



California High-Speed Rail: Operations Report

FY14-15, FY15-16 and Program Metrics

February 2016

Agenda

- ▶ Operations Report Metrics
 - Executive Summary
 - Right of Way (ROW)
 - Environmental
 - Third-Party Agreements
 - Contract Management
 - Finance/Budget
 - Risk
 - Back-Up ROW Information

Executive Summary

ROW Acquisition

- ▶ The current report presents ROW acquisition progress relative to CPI and CP2-3 through December 31, 2015. As of that date, the Authority has secured legal possession of 609 parcels, with 552 delivered to the design-builder. There were 33 parcels delivered in CPI and 17 parcels delivered in CP 2-3 during the month of December.
- ▶ California High-Speed Rail Authority (CHSRA) staff is focused on delivery of key early construction parcels through utilization of the Settlement Teams and partnering with TPZP. This partnering effort has been successful and will enable a total of seven locations to be under construction by mid March 2016. The partnering efforts will continue to identify those key parcels needed to continue meaningful construction.
- ▶ The CP2-3 ROW Acquisition plan will be re-baselined during the first quarter of 2016 .
- ▶ The probabilistic analysis update for CPI will be done after the seven early construction locations are underway so the analysis can incorporate the updated critical path schedule from TPZP. The probabilistic analysis update for CP 2-3 will be done after the rebaselining is completed.

Executive Summary

Environmental

- ▶ The Central Valley Wye administrative draft EIR/EIS is being written. Before the ROD can be issued, the least environmentally damaging practicable alternative (LEDPA) must be agreed upon by the US Army Corps of Engineers and the US Environmental Protection Agency to allow the alternative to be permitted and constructed.
- ▶ Authority decisions are needed to define a clearance approach for the Central Valley Interconnections and for the Heavy Maintenance Facility.
- ▶ Work continues in preparing Supplemental Alternatives Analysis reports for presentation to the Board this Spring, including studies for Bakersfield to Palmdale, Burbank to Los Angeles and Los Angeles to Anaheim.
- ▶ Following approval by the US Forest Service, geotechnical investigative work has begun in the Palmdale to Burbank corridor.
- ▶ Project management tools continue to be under development. To integrate milestones tracking and reporting, the new overall Project Management Information System (PMIS) and revised work breakdown structure are currently under review and revision. The revised system will be operational in February with a quick implementation among our team members.
- ▶ As part of a small group, the Authority has been invited to the White House to work with the Obama Administration to expand regional and landscape-scale environmental mitigation approaches and encourage greater private-sector investment in ecosystem and mitigation markets.
- ▶ With the FRA, the Authority is working to implement the Federal Infrastructure Permitting Dashboard which will be used by the FRA, federal agencies and the public for tracking our progress in completing each environmental document. The dashboard will begin reporting our progress beginning in February.
- ▶ With approval of Work Plan 2, the RDP and Authority continue to add additional staff resources, including new environmental project managers, environmental planners and permitting staff. Starting in January, the number of full-time equivalents is to increase from 22 to 58 by December 2016. With this change, the RDP environmental budget has been updated for this report to reflect these new resources.

Executive Summary

Third Party Agreement Execution

- ▶ The current report presents Third Party Agreement execution progress relative to CP2-3 and CP4 through December 31, 2015. All the agreements for CPI are either completed or agreements templates have been agreed upon and will be executed as design is completed.
- ▶ Quarterly Progress for CP2-3 and CP4 has reduced the total number of agreements needed by 45% as shown on the CP 1, CP 2-3 and CP 4 Unexecuted Agreements
- ▶ Central Valley*, Northern and Southern California Unexecuted Agreements are new agreements identified in this quarter as each respective region's design has been refined to a level that we can now identify the vast majority of third parties that will necessitate an agreement. As the design is further refined, the need for additional agreements may be identified.

Executive Summary

Contract Management

- ▶ **CPI** - Construction activities have recently increased. TPZP is progressing with construction at the Fresno River Viaduct, including large diameter cast-in-drilled-hole foundation piles, fabrication of reinforcement cages for piles and columns, placing concrete for bent columns and pedestals, and falsework erection for the viaduct. Construction has also begun at the Tuolumne Street Overcrossing with implementation of the traffic detour and preparation to start demolition of the existing bridge. Clearing and grubbing work has been completed for Guideway 1 between Avenue 15 and Avenue 15 ½. Additional planned work in the coming month includes construction of the secant piles for the Fresno Trench near the SJVRR and UPRR wyes, and clearing and grubbing and the start of embankment construction at Avenue 12. Additional key critical and near critical path structure locations have been jointly identified and actions continue to start construction in the coming months at those locations.
- ▶ **CP2-3** - The Joint Venture of Dragados/Flatiron has been issued a full Notice to Proceed. The Joint Venture continues to mobilize and plan the work, including developing and submitting various design and construction plans, meeting with third parties to understand their design requirements, and preparing for demolition activities. Field work has begun with geotechnical exploration and utility location activities.

Finance/Budget

- ▶ The program will rebaseline the budget and forecast in the coming months. In FY 2014/15, expenditure graphs tracked actuals and forecast. Going forward in FY 2015/16, the expenditure graphs will track budget along with actuals and forecast. Forecast will be published after the budget is rebaselined.
- ▶ Capital outlay expenditures were \$58.5M as reported in the Capital Outlay report for February-2016, compared to \$54.0M for February-2015.
- ▶ Delays in ROW are impacting construction schedules. Mitigation measures are in place to prioritize critical parcels required for major construction work. An analysis is currently being performed to verify that ARRA Federal Funds will not be at-risk even by using the Alternative Forecast. Continued monitoring will be performed to assess any changes should the ROW delivery be delayed further than anticipated.

Agenda

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 - Contract Management
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 - Back-Up ROW Information

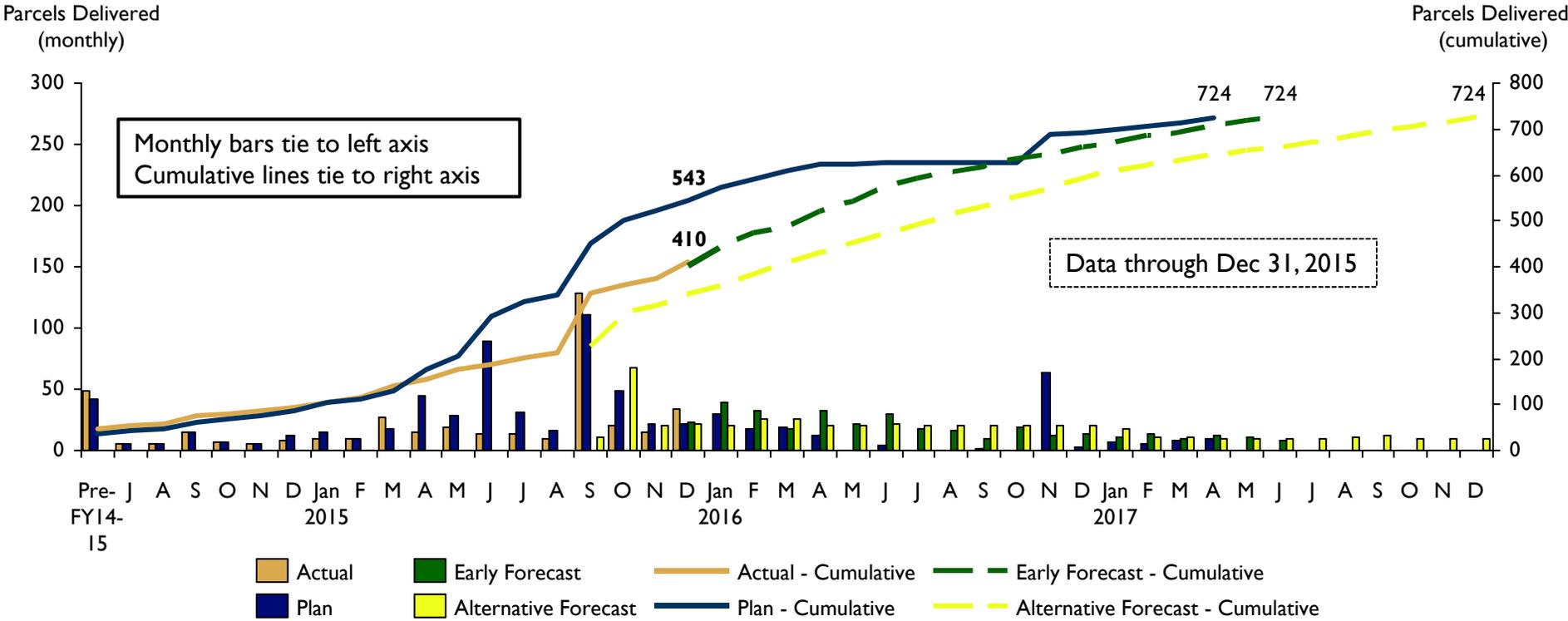
ROW Metrics - Context

- ▶ The following slides track parcels delivered to **design-builder (DB)**, which is the last step of the ROW process
 - Four metrics related to “delivered to DB” are tracked:
 - Plan: For CPI, the negotiated schedule of parcel delivery as of December 2014 plus additional public parcels and design changes; for CP2-3, planned delivery is currently a placeholder and will be re-baselined during the 1st Quarter of 2016.
 - Actual: Actual parcels delivered each month
 - Early Forecast: Refined every month based on future expected delivery
 - Alternative Forecast: Forecast that anticipates additional delays for elements outside the control of the Authority and reflects rates more in line with historic delivery
- ▶ Forecasts are based on inputs from the ROW Consultants and the Authority
- ▶ The total number of CPI parcels needed for delivery has changed (542 to 724) over time for two main reasons:
 - The number of public property parcels were based upon 15% designs; as the ROW Transfer Agreements were completed with the local agencies, the number of parcels has been refined.
 - As the Design Builder refines the design, the ROW needs may also be changed. The number of parcels to be acquired can fluctuate up or down. In some cases, additional ROW may be required from previously completed acquisitions.
- ▶ The monthly flow model methodology has been updated as of December 15, 2015 to allow us to better track parcels that are “recycled” within the process, or have to repeat previous steps. As a result, some historic flow numbers may have been slightly adjusted.

ROW – CP1 Parcels Delivered to Design-Build by Month

Plan vs. Actual vs. Forecast

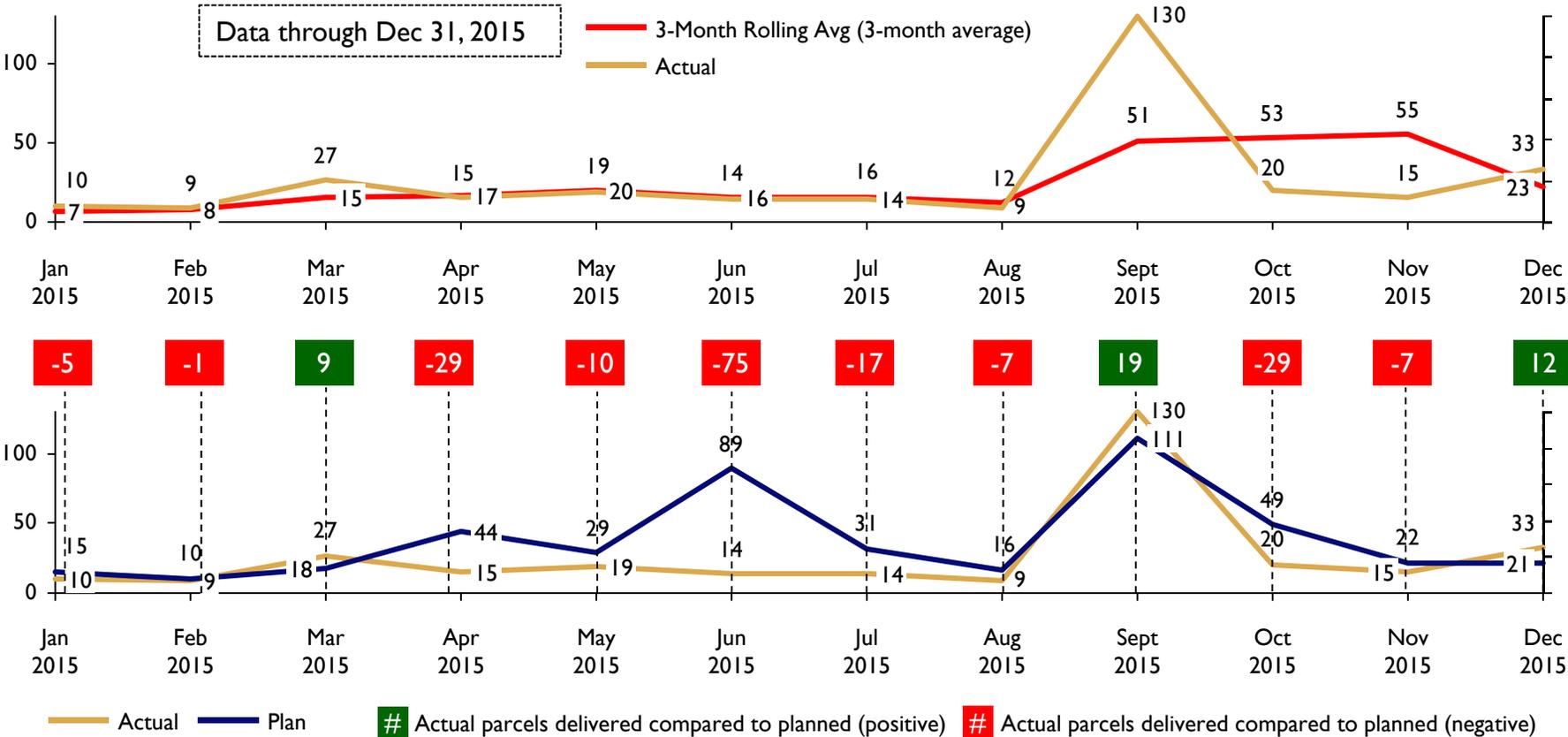
CPI - Delivered to DB (number of parcels)



Notes:
 1. "Plan": Negotiated schedule as of December 2014 plus public parcels, design changes and new parcels.
 2. "Early Forecast" and "Alternative Forecast": Early forecast is continually refined based on expected delivery schedule. The Alternative Forecast reflects potential delays.
 3. Additional parcels have been added as a result of design refinements by DB for new total of 724 parcels.
 Source: Dec 31, 2015 ROW Weekly Report

ROW – CP1 Historic Performance

CPI Performance (in number of parcels)



Notes:

1. "Plan": Negotiated schedule as of December 2014

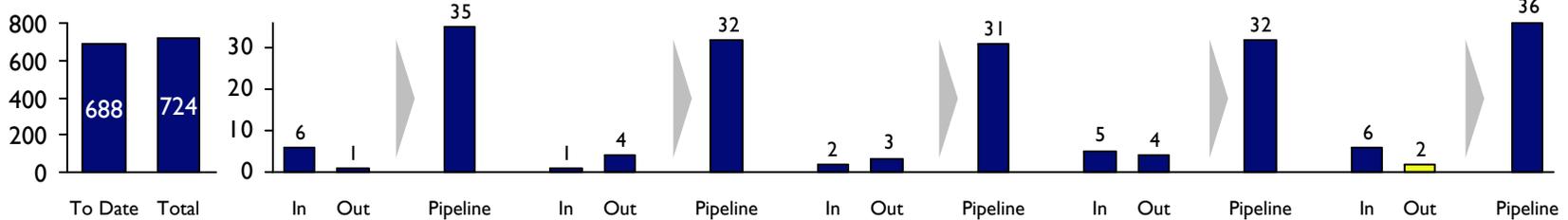
Source: Dec 31, 2015 ROW Weekly Report

ROW – CP1 Pipeline by Process (1 out of 4 pages)

Volume of Activity by Process (Flow) - Pipeline

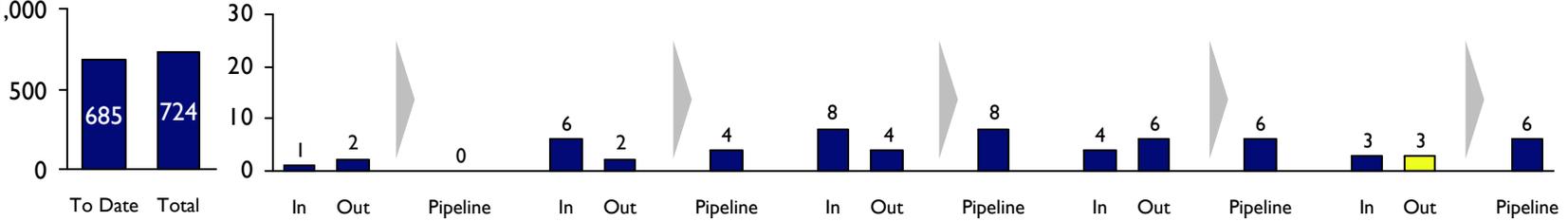
Completion Aug 2015 Sep 2015 Oct 2015 Nov 2015 **Dec 2015**

Appraisal



- Parcels in pipeline are a function of pending design refinement submittals, reviews and approvals

Just Compensation



- Parcels in pipeline pending DGS setting Just Compensation

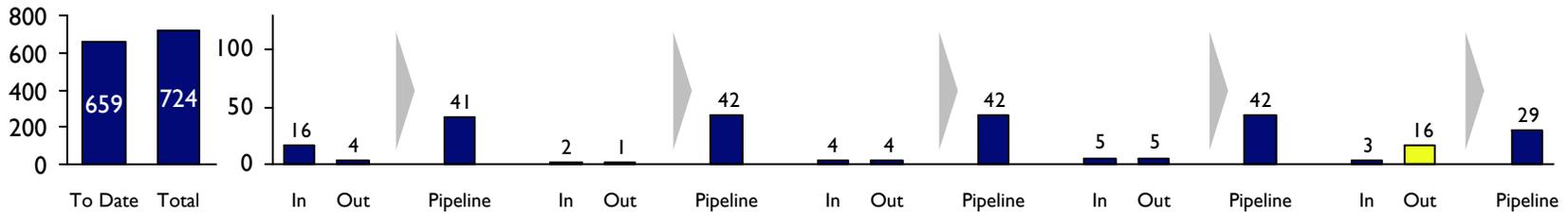
Source: Dec 31, 2015 ROW Weekly Report

ROW – CP1 Pipeline by Process (2 out of 4 pages)

Volume of Activity by Process (Flow) - Pipeline

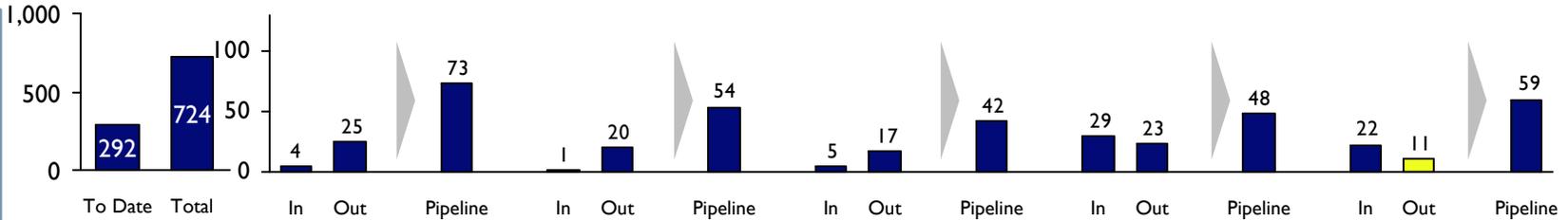


First Written Offer



- Pipeline consists of 20 railroad parcels and 9 non-railroad parcels

Negotiation Acquisition



- 45 signed agreements being processed through escrow with 14 pending offers at property owner decision to sign or enter condemnation

