SH 145 AT CR P SAFETY IMPROVEMENTS	\$1,660,194	\$1,676,597	(16,403)	Possible	Unlikely	\$0	\$0	Project is currently tracking within 1% of original budget; FOR complete; Likely savings from design phase; One decel lane could be removed; Bid alternates being considered.	
18972	US 285 Antonito Storm Drainage System Replacement	\$2,742,429	\$3,343,337	(600,908)	Bundled Projects	Completed	\$0	\$0	Awarded; Local in-kind contribution increased by \$350,000; (Bundled with \$7.0 mil SUR project for bidding economy)	
19411	SH 62 Ridgeway Street Improvements (pending approval of local match)	\$13,791,257	\$13,463,955	327,302	In-progress	Unlikely	\$0	\$0	Project is currently tracking within budget; Scalability is on-going during design; FOR complete; An ICE is anticipated for this project; Planned Advertisement for December 2015.	
19643	US 24 Enhancement Project in Buena Vista	\$2,497,090	\$2,780,174	(283,085)	Possible (3 options)	Unlikely	\$0	\$0	Scalability and Local Contribution under region review; Project to be bundled with \$8 mil SUR project; Further reduction of scope and FA items possible; Planned FOR in September 2015; Planned Advertisement in April 2016.	
Subtotals		\$337,990,970	\$388,458,884	(\$50,467,915)	(\$600,000)	\$6,214,454	\$28,475,209	\$14,043,450	(\$1,134,801)	
		Total Original	Total Forecast	Total Variance	Total Scope Reduction	Total Local Contribution	Total RAMP Contingency	Total CDOT Contribution	Remaining Projected Liability	

Legend:

Project Awarded (blue)
Cells updated since last month (yellow)

Per resolution TC-3209, Establishment of the RAMP Program Project Controls, the table above includes those RAMP Public-Public Partnership CDOT administered projects that were un-awarded as of December 2014.



COLORADO

Department of Transportation

Region 4

1420 2nd Street
Greeley, CO 80631
(970) 350.2103 (Fax) 350.2179

MEMORANDUM

TO: TRANSPORTATION COMMISSION

FROM: JOSH LAIPPLY, CHIEF ENGINEER

MARIA SOBOTA, CHIEF FINANCIAL OFFICER

JOHNNY OLSON, REGION FOUR RTD

CC: SCOTT MCDANIEL; RICHARD ZAMORA

DATE: AUGUST 4, 2015

SUBJECT: RAMP PROJECT 4-20, (US 287 (NORTH COLLEGE) CONIFER TO THE LAPORTE BYPASS)

Action

Requesting approval to add \$7.83M to the US 287 Conifer to LaPorte Bypass project allowing the project to move forward with re-advertisement and construction.

Background

This is the northern of three construction projects that make up the Conifer to LaPorte Bypass RAMP project. The southern project from Conifer to near SH 1 is under construction and the middle project is in design and scheduled for construction in 2017, with Fort Collins accepting responsibility for additional costs on both projects. The totality of the US 287 corridor from SH 14 to the LaPorte Bypass has been an ongoing partnership with Fort Collins, with Fort Collins bringing \$21.98M (or 41.3%) in local and MPO directed funds to leverage \$31.26M (or 58.7%) of CDOT directed moneys; including current RAMP funds.

CDOT advertised the northern segment of this project, SH 1 to the LaPorte Bypass, in September 2014 and opened bids from contractors on November 13, 2014. The apparent low bid resulted in a total project shortfall of \$7.35M. An Independent Cost Estimate (ICE) was performed in November and determined that the bids were reasonable. The region was instructed to analyze the project and reduce scope, risk, and cost instead of moving forward with award.

Details

Region 4 reviewed the project for potential scope and cost reductions to re-advertise for contractor bids.

- 1) Region 4 Materials re-evaluated the pavement design and determined a decrease in concrete pavement thickness saving approximately \$800,000 in material cost from the previous pavement design.
- 2) Colorado Contractor's Association requested comments on behalf of CDOT from original bidders to identify high-risk items. The highest risk is utilities within project limits, so utility agreements have been executed with utility owners and relocations emphasized prior to construction.
- 3) Consultants were contracted to perform a quality control review of project design and plans, clarifying several areas where plans are corrected to reduce confusion and perceived risk for contractors.