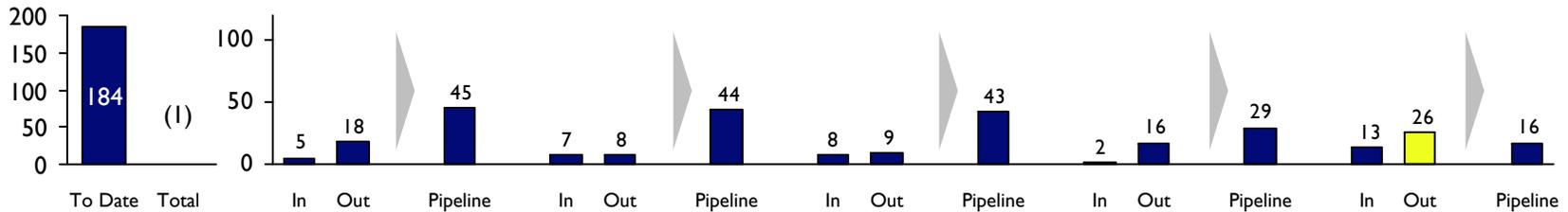
Source: Dec 31, 2015 ROW Weekly Report

ROW – CP1 Pipeline by Process (3 out of 4 pages)

Volume of Activity by Process (Flow) - Pipeline

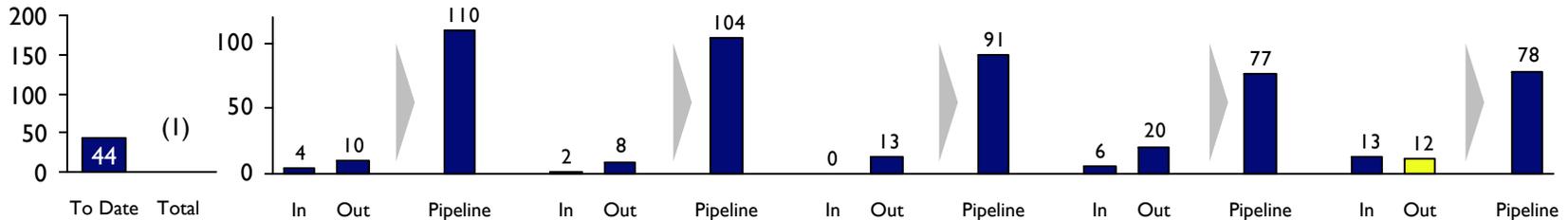


Condemnation



- Pipeline comprised of RONS being processed by CHSRA and ROW consultants and awaiting adoption by PWB. Also includes parcels being prepared by HSR to transfer to Caltrans Legal.

Eminent Domain



- Pipeline illustrates total number of parcels in the Eminent Domain process with Caltrans legal and have lawsuits filed. An Ordered of Possession (OP) is the next step if a settlement is not reached.

(1) Total parcels that may take the condemnation route is unknown

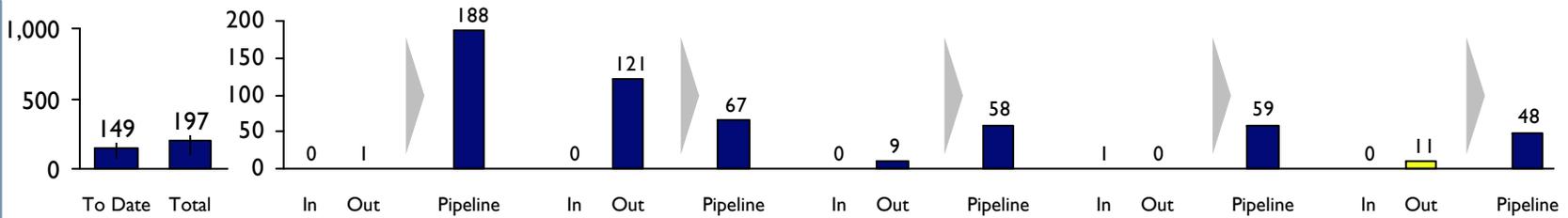
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ROW – CP1 Pipeline by Process (4 out of 4 pages)

Volume of Activity by Process (Flow) - Pipeline

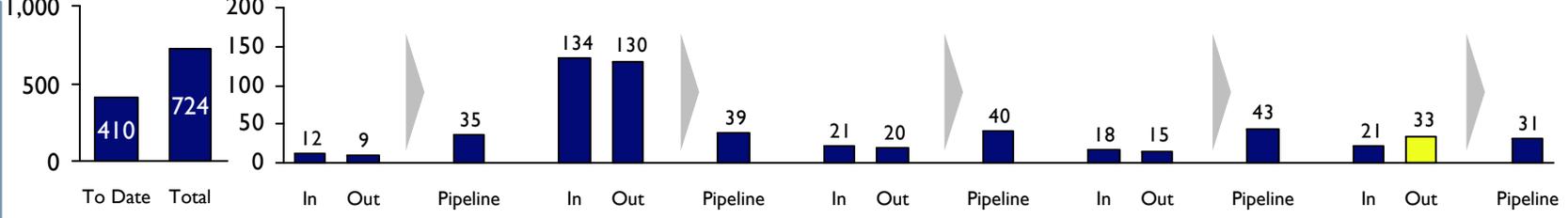


Public Agency / Railroad



- Comprised of 27 railroad parcels and 21 public parcels. Public parcels are being processed with Master Agreements before proceeding to individual utility relocations and acquisitions.

Delivery



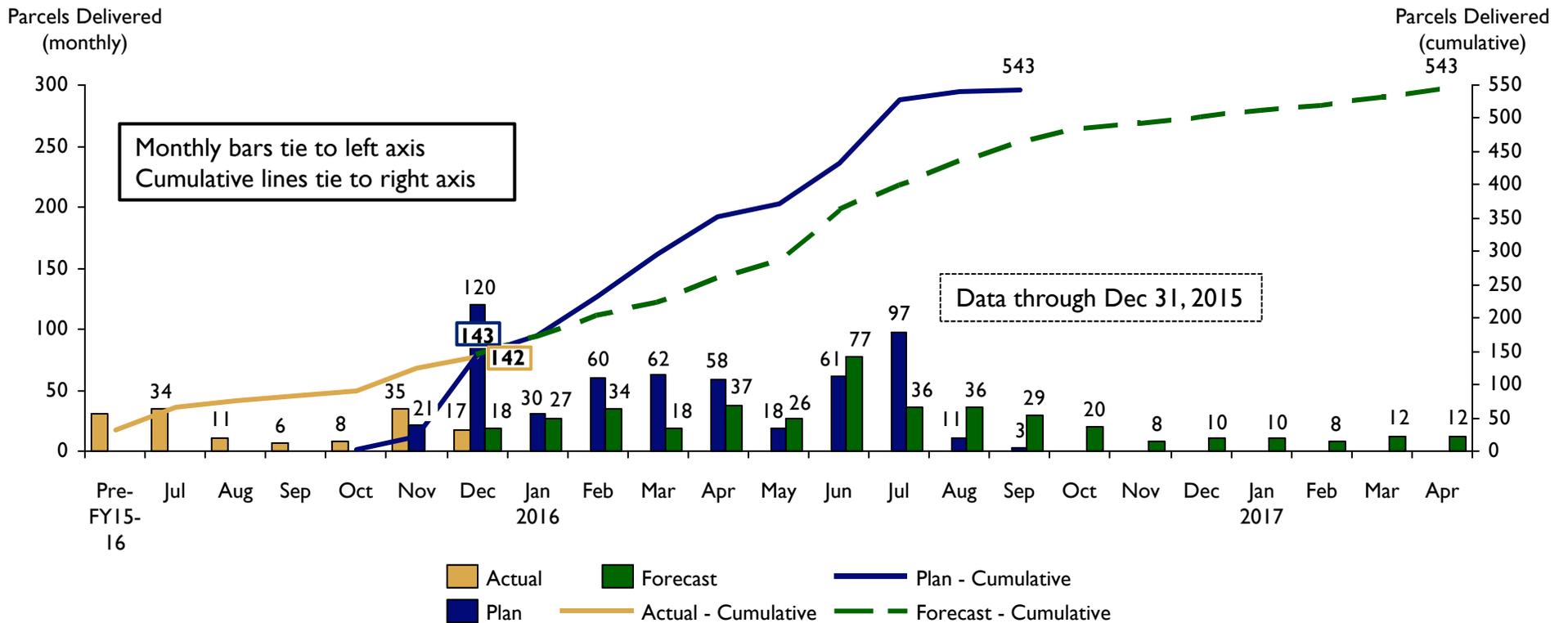
- 28 parcels require relocations, and 3 parcels available to be transferred to DB.

Source: Dec 31, 2015 ROW Weekly Report

ROW – CP2-3 Parcels Delivered to Design-Build by Month

Planned vs. Actual vs. Forecast

CP2-3 - Delivered to DB (in number of parcels)



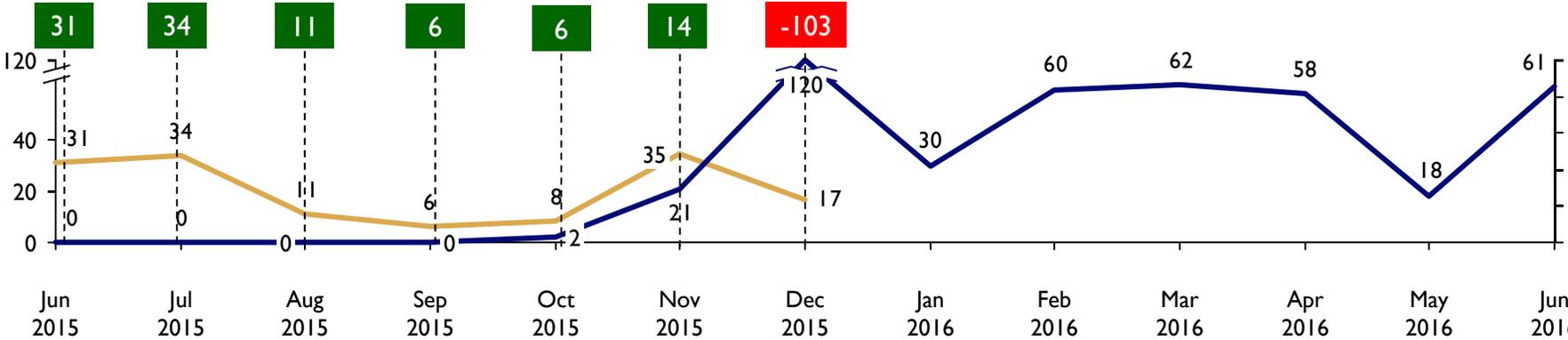
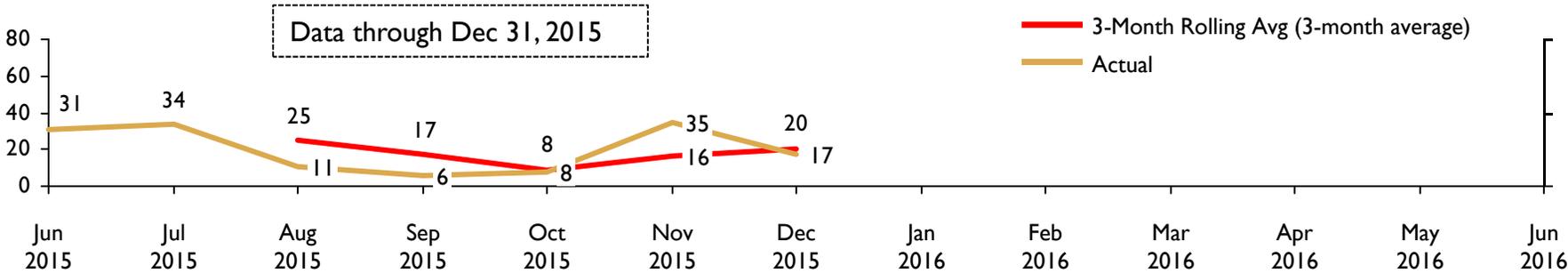
Notes:

1. The "Plan" numbers have been developed as a placeholder until acquisition plan with DB is finalized. Rebaselining should occur in 1st Quarter of 2016.
2. "Forecast": Continually refined based on expected delivery.
3. Total number of parcels will be updated as design changes are approved.

Source: Dec 31, 2015 ROW Weekly Report

ROW – CP2-3 Historic Performance

CP2-3 Performance (in number of parcels)



— Actual — Plan # Actual parcels delivered compared to planned (positive) # Actual parcels delivered compared to planned (negative)

- Notes:
1. Per contract, “planned” to be re-baselined in 1st Quarter of 2016
 2. Contract executed in June 2015; 31 parcels delivered after contract execution

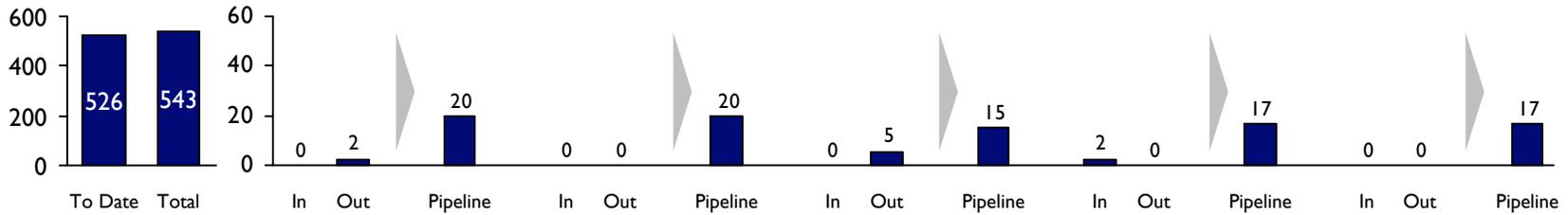
Source: Dec 31, 2015 ROW Weekly Report

ROW – CP2-3 Pipeline by Process (1 out of 4 pages)

Volume of Activity by Process (Flow) - Pipeline

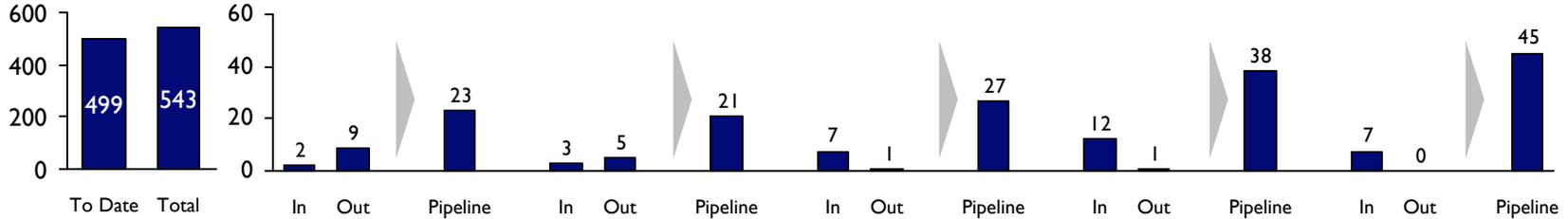
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Appraisal



- Parcels in pipeline a function of pending design refinement submittals, reviews and approvals

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- Parcels in pipeline pending DGS setting Just Compensation

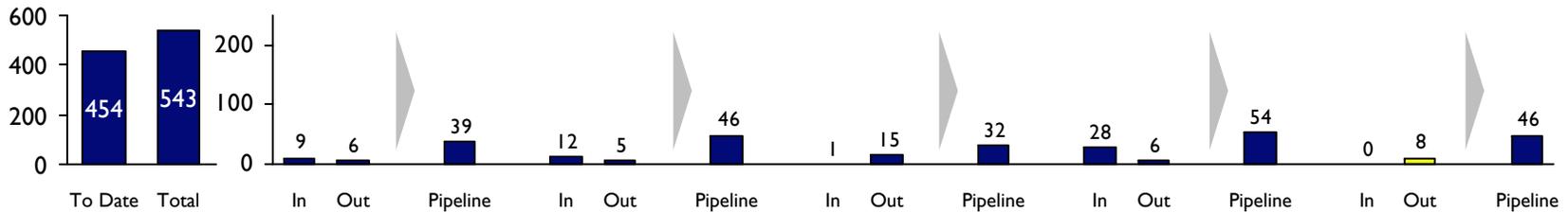
Source: Dec 31, 2015 ROW Weekly Report

ROW – CP2-3 Pipeline by Process (2 out of 4 pages)

Volume of Activity by Process (Flow) - Pipeline

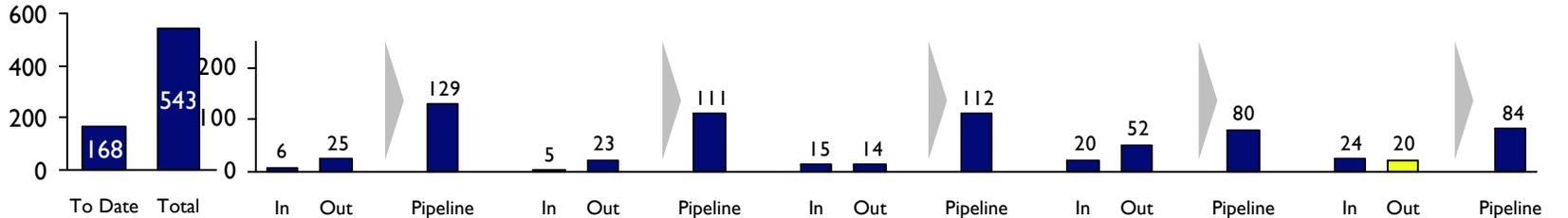


First Written Offer



- Pipeline consists of 25 railroad parcels and 21 non-railroad parcels

Negotiation Acquisition



- 39 signed agreements being processed through escrow with 45 pending offers at property owner decision to sign or enter condemnation

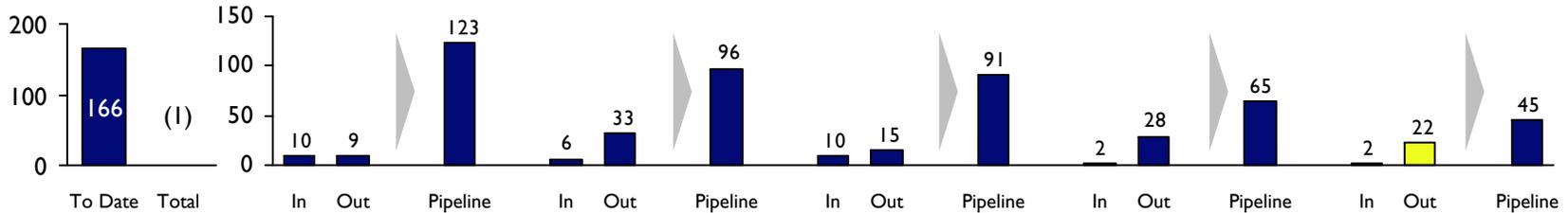
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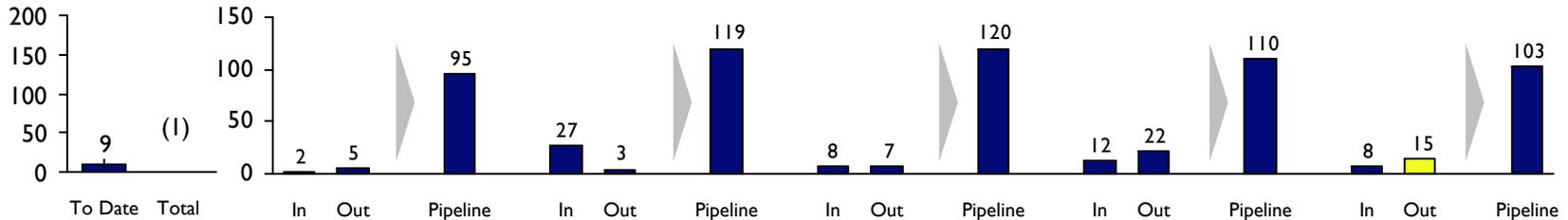


Condemnation



- Pipeline comprised of RONS being processed by CHSRA and ROW consultants and awaiting adoption by PWB.

Eminent Domain



- Pipeline comprised of suits (parcels) at Caltrans legal pending filing with the courts seeking Court Orders of Possession.

(1) Total parcels that may take the condemnation route is unknown

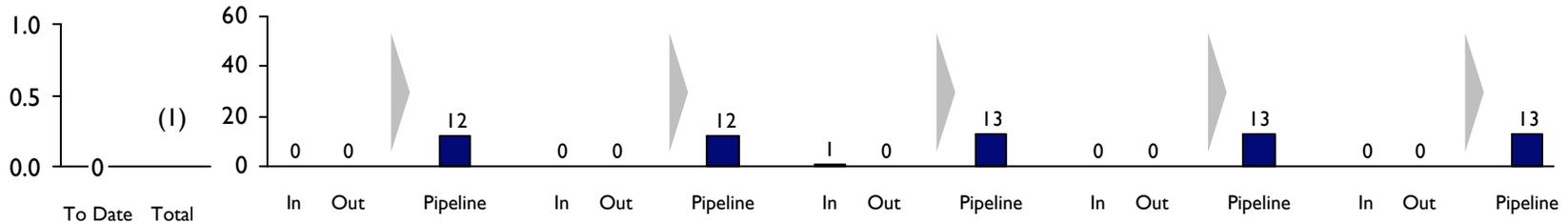
Source: Dec 31, 2015 ROW Weekly Report

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Volume of Activity by Process (Flow) - Pipeline

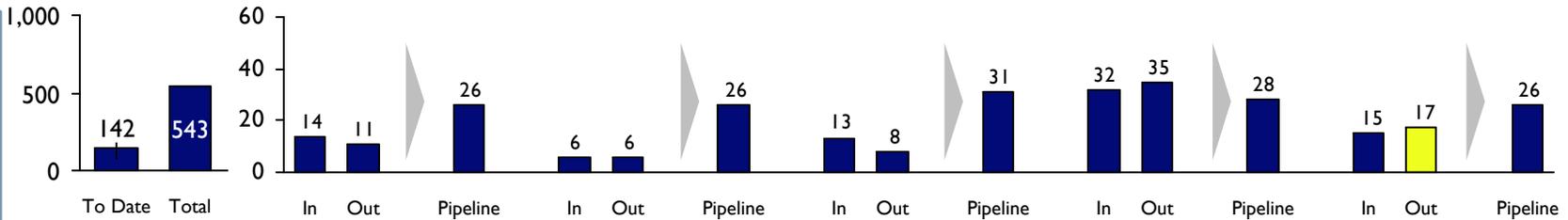
Completion Aug 2015 Sep 2015 Oct 2015 Nov 2015 **Dec 2015**

Public Agency / Railroad



- Current parcel count only includes public parcels with APN's and value. Public Roadway parcels will be defined to add to the total number of distinct parcels.

Delivery



- 15 parcels require relocations, and 11 parcels available to be transferred to DB.

(1) Total number of public parcels to be identified

Source: Dec 31, 2015 ROW Weekly Report

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Environmental Clearance Metrics - Context

- ▶ The following slides track several metrics for each environmental segment/project related to:
 - Schedule and physical percent complete.
 - Key milestones.
 - Actual, planned and forecasted costs-to-completion dates:
 - As of July 2015, costs projections were re-baselined.
 - Starting in September 2015, forecasted costs were based on performance and trends, with planned costs remaining locked.
 - In early 2016 with a revised project control regime, the earned value and forecast costs will be reported monthly.
 - Actual costs are based on invoices received by the Authority. For this reporting period:
 - Program, Bakersfield-Palmdale, Palmdale-Burbank, Burbank-LA and LA- Anaheim actual costs are based on monthly expenditures as of December 31, 2015.
 - For remaining sections, no invoices have been received or have not been approved for payment since October.
- ▶ Environmental Milestone Schedule (page 27) provides an overview for key, upcoming milestones across all environmental segments and projects.
- ▶ The Environmental budgets in this Operations Report take into account all funding sources (Proposition 1A, ARRA, FY10, and Cap and Trade). However, the budget in the Funding Contribution Plan (FCP) is limited to the ARRA and FY10 grants and state match.
- ▶ In future reports, a cross-walk between the FCP and Operations Report will be provided.

Environmental Milestones Schedule (to ROD)

Information as of December 31, 2015

Segment	Progress to Date	Next Steps
San Francisco to San Jose	<ul style="list-style-type: none"> Initial task order for environmental and engineering contractor issued in December for project planning. 	<ul style="list-style-type: none"> Working to refine Purpose & Need and project definition to reflect implementation of blended infrastructure and operations within Caltrain corridor. Continuing coordinating infrastructure analysis with Caltrain to define the project. Developing strategy for complying with NEPA/404/408 Integration MOU. Continuing to analyze design features to achieve travel time goal.
San Jose to CV Wye	<ul style="list-style-type: none"> Initial task order for environmental and engineering contractor issued in December for project planning. 	
Central Valley Wye	<ul style="list-style-type: none"> The regional consultant continues to prepare the Ranch Road to Merced environmental re-exam. Technical reports and Administrative Draft for Central Valley Wye evaluation under development. 	<ul style="list-style-type: none"> Continuing coordination with stakeholders and resource agencies to identify a preferred alternative. Schedule under review to incorporate input from regulatory agencies and extension of CPI north from Ave 17 to Ave 19.
Central Valley Interconnections	<ul style="list-style-type: none"> Initial studies by PG&E completed for critical electrical interconnections for test track. Second phase PG&E study necessary for defining electrical improvements. In February 2016, environmental clearance approach will be decided. 	<ul style="list-style-type: none"> Continuing to coordinate with PG&E on electrical interconnections and upgrades. Field work on biological and cultural resources underway to assess likely environmental impact. Currently behind schedule in defining clearance approach.
HMF	<ul style="list-style-type: none"> In February 2016, environmental clearance approach will be decided. 	<ul style="list-style-type: none"> Will assess schedule performance once approach is finalized.
Bakersfield F St. Station Alignment	<ul style="list-style-type: none"> Technical reports and Administrative Draft for F Street evaluation under development. Design/Build Contractor for CP 2/3 now preparing environmental re-exam for alternative technical concepts. 	<ul style="list-style-type: none"> On-going field biological and cultural surveys. Continuing outreach, community and agency meetings.
Bakersfield to Palmdale	<ul style="list-style-type: none"> The Supplemental Alternatives Analysis will be shared with the Board Spring 2016. Conducting environmental technical studies. 	<ul style="list-style-type: none"> Defining maintenance and operations strategy/locations for clearance. Developing environmental document to eventually select a Preferred Alternative.

Text identified in red indicate change from previous month.

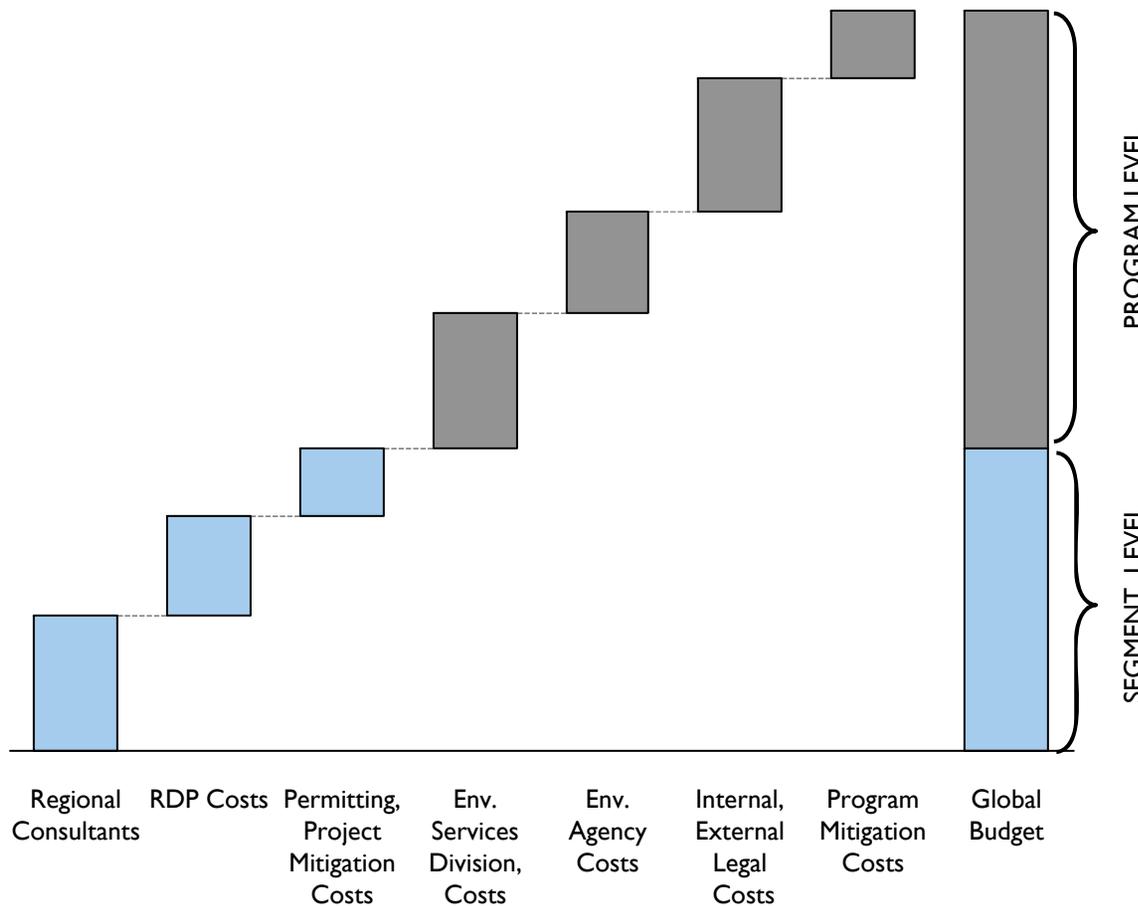
Environmental Milestones Schedule (to ROD)

Information as of December 31, 2015

Segment	Progress to Date	Next Steps
Palmdale to Burbank	<ul style="list-style-type: none"> ▪ Conducting environmental technical studies. ▪ Kicking-off station area planning in Burbank and Palmdale. ▪ With approval from the US Forest Service, geotechnical investigative work has begun in Angeles National Forest. 	<ul style="list-style-type: none"> ▪ Completing station and station area planning. ▪ Developing environmental document to eventually select a Preferred Alternative. ▪ Completing technical studies in winter 2016.
Burbank to LA	<ul style="list-style-type: none"> ▪ The Supplemental Alternatives Analysis will be shared with the Board Spring 2016. ▪ Technical baseline studies are underway. 	<ul style="list-style-type: none"> ▪ Completing station and station area planning for Los Angeles Union Station. ▪ Developing environmental document to eventually select a Preferred Alternative.
LA to Anaheim	<ul style="list-style-type: none"> ▪ The Supplemental Alternatives Analysis will be shared with the Board Spring 2016. ▪ Technical baseline studies are underway. 	<ul style="list-style-type: none"> ▪ Completing station planning, option evaluation and selection in Spring 2016. ▪ Developing environmental document to eventually select a Preferred Alternative.

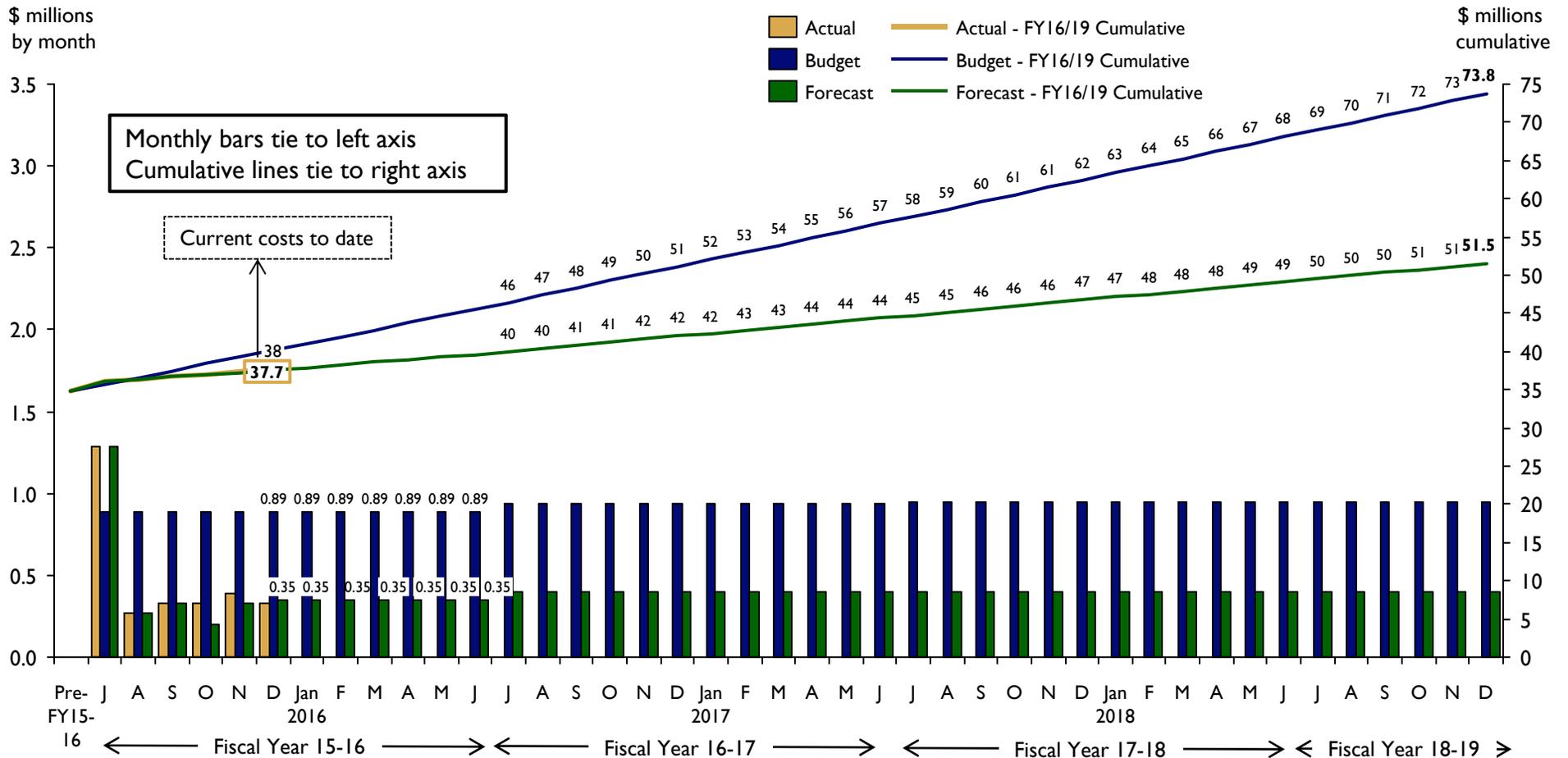
Global Environmental Budget includes activities involved in the scope at the program and segment levels

Cost Categories for Scope and Budget Definition



- | Cost Categories |
|---|
| <ul style="list-style-type: none"> ▪ Regional consultants and Engineering and Environmental consultants costs include project management, outreach, engineering and environmental activities. ▪ RDP costs include management, coordination, and technical reviews. ▪ Permitting and project mitigation costs include obtaining permits required for construction and implementing project-level mitigation commitments. ▪ Authority costs reflect management and staff costs for overseeing environmental program delivery. ▪ Environmental agency costs are costs for agency staff to attend meetings, review technical reports, and provide technical guidance. ▪ Legal costs are costs associated with in-house and outside legal reviews. ▪ Program mitigation costs for costs associated with implementing EIR/EIS program-level mitigation commitments. |

Program Level Budget (Non-Segment Specific Costs)



Source: Based on actual costs through December 2015 and future estimates for Authority Environmental Staff, Resource Agencies, Legal, and Program Mitigation Costs.