- 4) All phases' and segments' budgets have been analyzed and all available funds are being applied to the northern segment's construction budget.

Per resolution TC-3209, Stanton has performed an Independent Cost Estimate for the project and it is within 1% of the CDOT Engineer's Estimate. While the region identified areas for savings, the savings are offset by cost escalation in several of the major items including embankment, excavation, and concrete pavements.

The additional \$7.83M of requested funds are summarized as follows:

- 1) \$5.6M in Construction (28% increase)
- 2) \$0.3M design and repackage
- 3) \$1.5M additional ROW costs
- 4) \$0.4M Utility Relocations

Budget Comparison RAMP Project

Original RAMP Application Amount	Revised Budget Amount	Variance (\$)	Variance (%)
\$36.0M	\$43.834M	\$7.834M	21.8

According to the July Supplement, the Transportation Commission Contingency RAMP Reserve is at \$19,358,300. This request would give staff budget authority to advertise this project and would leave the RAMP Partnership contingency reserve at \$11,524,791.

Key Benefits & Recommendation

Approval of the additional funds allows project to advertise this fall and complete construction by the end of 2018. This fulfills CDOT's portion of the partnership with Fort Collins providing improved safety and traveler experience on this regional, high trucking volume, highway.

CDOT staff believes that it is in the best interest of all parties involved to add additional funds and advertise the project at this time.





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MARIA SOBOTA, CHIEF FINANCIAL OFFICER

JOHNNY OLSON, REGION FOUR RTD

CC: SCOTT MCDANIEL; RICHARD ZAMORA

DATE: AUGUST 4, 2015

SUBJECT: RAMP PROJECTS 4-13 AND 4-41; ADAPTIVE SIGNALS ON US 85 BYPASS AND US 34 BYPASS - GREELEY

Action

Request approval to add \$146,488 from the RAMP Operations contingency fund to the combined adaptive signal projects on US 85 and US 34 in Greeley, and waiver of Independent Cost Estimate requirement due to type of project and requested amount, allowing the project to be awarded in a timely manner and begin installation.

Background

CDOT Region 4 and the City of Greeley have embraced Adaptive Traffic Signal Systems as a method of improving mobility through use of technology and operations. The 10th Street (US 34 Business) Adaptive Signal demonstration project in Greeley displayed very positive results for moving traffic effectively and efficiently, garnering praise for CDOT.

This combined project utilizes the same concept for the main highways running north-south and east-west in the city.

Details

Due to the interdependency of the two corridors and to achieve cost saving through economies of scale, the adaptive signal projects on the US 85 and US 34 Bypasses are combined.

A reduction in the number of interconnected signals is the only method to reduce/modify the project's scope and cost. Due to the nature of the project, which improves mobility and travel times by interconnecting signals and having them "learn" traffic patterns to move traffic in waves through the corridor, reducing the number of signals was not deemed to be a viable option.

The City of Greeley installed a fiber optic network along US 34 and US 85 in anticipation of this project, allowing CDOT to link into their fiber system as their in-kind contribution (valued at \$250k, a 25% match of the original RAMP application amount). Seeking additional funds from the City, for a CDOT sponsored operational project, was not successful.

Per resolution TC-3209, because this project is less than \$15 million and received a bid that was greater than 7.5% over the original RAMP Application Amount, an Independent Cost Estimate (ICE) for the project is required. However, the region is requesting a waiver from the ICE requirement due to the closeness of the bid to the engineer's estimate



Note: This project was discussed with the RAMP Sponsorship Committee prior to advertisement, and was within the \$100,000 funding limit per PD703. The decision was made to advertise the project as planned in July. The cost estimate was adjusted by \$50,000 early the week of bid opening, and the resulting difference plus CE and indirect charges placed this project over the \$100,000 limit. The low bid is 2.2% above the adjusted engineer's estimate for bid items and the second bidder is 21% over engineer's estimate. The region believes the low bid is reasonable and a re-advertisement will result in higher cost.