Environmental Milestones Schedule (to ROD)

Information through December 2015¹

	Segment	Progress	Complete Purpose & Need Statement		Complete Alternatives Analysis		Board Selection of Preferred Alternative		Publish Draft EIR/EIS		Publish Final EIR/EIS and Obtain ROD		Date EIR/EIS To Be Completed	
			Due Dates	Last Month	Current Month	Last Month	Current Month	Last Month	Current Month	Last Month	Current Month	Last Month	Current Month	Original Target
1	San Francisco to San Jose	Plan Forecast % Complete	Mar-16 Feb-16 65%	Mar-16 Feb-16 65%	Complete Complete 100%	Complete Complete 100%	Jul-16 Jul-16 7%	Jul-16 Jul-16 7%	Jan-17 Jan-17 7%	Jan-17 Jan-17 7%	Nov-17 Nov-17 0%	Nov-17 Nov-17 0%	Nov-17	No Change
2	San Jose to CV Wye	Plan Forecast % Complete	Dec-15 Feb-16 40%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Sep-16 Sep-16 10%	Sep-16 Sep-16 10%	Feb-17 Dec-16 10%	Feb-17 Dec-16 10%	Nov-17 Nov-17 0%	Nov-17 Nov-17 0%	Nov-17	No Change
3	Central Valley Wye (M-F)	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Sep-15 Feb-16 60%	Sep-15 Feb-16 60%	Feb-16 Nov-16 0%	Feb-16 Oct-16 0%	Dec-16 Oct-17 0%	Dec-16 Oct-17 0%	Dec-16	Oct-17
4	CV Electrical Interconnections ²	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Jul-16 Aug-16 80%	Jul-16 Aug-16 80%	Nov-16 Nov-16 0%	Nov-16 Nov-16 0%	Oct-17 Oct-17 0%	Oct-17 Oct-17 0%	Oct-17	No Change
5	HMF	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Apr-16 Apr-16 0%	Apr-16 Apr-16 0%	Sep-16 Sep-16 0%	Sep-16 Sep-16 0%	May-17 May-17 0%	May-17 May-17 0%	May-17	No Change
6	Bakersfield F St. Alignment (F-B) ³	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	May-16 May-16 15%	May-16 May-16 50%	Jul-16 Jul-16 5%	Jul-16 Jul-16 5%	Dec-16 Jan-17 0%	Dec-16 Oct-16 0%	Dec-16	Oct-16
7	Bakersfield to Palmdale	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Jan-16 Jan-16 80%	Jan-16 Feb-16 80%	Oct-16 Oct-16 15%	Oct-16 Oct-16 15%	Feb-17 Feb-17 5%	Feb-17 Feb-17 5%	Nov-17 Nov-17 0%	Nov-17 Nov-17 0%	Nov-17	No Change
8	Palmdale to Burbank	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Aug-16 Aug-16 25%	Aug-16 Nov-16 25%	Mar-17 Mar-17 15%	Mar-17 Mar-17 15%	Nov-17 Nov-17 0%	Nov-17 Nov-17 0%	Nov-17	No Change
9	Burbank to LA	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Jan-16 Jan-16 90%	Jan-16 Feb-16 90%	Mar-17 Oct-16 5%	Mar-17 Oct-16 5%	Jun-17 Jun-17 5%	Jun-17 Jun-17 5%	Nov-17 Nov-17 0%	Nov-17 Nov-17 0%	Nov-17	No Change
10	LA to Anaheim	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Jan-16 Jan-16 85%	Jan-16 Feb-16 88%	Mar-17 Oct-16 15%	Mar-17 Oct-16 15%	Jun-17 Jun-17 5%	Jun-17 Jun-17 5%	Nov-17 Nov-17 0%	Nov-17 Nov-17 0%	Nov-17	No Change

1. Dates identified in red indicate change from previous month.

2. Schedule reflects master plan for testing and commissioning of the HSR train; dates are subject to change pending Authority decision regarding type of environmental documentation needed.

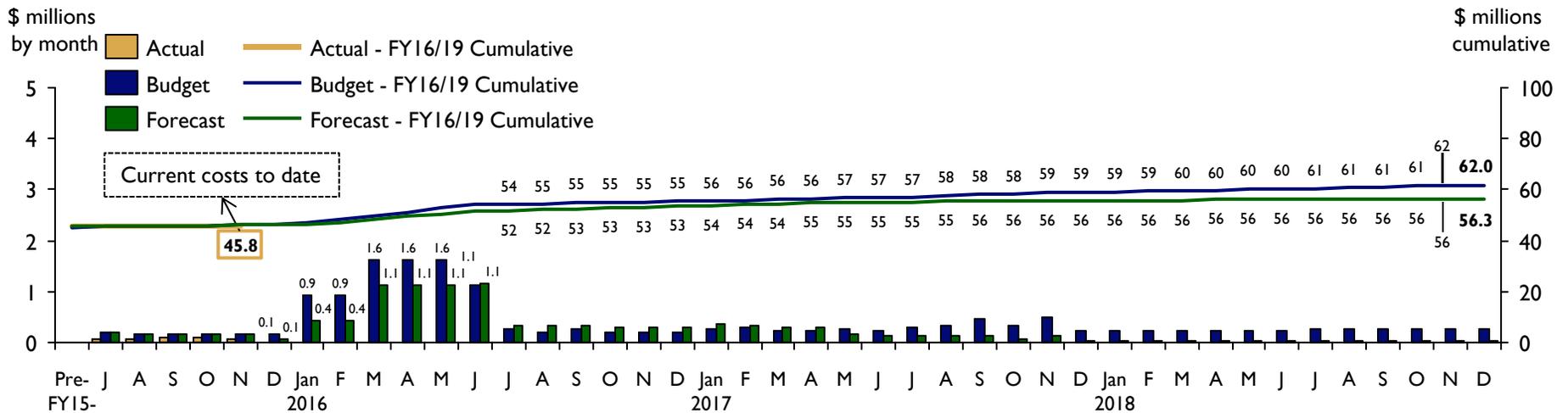
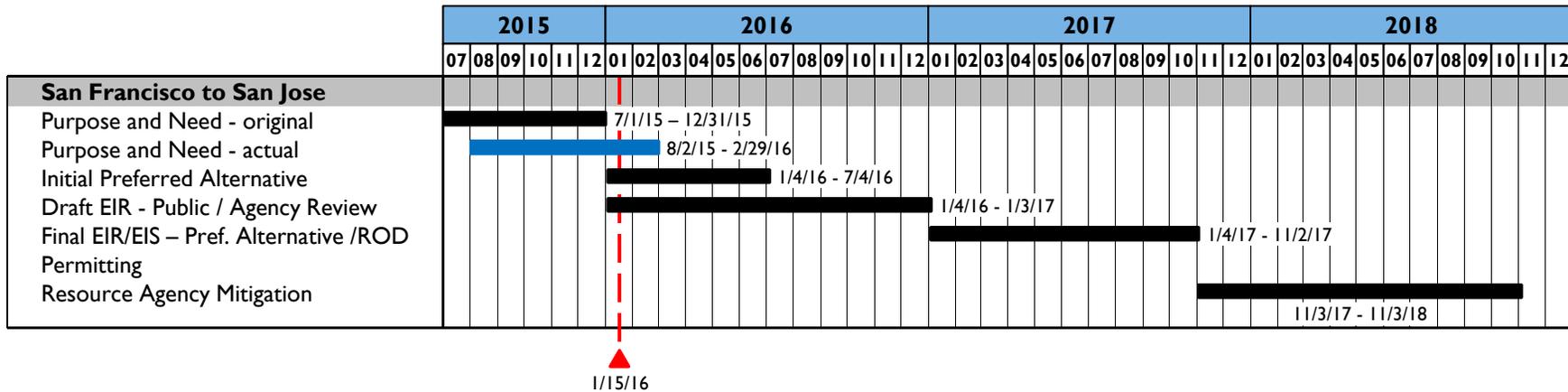
3. For Bakersfield F Street, revised ROD date reflects a “logic” correction to the schedule made by the Regional Consultant.

Environmental Milestone Schedule (to ROD)

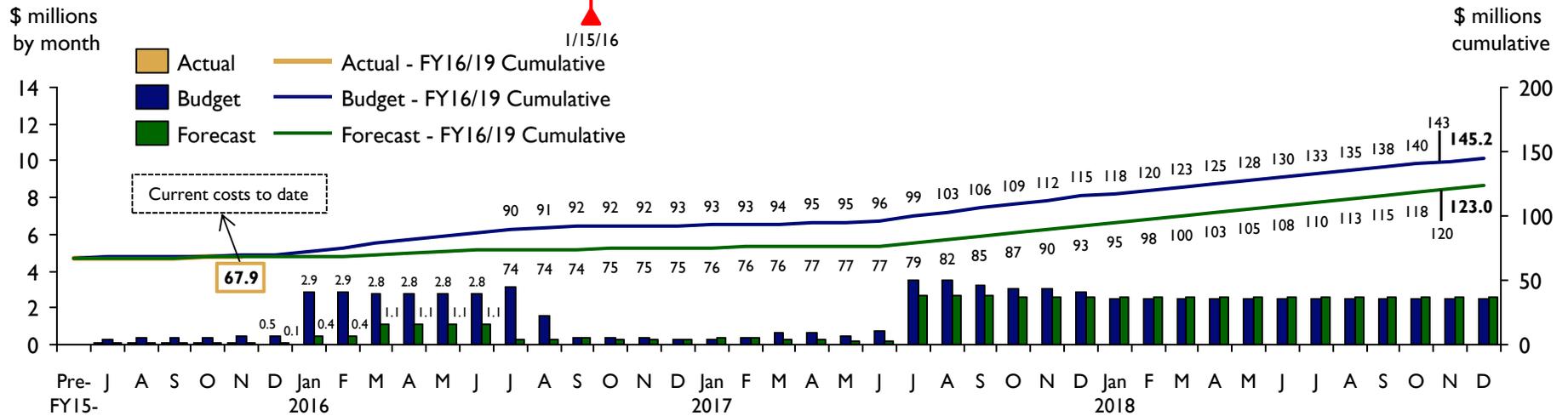
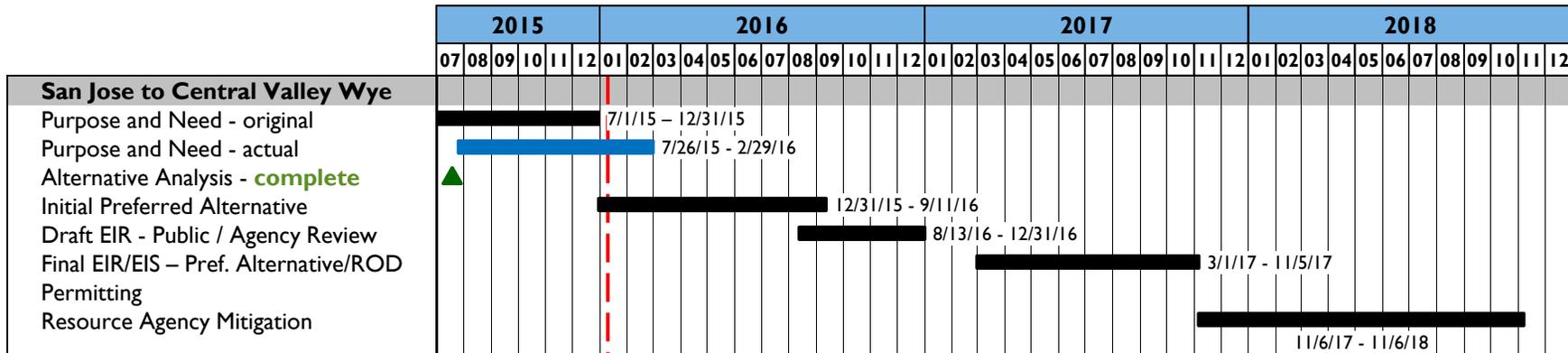
Information through December 2015

Segment	Schedule Status, Delay, and Mitigation Strategies
1 San Francisco to San Jose	No Delay Forecast at this Time
2 San Jose to CV Wye	No Delay Forecast at this Time Authority and FRA have decided to stay with adopted Checkpoint A and Checkpoint B documentation to maintain schedule.
3 Central Valley Wye (M–F)	No Delay Forecast at this Time Date for Draft EIR/EIS now October instead of November 2016. Change due to modified task schedule.
4 CV Electrical Interconnections	No Delay Forecast at this Time Dates are subject to change pending Authority decision regarding type of environmental documentation needed.
5 HMF	No Delay Forecast at this Time Dates are subject to change pending Authority decision regarding type of environmental documentation needed.
6 Bakersfield F Street Alignment (F–B)	No Delay Forecast at this Time Date for Final EIR/EIS now October 2016 instead of January 2017 due to modified task schedule.
7 Bakersfield to Palmdale	Current Delay for Completing Alternatives Analysis Milestone Rationale for Delay: Date adjusted to coincide with completion of document and ready for final presentation to the Authority Board Consequence: Completion of Alternatives Analysis will be delayed by one month. Mitigation: No schedule mitigation is required.
8 Palmdale to Burbank	Current Delay for Identifying Initial Preferred Alternative Milestone Rationale for Delay: Delay because of modified task schedule. Consequence: Identification of the initial preferred alternative will be delayed by three months. Mitigation: No schedule mitigation is required.
9 Burbank to LA	Current Delay for Completing Alternatives Analysis Milestone Rationale for Delay: Date adjusted to coincide with completion of document and ready for final presentation to the Authority Board Consequence: Completion of Alternatives Analysis will be delayed by one month. Mitigation: No schedule mitigation is required.
10 LA to Anaheim	Current Delay for Completing Alternatives Analysis Milestone Rationale for Delay: Date adjusted to coincide with completion of document and ready for final presentation to the Authority Board Consequence: Completion of Alternatives Analysis will be delayed by one month. Mitigation: No schedule mitigation is required.

San Francisco to San Jose



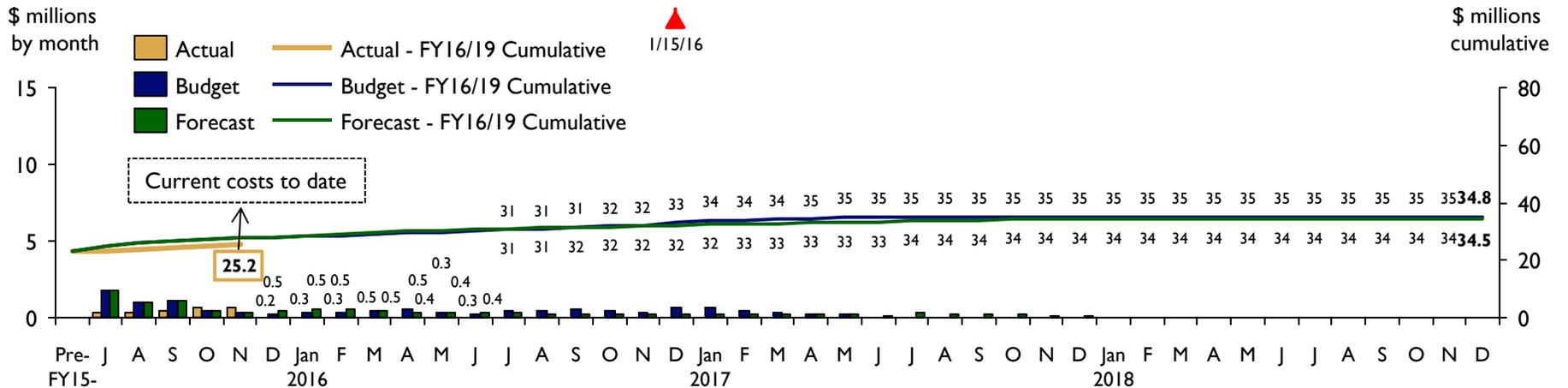
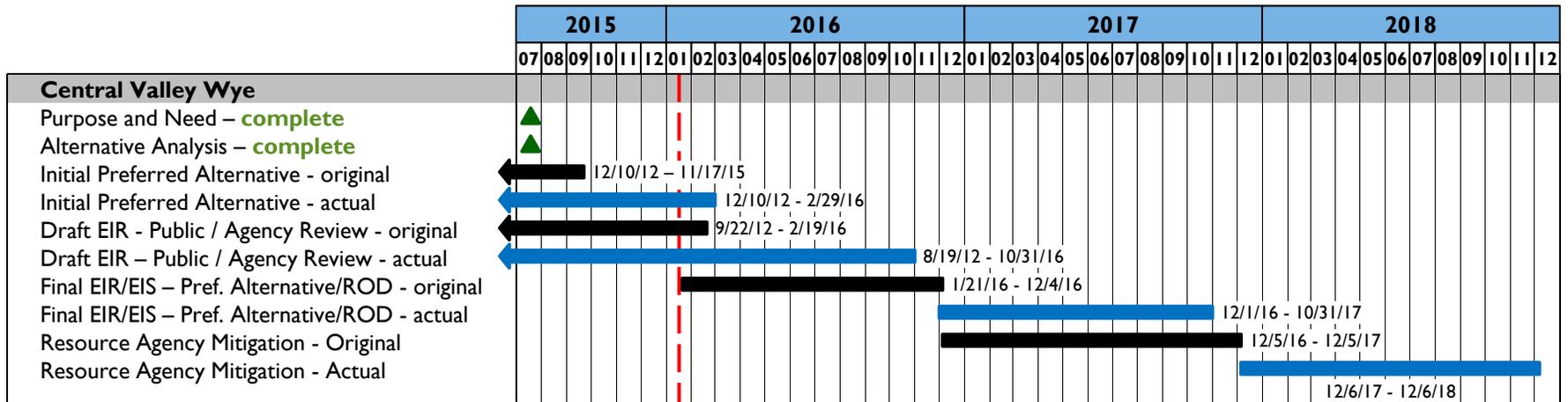
San Jose to Central Valley Wye



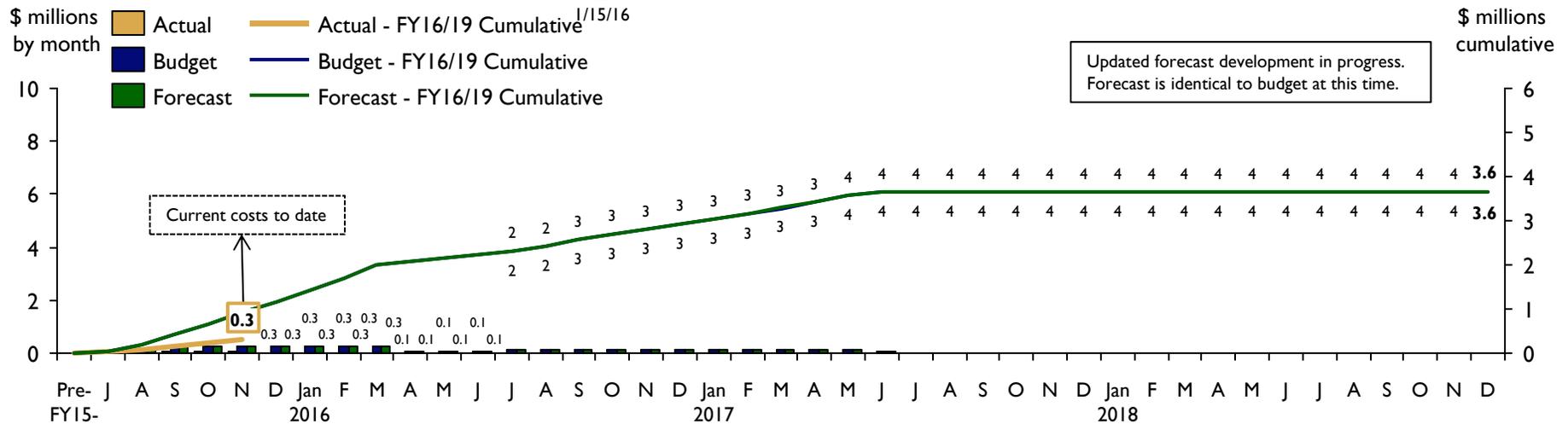
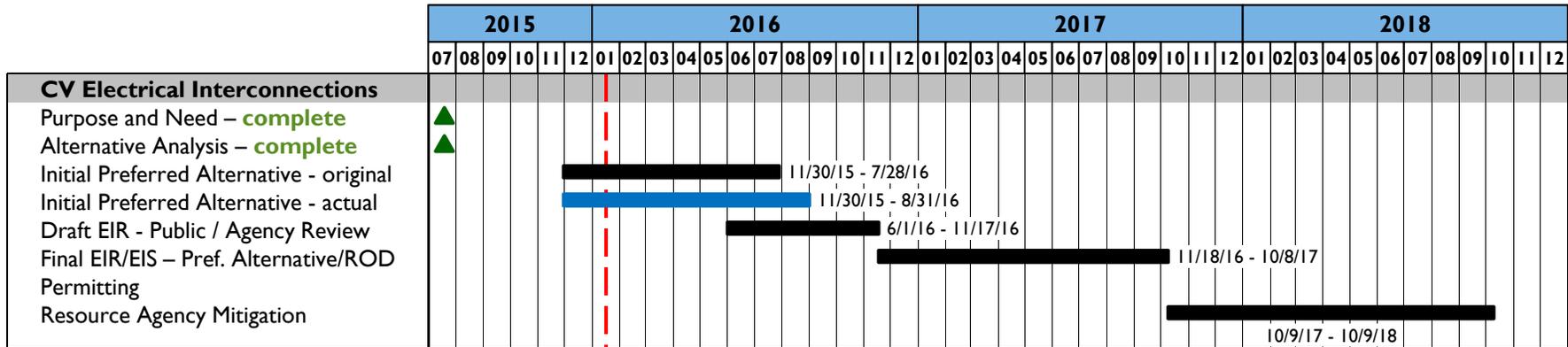
- Notes:
- 1) All estimates are preliminary and subject to change.
 - 2) Jul. – Nov. 2015 actuals for RDP only. Forecast based on Dec. 2015 estimate through Dec. 2017.
 - 3) Habitat Mitigation included.

Source: Based on actual costs and future estimates for the RC and RDP.

Central Valley Wye



Central Valley Electrical Interconnections



Notes:

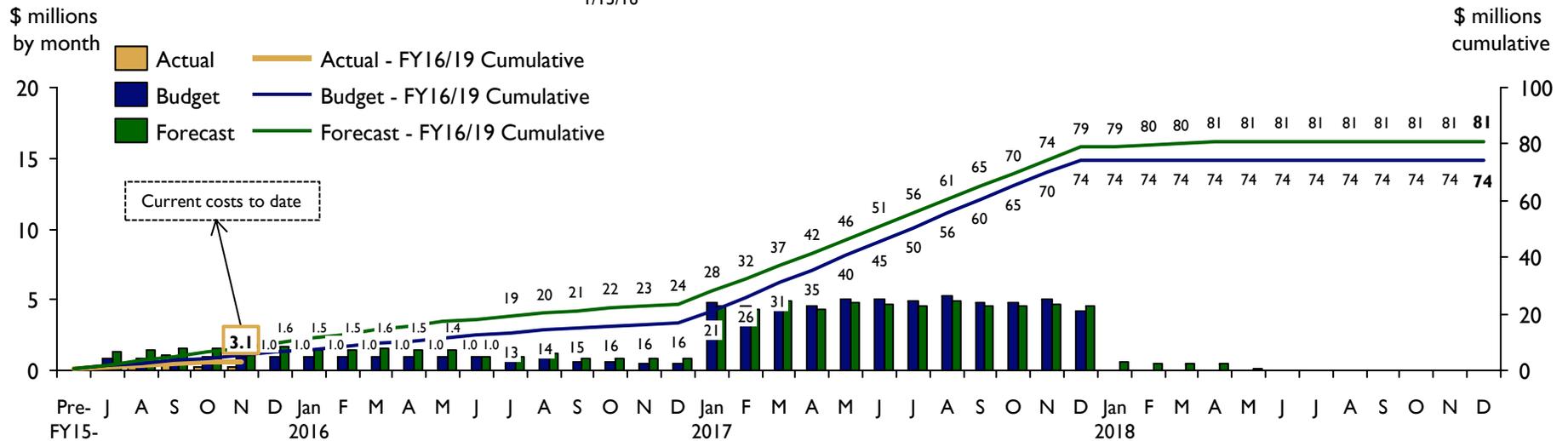
- 1) All estimates are preliminary and subject to change. Environmental clearance approach under review.
- 2) At this time, no habitat mitigation assumed in estimate.
- 3) Includes actual RDP costs thru Nov. 2015; forecast includes RDP and RC Dec. 2015 through Dec. 2018.
- 4) Purpose and Need & Alternatives analysis completed prior to Jul. 1, 2015.

Source: Based on actual costs and future estimates for the RC and RDP.

Bakersfield F Street Station Alignment

	2015												2016												2017												2018											
	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12						
Bakersfield F Street Alignment																																																
Purpose and Need – complete	▲																																															
Alternative Analysis – complete	▲																																															
Initial Preferred Alternative	7/1/15 - 5/10/16																																															
Draft EIR - Public / Agency Review	7/1/15 - 7/12/16																																															
Final EIR/EIS – Pref. Alt./ROD - original	6/21/16 - 12/31/16																																															
Final EIR/EIS – Pref. Alt./ROD - actual	6/21/16 - 10/29/16																																															
Resource Agency Mitigation	11/1/16 - 1/1/18																																															

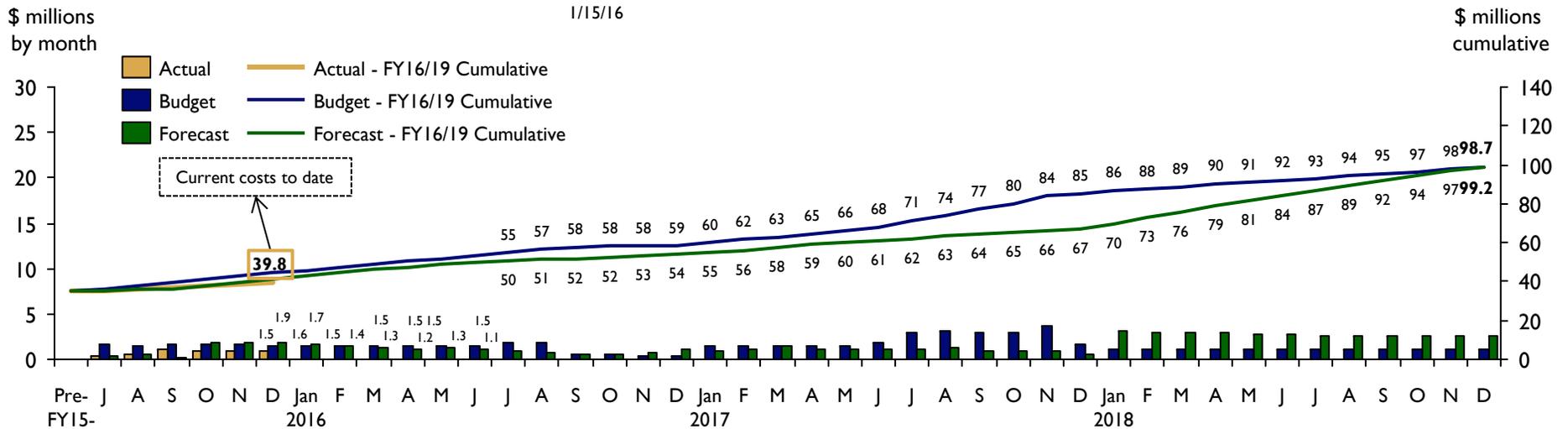
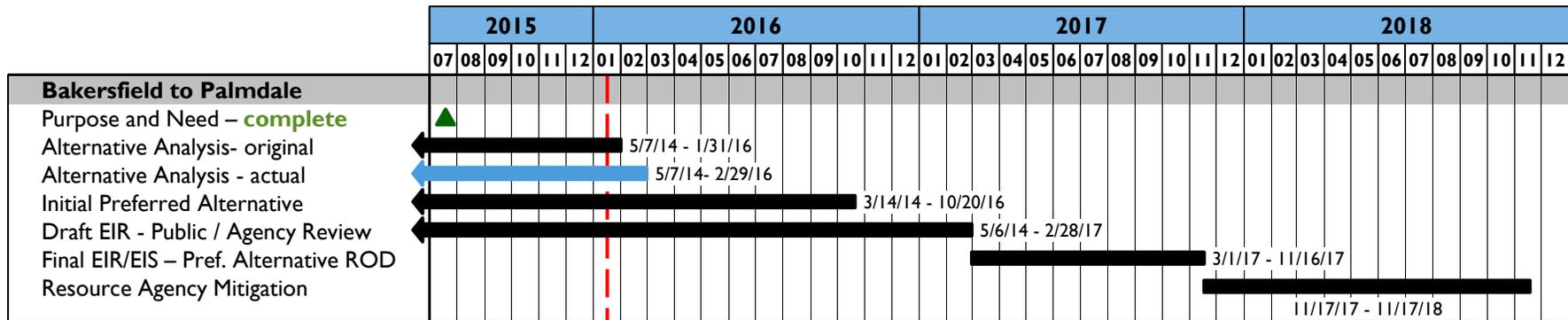
1/15/16



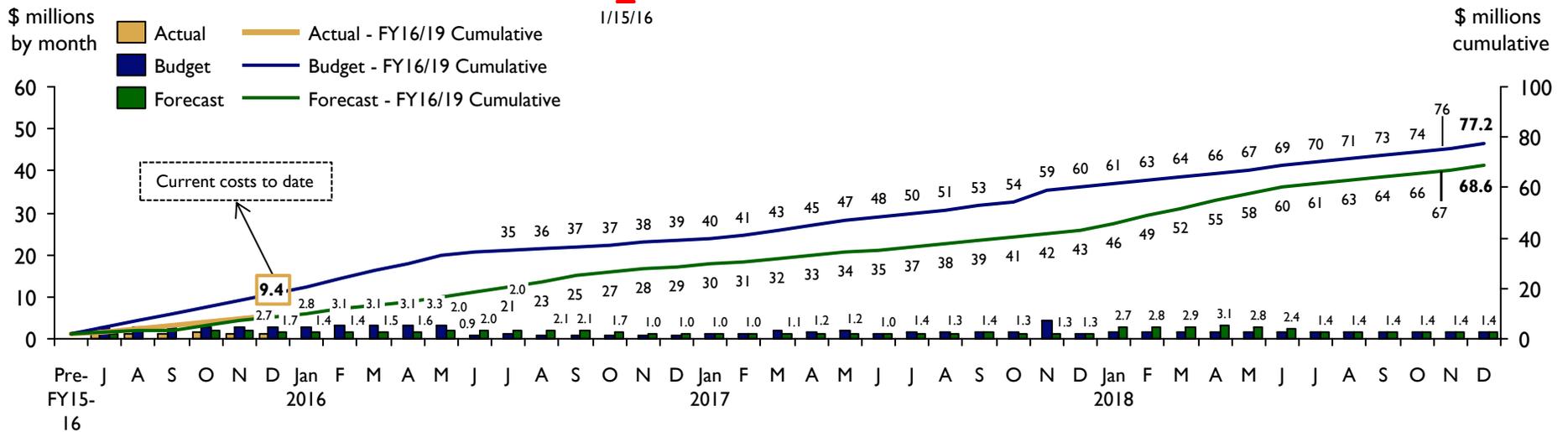
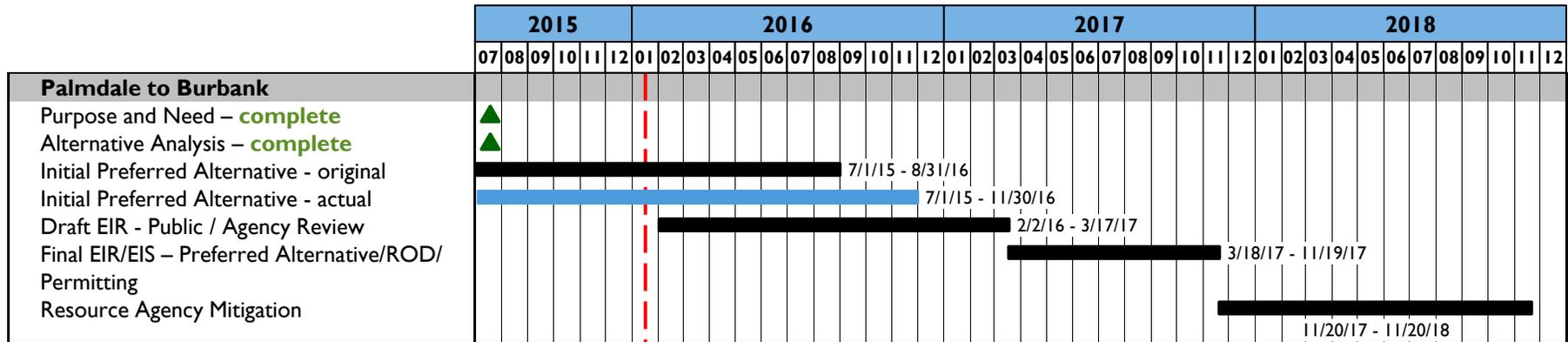
- Notes:
- 1) All estimates are preliminary and subject to change.
 - 2) Habitat Mitigation included for all of Fresno to Bakersfield.
 - 3) Includes actual RDP costs thru Nov. 2015 and forecasted RC costs Nov. 2015 forward.
 - 4) Purpose and Need & Alternatives analysis completed prior to Jul. 1, 2015.

Source: Based on actual costs and future estimates for the RC and RDP.

Bakersfield to Palmdale



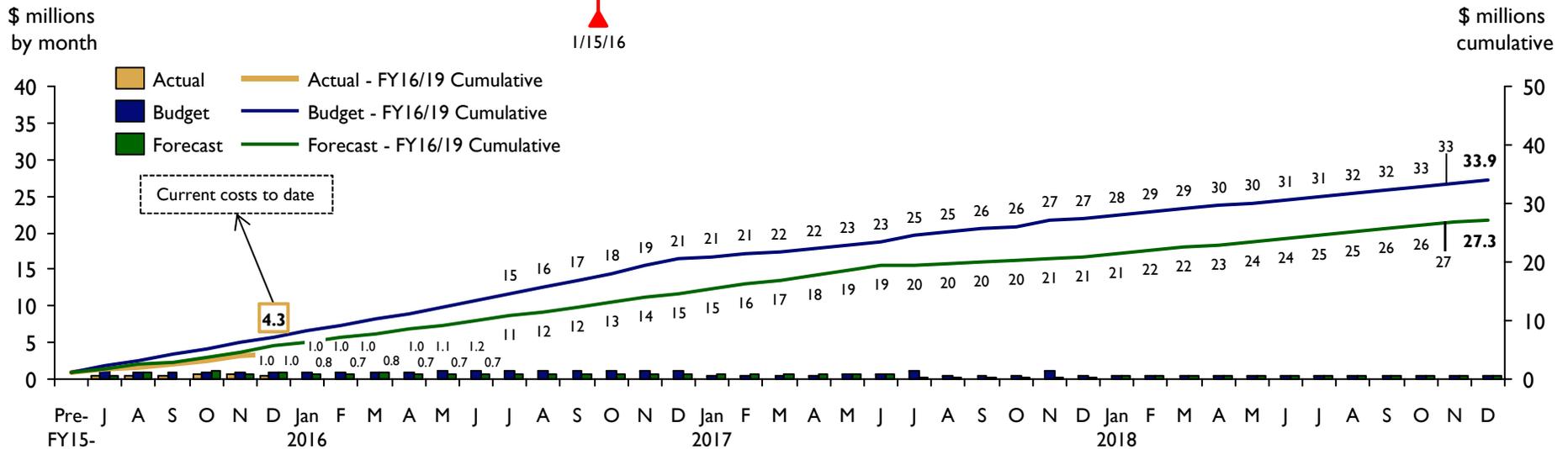
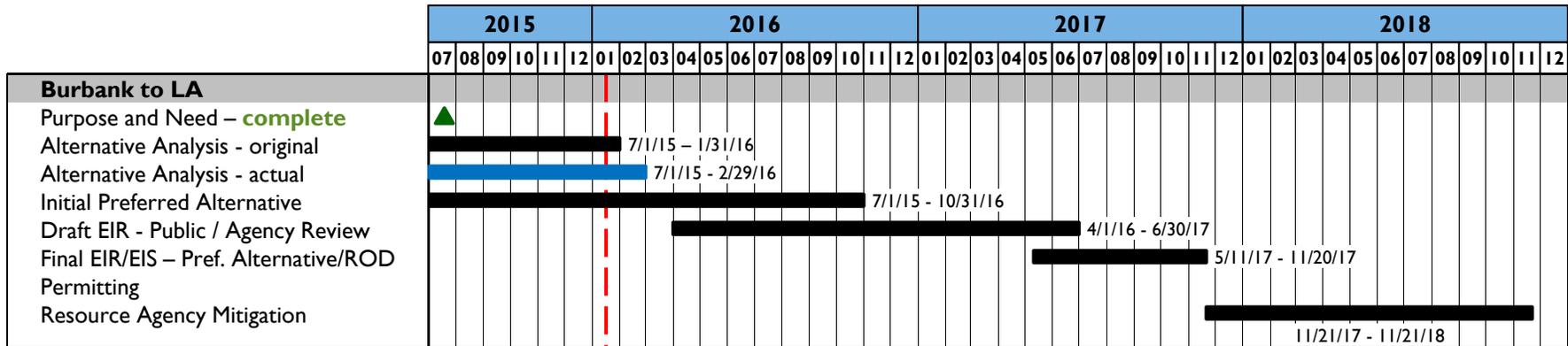
Palmdale to Burbank



- Notes:
- 1) All estimates are preliminary and subject to change.
 - 2) Habitat Mitigation included.
 - 3) Purpose and Need & Alternatives analysis completed prior to Jul. 1, 2015.

Source: Based on actual costs and future estimates for the RCs and RDP.