Budget Comparison

Original RAMP Application Amount	Revised Budget Amount	Variance (\$)	Variance (%)
\$1,250,000	\$1,396,488	\$146,488	11.9

Estimate Comparison

CDOT Engineer's Estimate	Independent Cost Estimate (ICE)	Current Low Bid (if available)
\$777,585		\$794,968

According to the August Supplement, the RAMP Operations contingency reserve is currently at \$2,932,313. If approved, this request would give staff budget authority to award the project and would leave the RAMP Operations contingency reserve at \$2,785,825 for the remaining Operations projects.

Key Benefits & Recommendation

Approval of the additional funds allows CDOT staff to award the contract and begin construction later this summer with completion in the fall of 2015.





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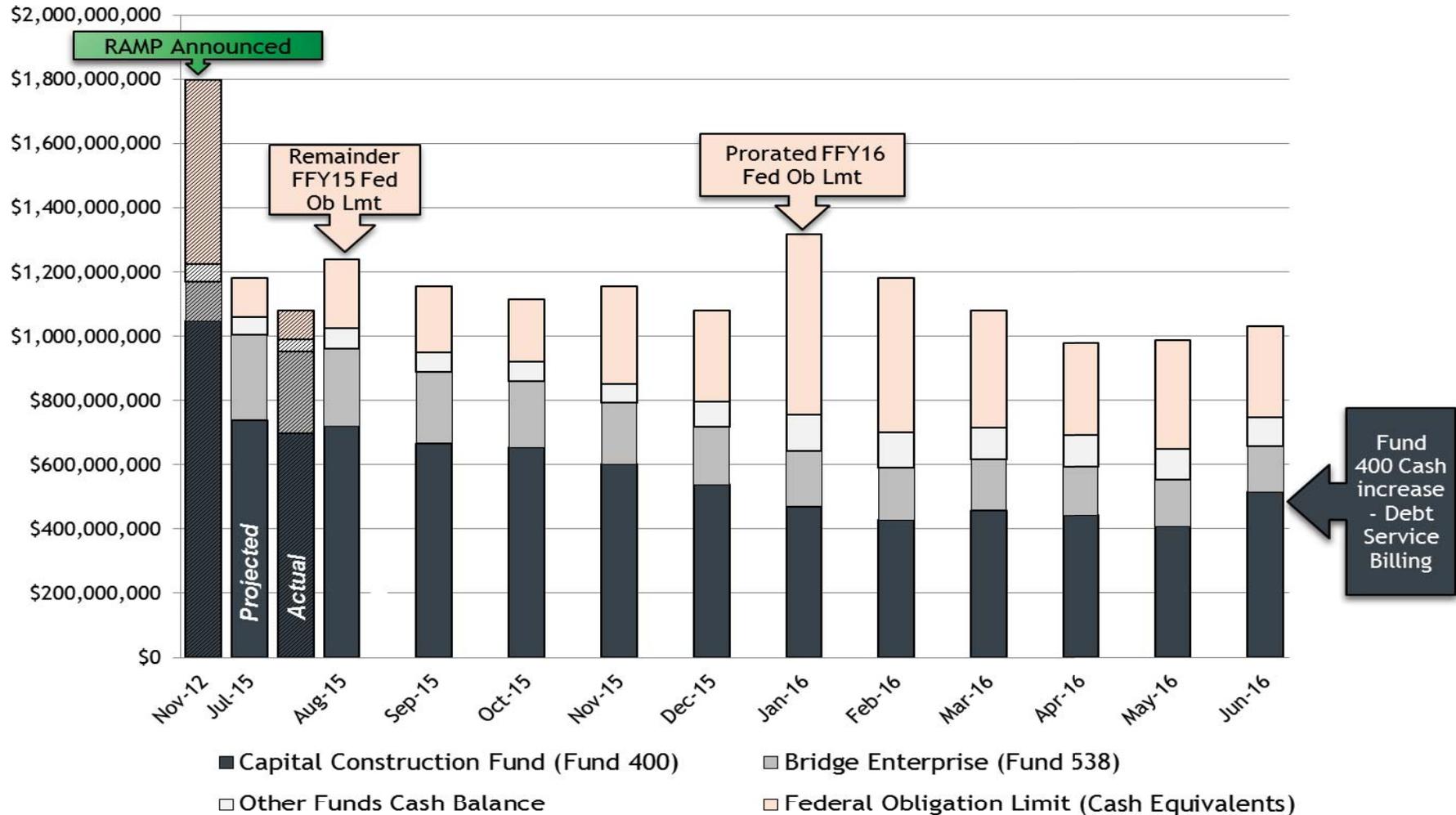
Department of
Transportation