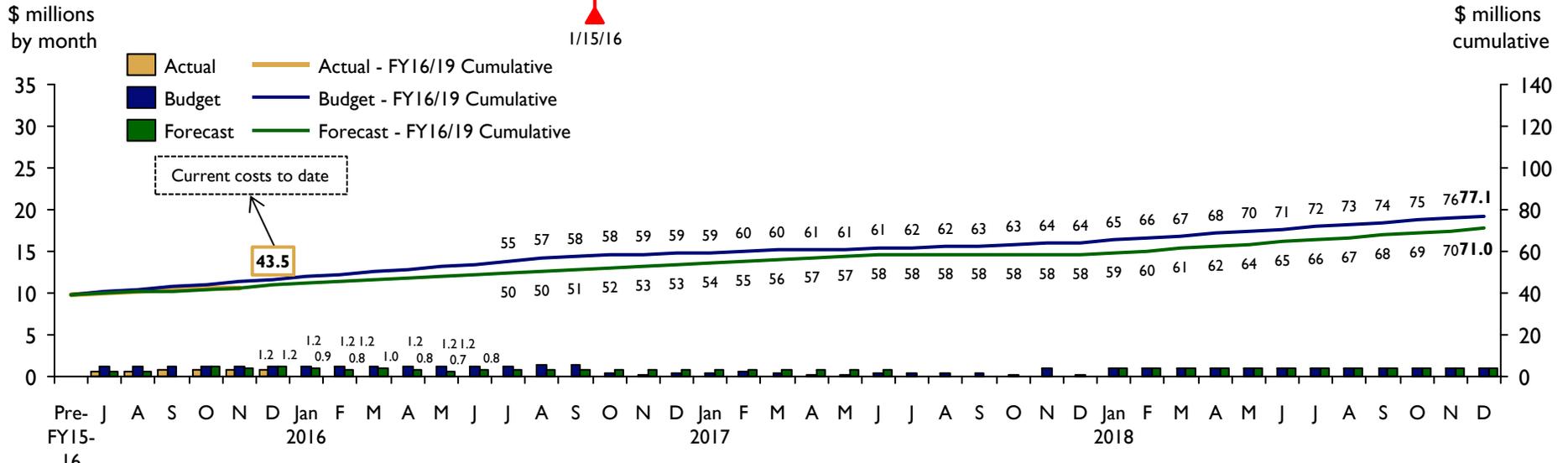
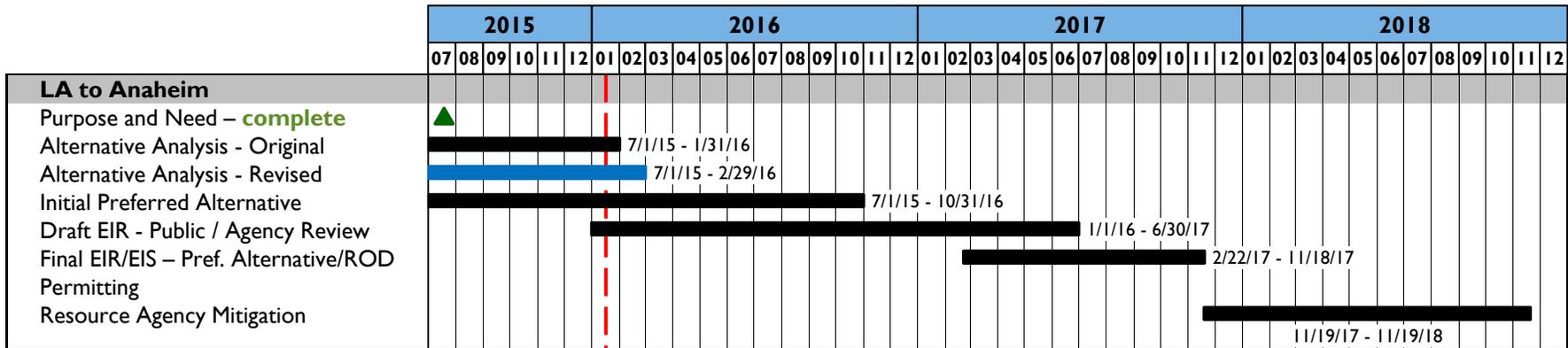
Burbank to LA



- Notes:
- 1) All estimates are preliminary and subject to change.
 - 2) Habitat Mitigation included.
 - 3) Purpose and Need analysis completed prior to Jul. 1, 2015.

Source: Based on actual costs and future estimates for the RCs and RDP.

LA to Anaheim



- Notes:
- 1) All estimates are preliminary and subject to change.
 - 2) Habitat Mitigation included.
 - 3) Purpose and Need analysis completed prior to Jul. 1, 2015.

Source: Based on actual costs and future estimates for the RCs and RDP.

4-month milestones look-ahead – all segments/projects

Milestone	Segment	Due Date	% Completion	Status
Initial Preferred Alternative	Central Valley Wye	February 2016 ¹	60%	Late - Need LEDPA determination
Alternatives Analysis	Bakersfield to Palmdale	February 2016 ²	80%	On Target
Alternatives Analysis	Burbank to LA	February 2016 ²	90%	On Target
Alternatives Analysis	LA to Anaheim	February 2016 ²	88%	On Target
Initial Preferred Alternative	Bakersfield F Street Station Alignment	May 2016	50%	On-Target

Notes:

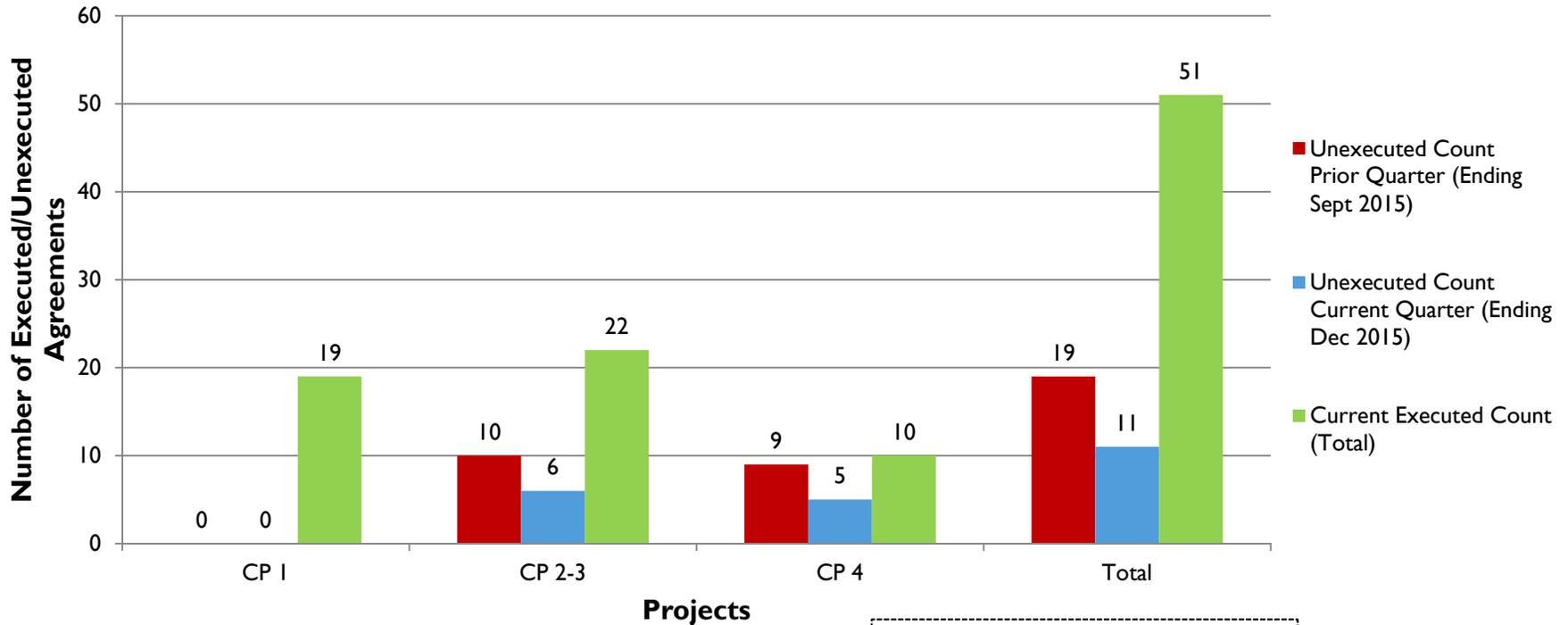
¹Identification of the Initial Preferred Alternative is still under discussion with interested stakeholders and regulatory agencies.

²Alternatives Analysis for Bakersfield-Palmdale, Burbank-Los Angeles, and Los Angeles-Anaheim to be presented to Board in Spring 2016.

Agenda

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CP1, CP2-3, and CP4 Executed and Unexecuted Agreements



Actual data through Dec 31, 2015

Notes:

28 total CP2-3 agreements were previously expected to be executed. Kings County, Angiola Water District, and Deer Creek Storm Water District agreements not expected to be executed.

15 total CP4 agreements to be executed.

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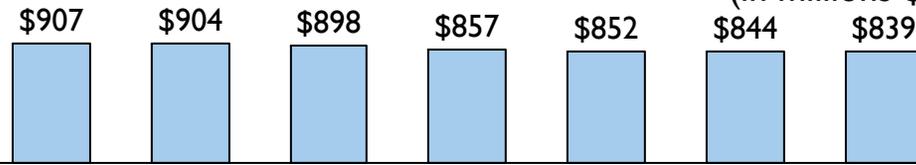
Contract Management Metrics - Context

- ▶ There are 2 contract management metrics included:
 - Contingency Value
 - This value is based on remaining contingency as a percentage of the remaining contract balance
 - Expenditure Schedule
 - Earned value refers to total invoices to date
 - Planned value refers to forecasted invoices to date
- ▶ Contract management metrics for CPI and CP2-3 are included
- ▶ Updates to the report will be made monthly
 - In October 2015, cut-off date for data reporting was adjusted to the end of the prior month

CP1 Contract Management – Contingency Value

CPI – Contract Balance Remaining

(in millions \$)



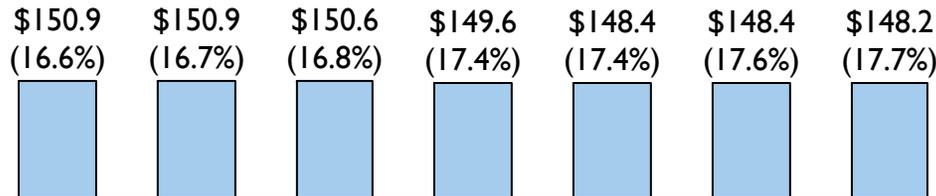
End of FY14-15 Jul 2015 Aug 2015 Sep 2015 Oct 2015 Nov 2015 Dec 2015 Jan 2016 Feb 2016 Mar 2016 Apr 2016 May 2016 Jun 2016

If remaining contingency against amount of contract / work left falls below 10%, corrective action may be necessary.

CPI – Contingency Balance Remaining

(millions \$)

(% of contract balance remaining)



End of FY14-15 Jul 2015 Aug 2015 Sep 2015 Oct 2015 Nov 2015 Dec 2015 Jan 2016 Feb 2016 Mar 2016 Apr 2016 May 2016 Jun 2016

Notes:

1. Contract balance only accounts for approved invoices in determining contract balance, so this number may not reconcile with "earned value" in schedule performance index metric

2. Based upon the amount of CP I work remaining, both the remaining contingency balance and the contingency percentage, measured against the contract balance remaining, fall within the established contingency envelope of the project

Source: January 15, 2015

CPI Performance Metric Report

CP1 Contract Management Raw Data: Contingency Value

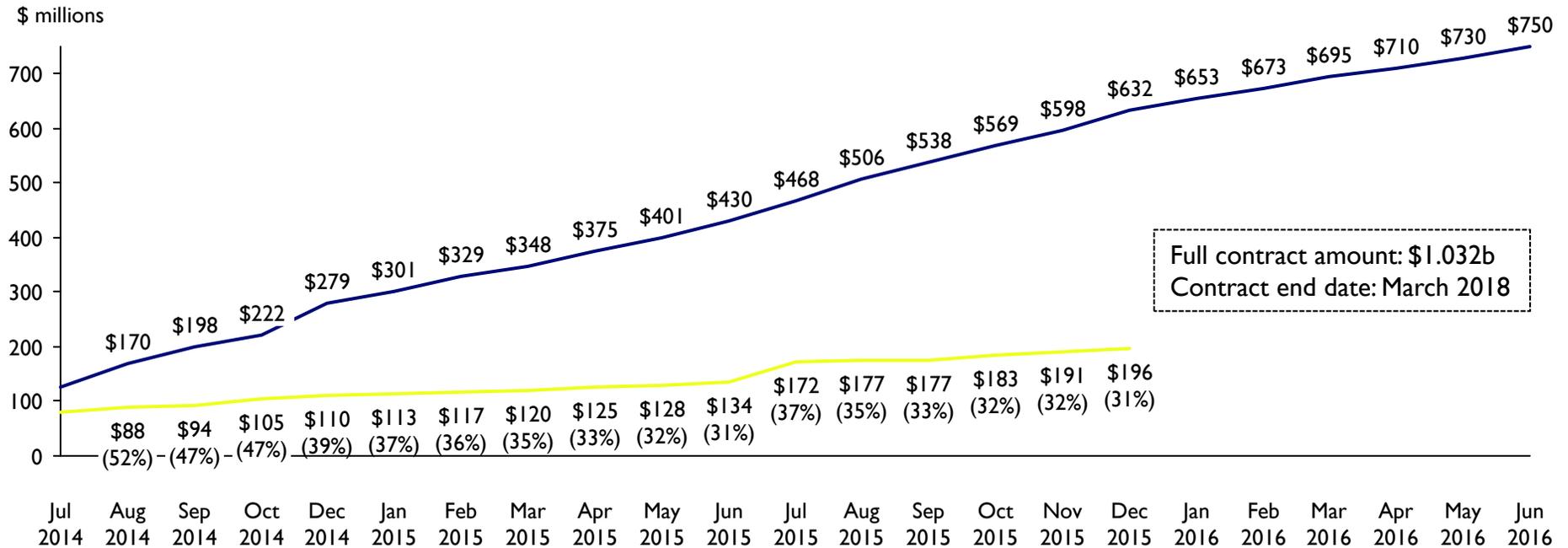
CPI – Contingency (\$ millions)

	End of FY 14-15	July 2015	Aug 2015	Sept 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	June 2016
Contract Balance Remaining	\$906.8m	\$904.2m	\$898.2m	\$857.4m	\$851.7m	\$843.9m	\$838.9m						
Contingency	\$160m	\$160m	\$160m	\$160m	\$160m	\$160m	\$160m						
Change Orders (from contingency)	\$9.1m	\$0	\$0.3m	\$1.0m	\$1.2m	\$0.02m	\$0.2m						
Contingency Balance Remaining	\$150.9m	\$150.9m	\$150.6m	\$149.6m	\$148.4m	\$148.4m	\$148.2m						
Contingency %	16.6%	16.7%	16.8%	17.4%	17.4%	17.6%	17.7%						

Source: January 15, 2015
CPI Performance Metric Report

CP1 Contract Management – Schedule Performance Index

CPI Schedule – Total Planned Value of Contract Earned (in millions \$)



— Planned Value (forecasted value of contract earned)
— Earned Value/Invoiced to Date (actual value of contract earned)

Notes:

1. No report produced in November 2014
2. The increase in the CPI earned value during the August 2015 pay period (July 2015 data shown above) is primarily a result of revising the way the Contractor is compensated for administrative overhead incurred to date
3. Earned value flat from August to September 2015 because data reporting date was moved up in October 2015 creating a short period between data reporting dates in September and October 2015

Source: January 15, 2015
CPI Performance Metric Report

CP1 Contract Management Raw Data: Schedule Performance Index

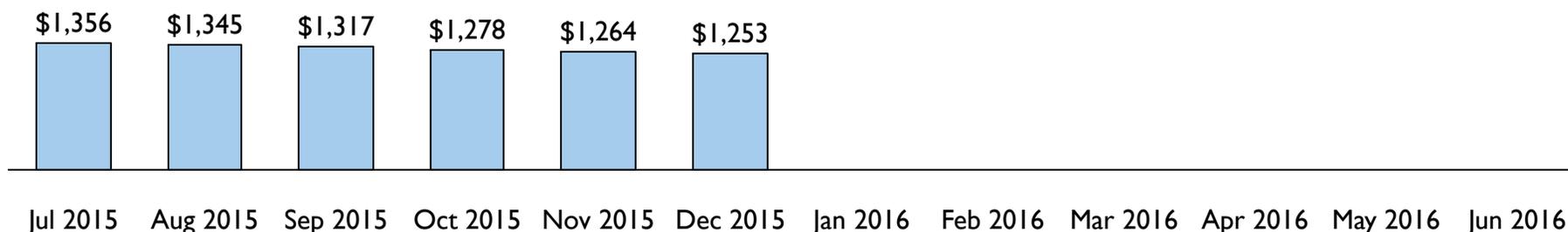
CPI – Schedule (millions \$)

	End of FY 14-15	July 2015	Aug 2015	Sept 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	June 2016
Earned Value/ Invoiced to Date	\$134.4m	\$171.5m	\$176.5m	\$176.5m	\$183.4m	\$191.2m	\$196.3m						
Planned Value	\$430.3m	\$468.0m	\$505.8m	\$538.3m	\$568.9m	\$597.5m	\$631.8m						
Schedule Performance Index	31%	37%	35%	33%	32%	32%	31%						

Source: January 15, 2015
CPI Performance Metric Report

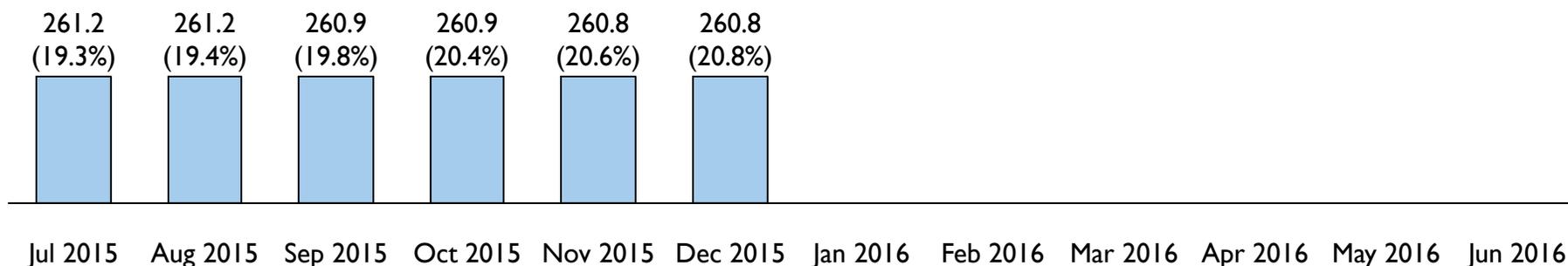
CP2-3 Contract Management – Contingency Value

CP2-3 – Contract Balance Remaining
(in millions \$)



If remaining contingency against amount of contract / work left falls below 10%, corrective action may be necessary.

CP2-3 – Contingency Balance Remaining
(millions \$)
(% of contract balance remaining)



Notes: Contract balance only accounts for approved invoices in determining contract balance, so this number may not reconcile with "earned value" in schedule performance index metric

Source: January 15, 2015
CPI Performance Metric Report

CP2-3 Contract Management Raw Data: Contingency Value

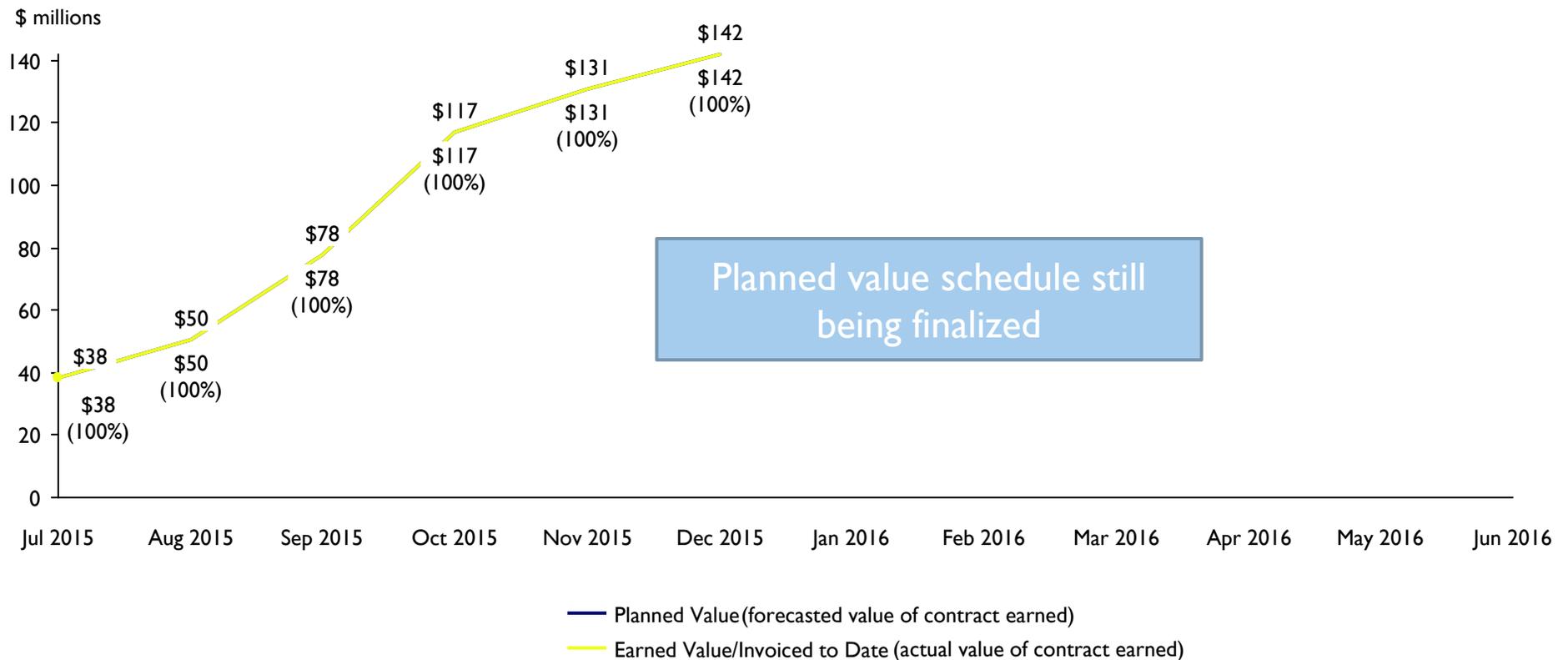
CP2-3 – Contingency (millions \$)

	July 2015	Aug 2015	Sept 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	June 2016
Contract Balance Remaining	\$1,356m	\$1,345m	\$1,317m	\$1,278m	\$1,264m	\$1,253m						
Contingency	\$261.2m	\$261.2m	\$261.2m	\$261.2m	\$261.2m	\$261.2m						
Change Orders (from contingency)	\$0	\$0	\$0.3m	\$0	\$0.1m	\$0.0m						
Contingency Balance Remaining	\$261.2m	\$261.2m	\$260.9m	\$260.9m	\$260.8m	\$260.8m						
Contingency %	19.3%	19.4%	19.8%	20.4%	20.6%	20.8%						

Source: January 15, 2015
CPI Performance Metric Report

CP2-3 Contract Management – Schedule Performance Index

CP2-3 Schedule – Total Planned Value of Contract Earned (in millions \$)



Notes: Total amount earned refers to progress on the schedule, not approved contract invoices

Source: January 15, 2015
CPI Performance Metric Report

CP2-3 Contract Management Raw Data: Schedule Performance Index

CP2-3 – Schedule (millions \$)

	July 2015	Aug 2015	Sept 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	June 2016
Earned Value/ Invoiced to Date	\$38.1m	\$50.4m	\$77.7m	\$116.9m	\$130.6m	\$141.9m						
Planned Value	\$38.1m	\$50.4m	\$77.7m	\$116.9m	\$130.6m	\$141.9m						
Schedule Performance Index	100%	100%	100%	100%	100%	100%						

Source: January 15, 2015
CPI Performance Metric Report

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Finance/Budget Metrics – Context

- ▶ Metrics organized by:
 - Summary of current fiscal environment
 - FY 2015-16 finance/budget data, which includes ROW, planning, environmental and construction

- ▶ For FY 2015-16, this report presents:
 - Budget expenditures: based on FCP budget
 - Actual expenditures: incorporated each month
 - Forecasts: will shift each month and align with FY15-16 forecast from the F&A Capital Outlay Report

- ▶ All data shown is at the end of each month
 - Numbers used reflect actual expenditures in the months they occur and may include adjustments from published versions of capital outlay reports
 - There is a 1-month lag to produce the F&A Capital Outlay Reports, which is the source of the data
 - For example, a July F&A Capital Outlay Report includes financial data through May

The Authority has spent 16.2% of FY15-16 budget, 37.6% of the federal ARRA fund and 100% of C&T fund

FY15-16 Expenditures to Date* (Data as of December 2015)

Total appropriation includes some funding for Phase II planning and FY15/16 C&T creating a difference with the total budget below.

Total Appropriation	FY15-16 Budget		Expenditures to Date		Expenditures - % of Budget	
	Nov 30	Dec 31	Nov 30	Dec 31	Nov 30	Dec 31
\$7.292b	\$1.74b	\$1.81b	\$0.235b	\$0.293b	13.5%	16.2%

*F&A Capital Outlay Report, Feb 2016

** Budget increased from \$1.74b for Jan-16 Ops Report to \$1.81b for Feb-16 Ops Report, a total of \$63M, due to the conditional approval of Annual Work Plan 2 (AWP2) for Parsons Brinckerhoff, the Authority's Rail Delivery Partner. AWP2 is for work for Jan-Dec, 2016, of which \$63M is budgeted for Jan-June, 2015, increasing the budget for FY 15-16 by the same amount.

Total Expenditures to Date*

(Data as of December 2015)

ARRA expenditures are 37.6% of federal ARRA grant funds and 15.1% of \$6.34b total budget

	TOTAL		Planning		Construction	
	Budget	Expended	Budget	Expend to Date	Budget	Expend to Date
ARRA Grant*	\$2.553b	\$0.96b	\$0.322b	\$0.303b	\$2.231b	\$0.654b
FY10 Grant	\$0.928b	\$-	\$-	\$-	\$0.928b	\$-
PROP IA**	\$2.563b	\$0.154b	\$0.192b	\$0.154b	\$2.372b	\$-
LOCAL	\$0.052b	\$-	\$0.052b	\$-	\$-	\$-
C&T (FY14/15 only)*	\$0.250b	\$0.250b	\$0.059b	\$0.059b	\$0.191b	\$0.191b
Total	\$6.347b	\$1.364b	\$0.624b	\$0.516b	\$5.722b	\$0.845b

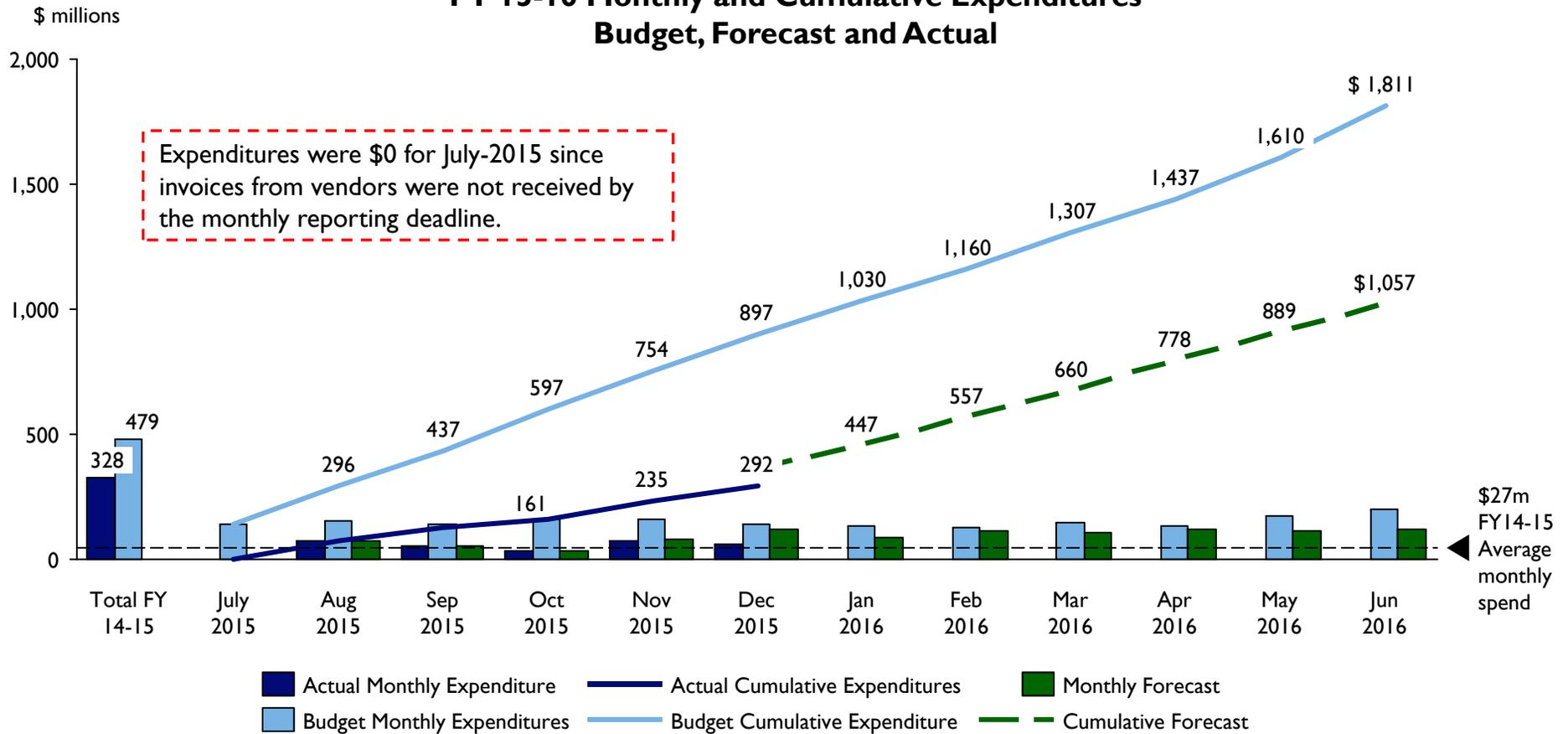
*Source: F&A Capital Outlay Report, Feb 2016 – balance subject to change due to pending approval of tapered match and federal reimbursements

**There is a total of \$2.8b in Prop IA appropriations, but the budgeted total excludes \$250m that were supplanted by C&T funds

Note: Numbers may not add due to rounding

Finance/Budget – FY15-16 Expenditures

FY 15-16 Monthly and Cumulative Expenditures Budget, Forecast and Actual



Source: F&A Capital Outlay Reports (Sept 2015 – Feb 2016)

Notes: Forecast data will shift each month (budget and forecasts only equal at outset of FY15-16)

Finance/Budget Raw Data: Expenditures

FY14-15 Raw Data

	July 2014	Aug 2014	Sept 2014	Oct 2014	Nov 2014	Dec 2014	Jan 2015	Feb 2015	Mar 2015	Apr 2015	May 2015	June 2015
Total FY Budget	\$1.6b	\$1.6b	\$1.6b	\$1.6b	\$859m	\$859m	\$859m	\$522m	\$479m	\$479m	\$479m	\$479m
Expense to Date	\$24.7m	\$47.2m	\$66.9m	\$91.6m	\$119.0m	\$139.4 m	\$153.0m	\$174.4m	\$199.7m	\$218.3m	\$273.2m	\$327.6m
Monthly expenditures	\$24.7m	\$22.5m	\$19.7m	\$24.6m	\$27.4m	\$20.5m	\$13.6m	\$21.4m	\$25.3m	\$18.6m	\$54.9m	\$54.4m
Total FY Forecast	\$1.6b	\$1.5b	\$1.6b	\$838m	\$766m	\$728m	\$653m	\$522m	\$479m	\$416m	\$349m	\$336m

FY15-16 Raw Data

	July 2015	Aug 2015	Sept 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	June 2016
Total FY Budget	\$1.7b	\$1.7b	\$1.7b	\$1.7b	\$1.7b	\$1.8b						
Expense to Date	\$0	\$74.1m	\$125.5m	\$161.4m	\$234.5m	\$292.4m						
Monthly expenditures	\$0	\$74.1m	\$51.4m	\$35.9m	\$73.2m	\$58.5m						
Total FY Forecast	\$1.7b	\$1.7b	\$1.3b	\$1.0b	\$1.0b	\$1.1b						

Source: F&A Capital Outlay Reports (Sept 2014 – Jan 2016)

Notes: Numbers may not add due to rounding; no July 2015 expenditures were received by the July-2015 reporting deadline.

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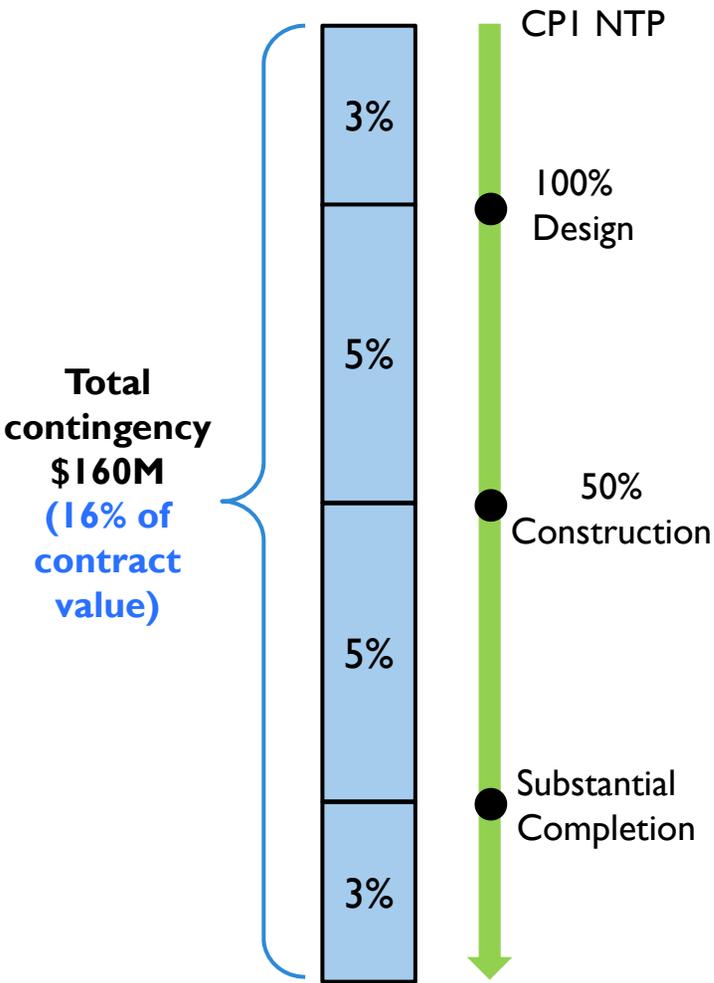
CP1 Contract – Current Contingency Level

Contract Milestones	CPI Contract Remaining Contingency	Major Change Orders Approved as of November 15, 2015
CPI Contract NTP	\$ 160.0 M	
As of 15-Nov-2015	\$ 148.4 M	<ul style="list-style-type: none"> • Class 1/2 Hazmat (\$5.25M) • Regulatory Changes - Archaeological, Biological, Native American monitoring (\$1.31M) • Ped.Arch Field Surveys; GIS Habitat Tracking • Scope Changes - Revised Shear Wave Boring, Weed Abatement, etc. • Trackway and Structures - Design Criterial Revisions • COF utility relocation cooperative agreement for design only • East American Avenue design speed variance • Small mammal burrow excavation; Built environment treatment plan • Env. Permit Changes, etc. • DRB expenses; Partnering workshop costs; Additional Space at 1401 Fulton • Other administrative, 3rd party, regulatory changes and additional scope items

Note: The approved change orders for CPI includes both anticipated and unanticipated risks/uncertainty initially considered in the contract contingency analysis (Aug 2013).

CP1 Contract – Establishing Contingency Floor

- ▶ Based on an analysis of the risks associated with CPI, a contingency of \$160M or slightly less than 16% of the contract value, was set aside.
- ▶ 3% of the contract value or approximately \$31M of the contingency was reserved for potential additional costs arising at or following substantial completion. This percentage is based on FTA guidance and is intended to serve as an added layer of protection against potential unidentified (additional) costs.
- ▶ Between these points, the floor is set based on FTA’s contingency targets for the amount of work outstanding at each milestone, for example, an additional 10% of contract value was reserved for potential additional cost arising between the start of construction and substantial completion, making the total required contingency at the 100% design stage to 13% of the contract value.