Program Management Update

August 19, 2015



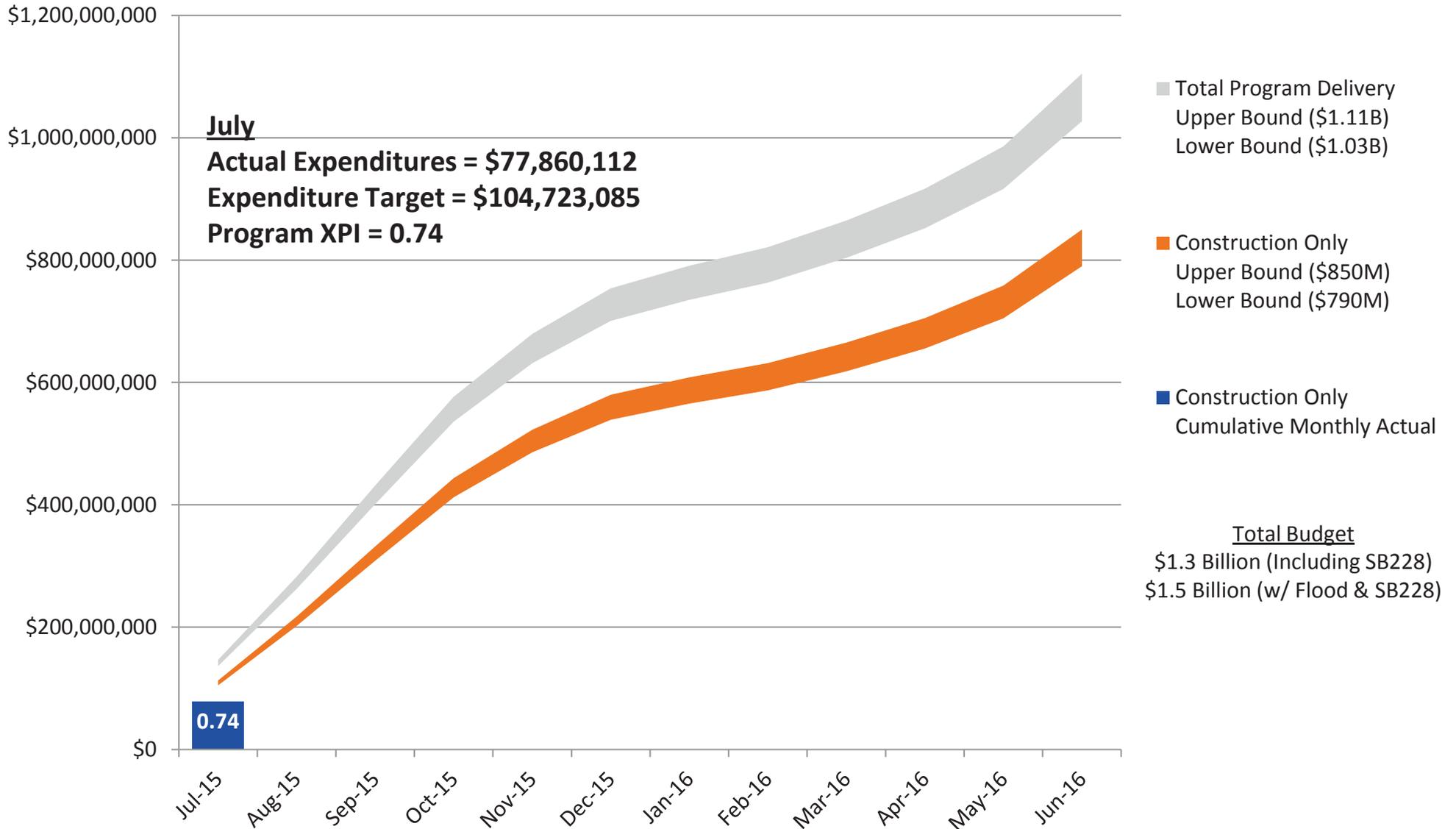
Cash & Federal Obligation Target Balance



Assumes \$790M in Construction Spending including Indirects and Construction Engineering



FY 2016 Capital Program Expenditures





PMO Reporting Overview by Program

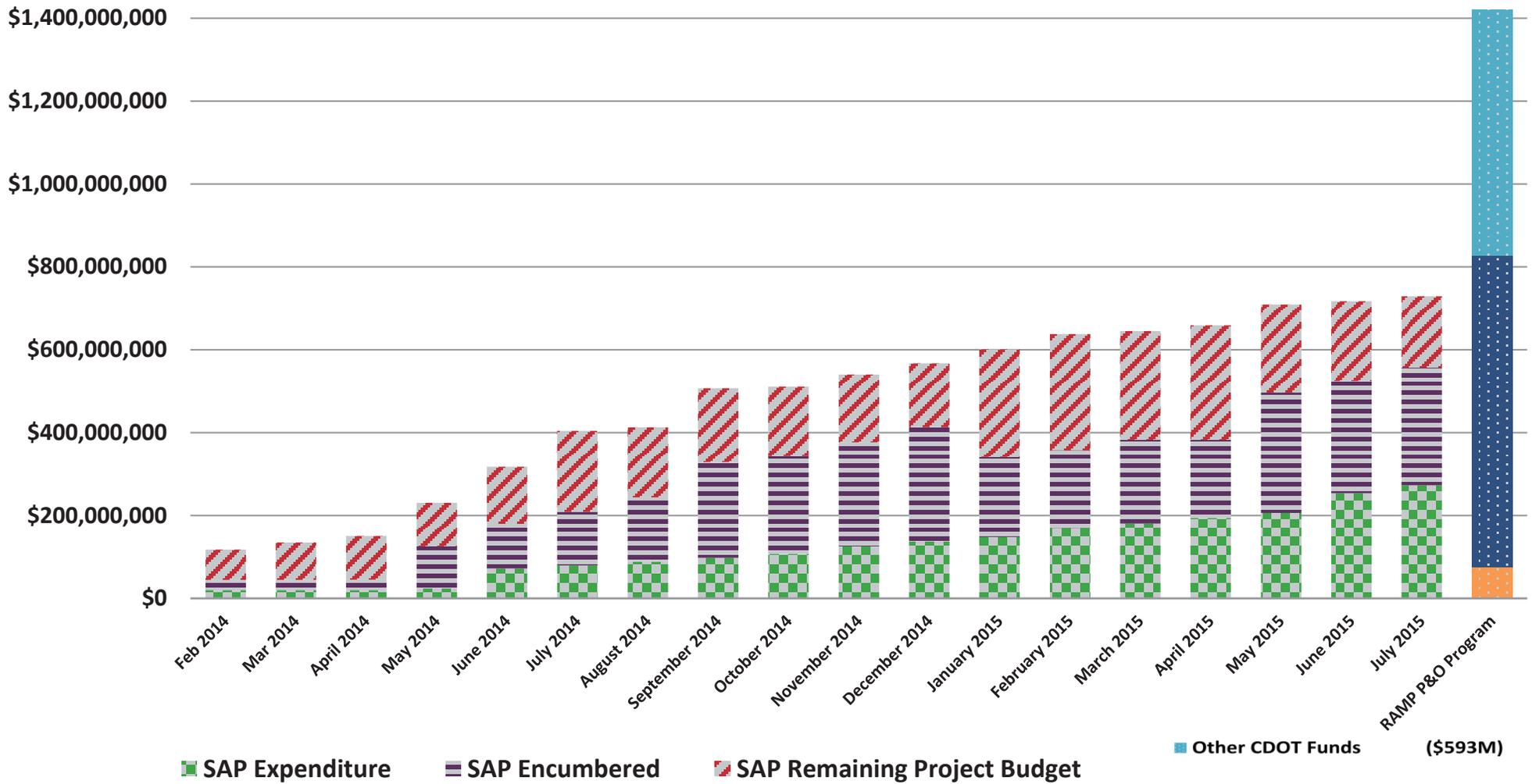
Program	Financial Performance (\$Millions)			Precon. Schedule Performance	Quarterly Rotation
	Program Expenditure through 6/19/2015	Program Expenditure through 7/17/2015	\$ Change	SPI	
Flood	\$151.5	\$156.9	\$5.4	0.94	Oct. 2015
RAMP P&O (Overall)	\$253.3	\$272.8	\$19.5	0.95	Aug. 2015
RAMP P&O (Local Agency)	\$32.7	\$33.1	\$0.4	0.94	Oct. 2015
RAMP P&O (CDOT)	\$220.6	\$239.7	\$19.1	0.95	Aug. 2015
FASTER and HSIP	\$463.4	\$470.5	\$7.1	-	Aug. 2015
Asset Management	\$912.6	\$959.4	\$46.8	*	Sept. 2015

Notes:

1. SPI's shown are for Preconstruction.
2. FASTER and HSIP funds are used on projects in multiple programs and as a result, an SPI is not provided for these programs.
3. Asset Management expenditures are a combination of Fiscal Year 2014, 2015, 2016 and include MLOS and Roadway Equipment.
(Note: MLOS and Road Equipment are excluded from SPI calculations)



Overview of RAMP P&O Program

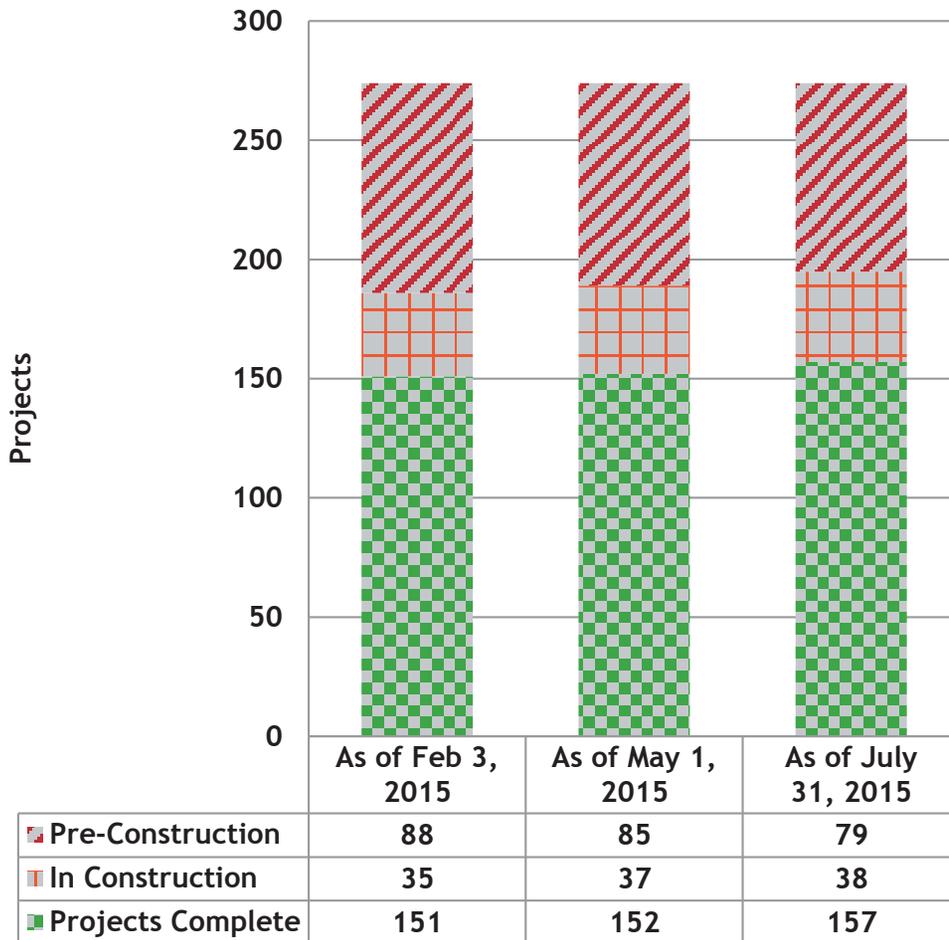


Note: RAMP Allocation does not include in-kind match nor locally administered cash match

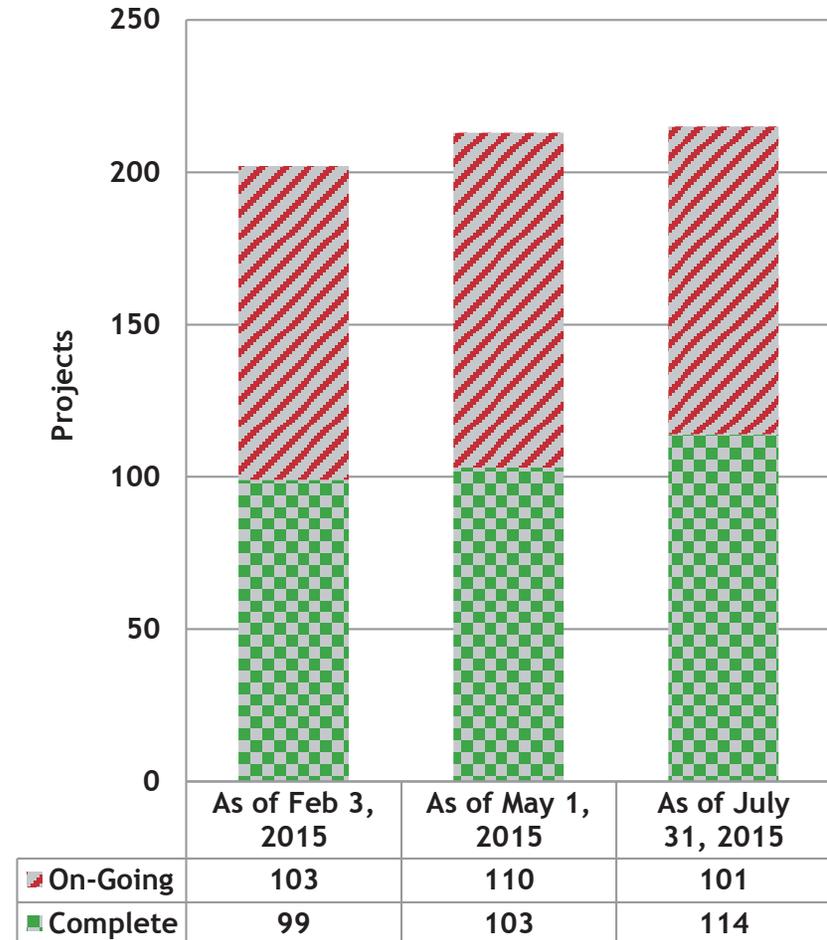


Safety Program Project Status

FASTER Program



HSIP Program



* Completed Projects Within Fiscal Year Range (2010-Present)



Managing within the Established RAMP Program Controls (TC-3209)

There are two (2) Region 4 projects that require commission action:

1. US 287 Conifer to Laporte Bypass

- Budget authorization request of \$7,833,509.
- If approved, the remaining RAMP Public-Public Partnership Contingency Reserve will be \$11,524,791.

2. Adaptive Signal Controls on US 85 and US 34 Bypass - Greeley

- Budget authorization request of \$146,488.
- If approved, the remaining RAMP Operations Contingency Reserve will be \$2,785,825.



Closing

- Questions or Comments
- Upcoming topics for next month
 - Update of Cash Balance
 - Updated Expenditure Performance Index
 - Update on Asset Management Program