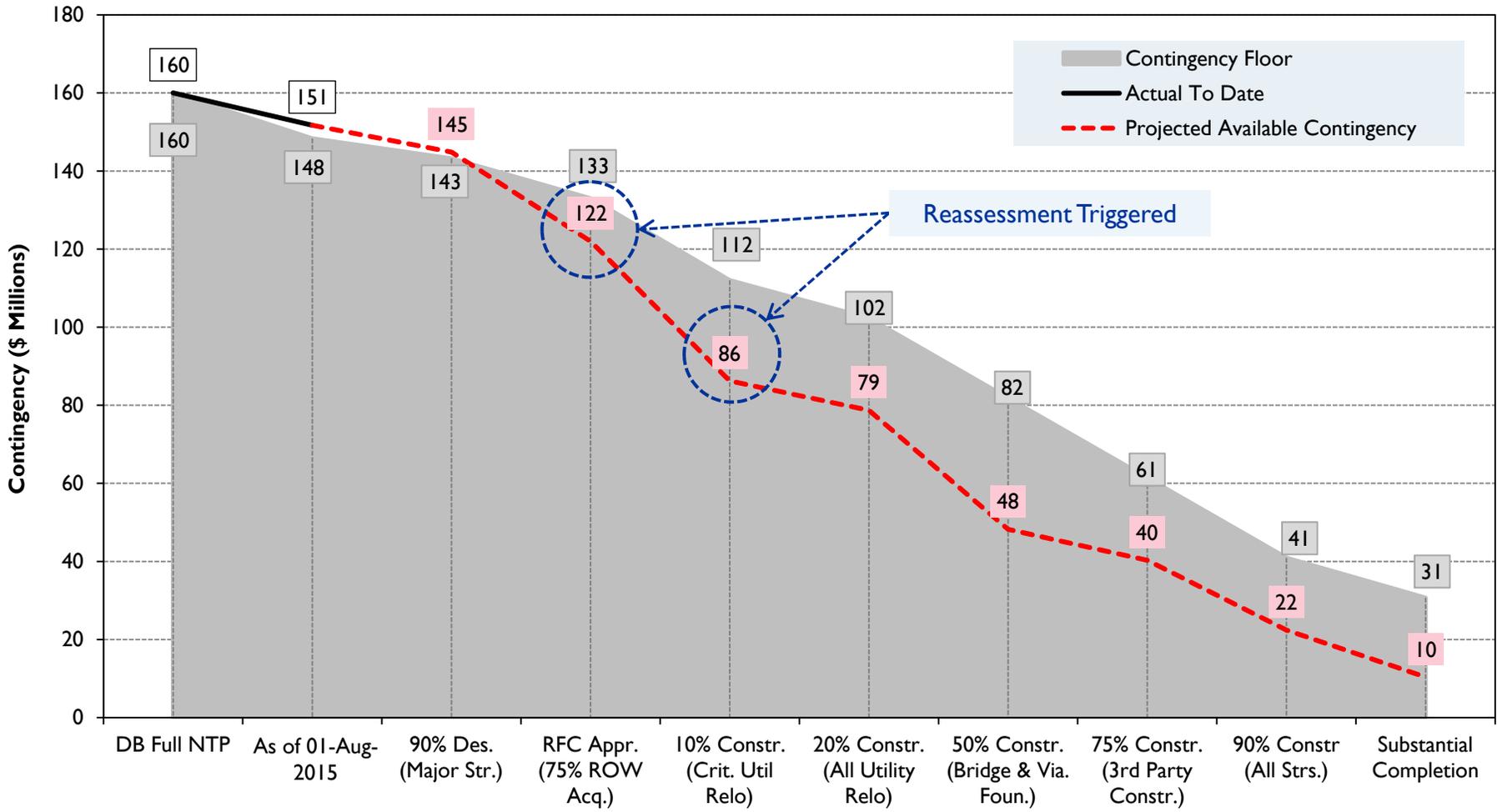
* Based on FTA Project and Construction Management Guidelines (July 2011)

Projected Available Contingency Level at Future Milestones

Contract Milestones	Projected Available Contingency (\$M)	Potential Risks Expected to Occur at Contract Milestones	Mean Rem. Risk Exposure (\$M)
As of Apr 01, 2015	151.7		
90% Design	144.8	<ul style="list-style-type: none"> • Scope changes as per environmental requirements modifications 	6.9
100% RFC Design	122.0	<ul style="list-style-type: none"> • Madera County Design roadway revisions (Avenues 9, 12, 13, 15 and 15.5) • Other Known scope changes incl. McKinley, GSB, etc. • City of Fresno Tier 2 requirements 	22.9
10% Construction	86.2	<ul style="list-style-type: none"> • Delays in agreement with RR agencies (50% impact) • ROW acquisition delays (50% impact) • Delays in obtaining permits (50% impact) • SJVRR Spurs - Scope considers one spur in the vicinity of Dry Creek Canal 	35.8
20% Construction	78.7	<ul style="list-style-type: none"> • Utility Provisional Sum • Construction contract work Prov. Sums 	7.5
50% Construction	48.2	<ul style="list-style-type: none"> • Changed/Differing Site Conditions • Class I & II Hazmat 	30.5
75% Construction	40.3	<ul style="list-style-type: none"> • Change or mis-representation of environmental requirements • SR99 & SRI80 Interface Coordination 	7.9
90% Construction	22.4	<ul style="list-style-type: none"> • Direct costs associated with intrusion protection 	17.9
Substantial Complete	10.4	<ul style="list-style-type: none"> • ROW acquisition delays (50% impact) • Delays in obtaining permits (50% impact) • Delays in acquiring compensatory mitigation sites 	24.1

Note: Content as of 01-Apr-2015. The projections for remaining contingency available will be reviewed and adjusted at major project milestones. This will take into account actual known impact of risks that are realized and free-up the mean impact of the risks that are avoided.

CP1 Contract - Contingency report



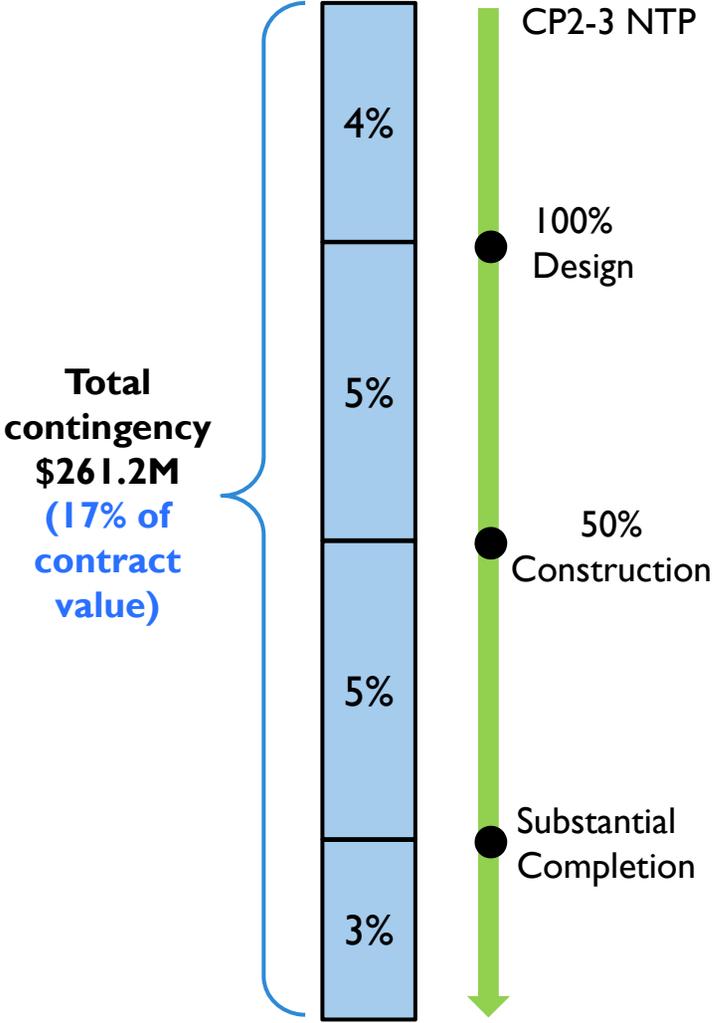
CP2-3 Contract Cost Summary

Base Cost item	Cost
CP2-3 D-B Base Cost	1,234,567,890
PG&E Allowance	160,000,000
Third Parties / Support Costs	140,000,000
Total CP2-3 Contract D-B Cost	1,534,567,890
Allocated Contingency	261,200,000

Note: Figures from Task 8 – Design-Build Funding Contribution Plan as of May 2015

CP2-3 Contract – Establishing Contingency Floor

- ▶ Based on an analysis of the risks associated with CP2-3, a contingency of \$261.2M or slightly over 17% of the contract value (base contract plus the PG&E provision sums and third party allowance), was set aside.
- ▶ Three percent of the contract value or approximately \$46M of the contingency was reserved for potential additional costs arising at or following substantial completion. This percentage is based on FTA guidance and is intended to serve as an added layer of protection against potential unidentified (additional) costs.
- ▶ Between these points, the floor is set based on FTA’s contingency targets for the amount of work outstanding at each milestone, for example, an additional 10% of contract value was reserved for potential additional cost arising between the start of construction and substantial completion, making the total required contingency at the 100% design stage to 13% of the contract value.



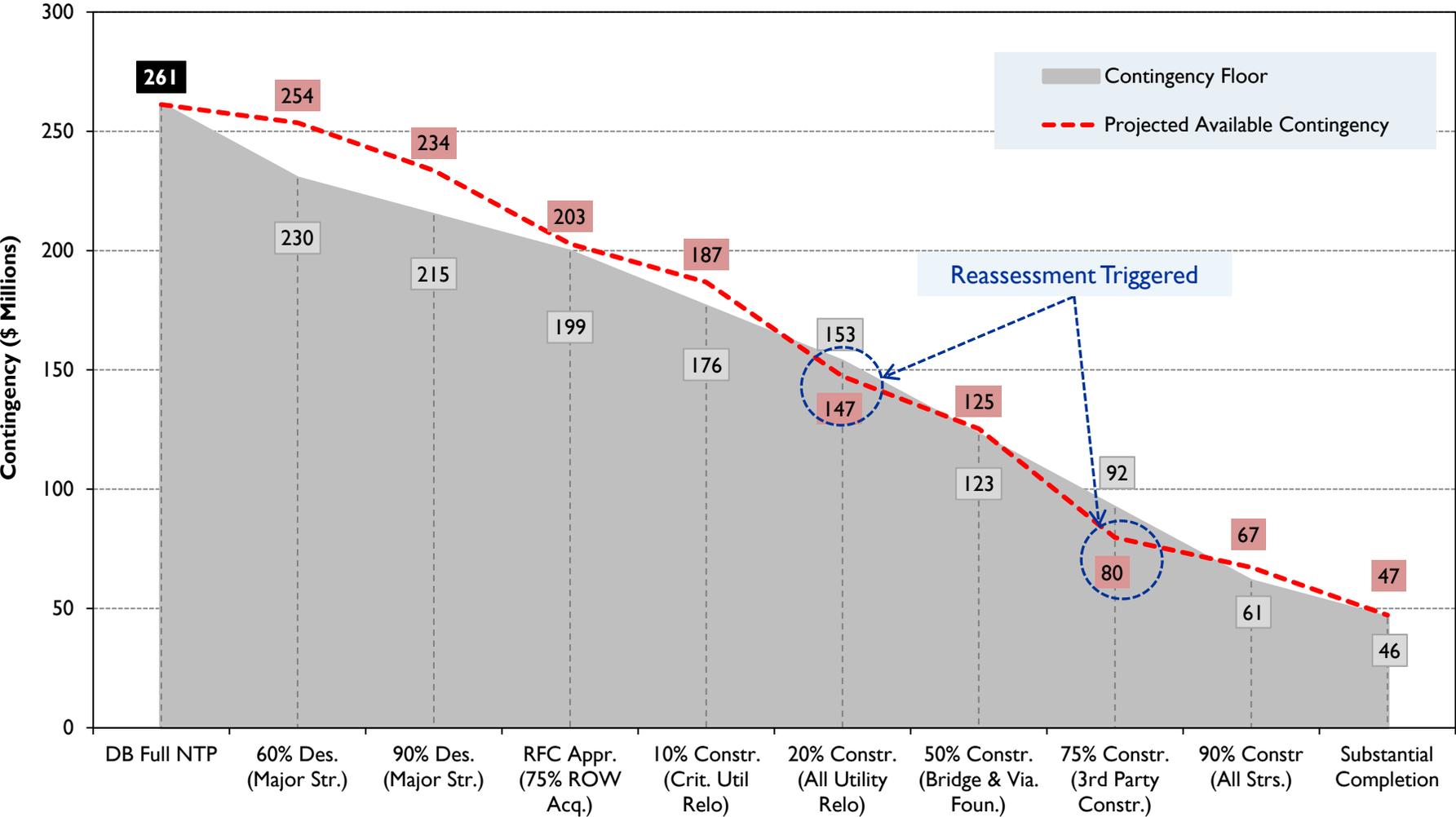
* Based on FTA Project and Construction Management Guidelines (July 2011)

Projected Available Contingency Level at Future Milestones

Contract Milestones	Projected Available Contingency (\$M)	Potential Risks Expected to Occur at Contract Milestones	P90 Risk Exposure (\$M)
CP2-3 NTP	261		
60% Design	253.6	<ul style="list-style-type: none"> • Scope changes as per Environmental requirement modifications 	15.3
90% Design	233.6	<ul style="list-style-type: none"> • Kings County Roadway Modifications • Notice of approval of restricted drawings 	20.0
100% RFC Design	202.8	<ul style="list-style-type: none"> • Fresno & Tulare County Roadway Modifications • SBE/DBE participation, community benefits agreement and NTHI 	30.8
10% Construction	186.8	<ul style="list-style-type: none"> • Delays in agreement with RR agencies (20% impact) • ROW acquisition delays (20% impact); Delays in obtaining permits (20% impact) • Uncooperative Kings County delaying HSR work (20% impact) • CPUC delays (20% impact) 	16.0
20% Construction	147.3	<ul style="list-style-type: none"> • Uncertainty in utility relocation costs; Uncertainty in canal relocation costs • Construction Water hard to find 	39.5
50% Construction	125.3	<ul style="list-style-type: none"> • Changed/Differing Site Conditions • Class I & II Hazmat 	22.0
75% Construction	79.7	<ul style="list-style-type: none"> • BNSF railroad intrusion protection measures (50%) 	45.6
90% Construction	67.2	<ul style="list-style-type: none"> • Agricultural crossings at Hanford and Cross Creek necessitated by embankments. 	12.5
Substantial Complete	47.2	<ul style="list-style-type: none"> • ROW acquisition delays (50% impact) • Delays in obtaining permits (50% impact) • Delays in acquiring compensatory mitigation sites (50% impact) 	40.1

Note: Content as of 11-Jun-2015. The projections for remaining contingency available will be reviewed and adjusted at major project milestones. This will take into account actual known impact of risks that are realized and free-up the P90 impact of the risks that are avoided.

CP2-3 Contract - Contingency report



Agenda

- ▶ Operations Report Metrics

- Executive Summary
- Right of Way (ROW)
- Environmental
- Third-Party Agreements
- Contract Management
- Finance/Budget
- Risk

- Back-Up ROW Information

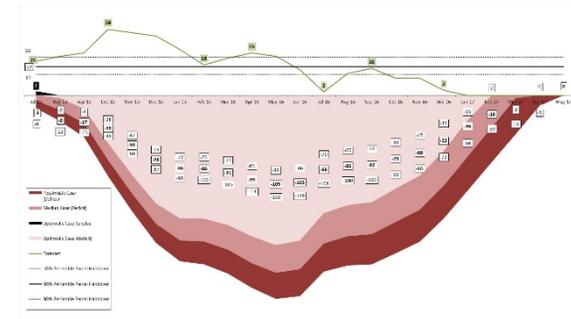
CP1 Probabilistic Analysis of Meeting CP1 Forecast

- ▶ The team has developed a new parcels handover forecast for CPI based on actual and past performance in terms of numbers of parcels delivered per month
- ▶ The forecast is refined monthly as new information is integrated and present a trajectory that the team uses to achieve the plan agreed with the contractor TPZP (negotiated schedule as of December 2014)
- ▶ A probabilistic distribution of monthly handover rates is specified based on monthly handovers during previous delivery periods (3 months and 6 months)
- ▶ The distribution is then compared to the forecast handover rates of each month in a Monte Carlo simulation to determine the probability of meeting monthly (clean slate) and cumulative (rolling over delayed parcels to next month) targets
- ▶ When relevant the analysis determines the likely delay to the forecasted completion date
- ▶ A Pessimistic case and an Optimistic case bracket the Median case; all presented in the detailed results in Appendix
- ▶ An updated probabilistic analysis will be prepared after the re-baselining of CP2-3. We expect this update to the probabilistic analysis to be completed in the 2nd Quarter 2016.

CP1 Probabilistic Analysis – Summary and Preliminary Results from August 2015 Forecasts

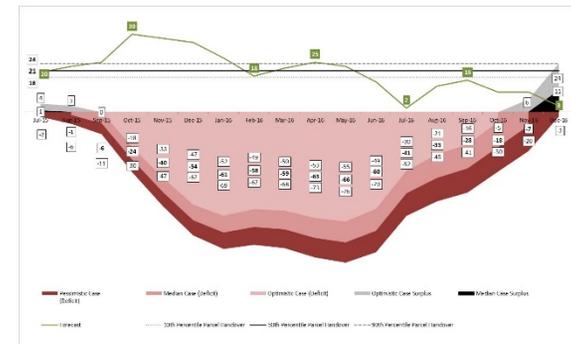
Past 6-Month Parcel Handover Rate

- Range used for historic period : 9 – 27 parcels per month (Median = 17 parcels per month)
- Meeting monthly targets (clean slate) : 9 / 18 months
- Meeting monthly targets (roll over) : 1 / 18 months
- Accumulated parcel delivery deficit of delivery of parcels (iceberg) reaches 105 parcels in the median case creating cost impacts to the contract if delays are not avoided or mitigated
- Handover of the final parcel anticipated to be delayed 7 months



Past 3-Month Parcel Handover Rate

- Range used for historic period : 15 – 27 parcels per month (Median = 21 parcels per month)
- Meeting monthly targets (clean slate) : 9 / 18 months
- Meeting monthly targets (roll over) : 4 / 18 months
- While the final parcel is likely (85.6%) to be delivered by Dec 2016, delays (and likely associated claims) will have been accumulated by that date.



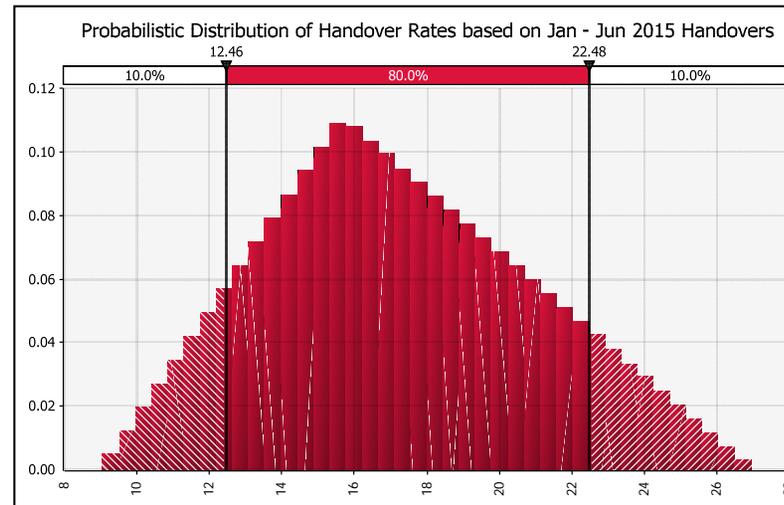
Notes: The deficits presented are in addition to the delays already accrued. Deficits measured against our own internal forecast NOT contractual obligations to the contractor.

ROW – CPI: Monthly Forecast Parcel Handover Rate vs Probabilistic Handover Rate based on prior 6 month’s results

	CLEAN SLATE Probability of meeting or bettering forecast	ROLL-OVER Probability of meeting or bettering forecast
Jul-15	24.0%	24.0%
Aug-15	7.8%	5.8%
Sep-15	2.0%	0.6%
Oct-15	0.0%	0.0%
Nov-15	0.0%	0.0%
Dec-15	0.0%	0.0%
Jan-16	0.0%	0.0%
Feb-16	39.7%	0.0%
Mar-16	12.3%	0.0%
Apr-16	2.0%	0.0%
May-16	7.8%	0.0%
Jun-16	70.0%	0.0%
Jul-16	100.0%	0.0%
Aug-16	86.7%	0.0%
Sep-16	59.3%	0.0%
Oct-16	99.2%	0.0%
Nov-16	99.2%	0.0%
Dec-16	100.0%	0.0%
Jan-17	100.0%	1.6%
Feb-17	100.0%	13.2%
Mar-17	100.0%	45.9%
Apr-17	100.0%	82.2%
May-17	100.0%	97.3%
Jun-17	100.0%	99.8%
Jul-17	100.0%	100.0%

A probabilistic distribution of monthly handover rates was specified based on monthly handovers during January – June 2015 period (below). This was then compared to the forecast handover rates of each month in a Monte Carlo simulation to determine the probability of meeting monthly and cumulative (rolling over delayed parcels to next month) targets.

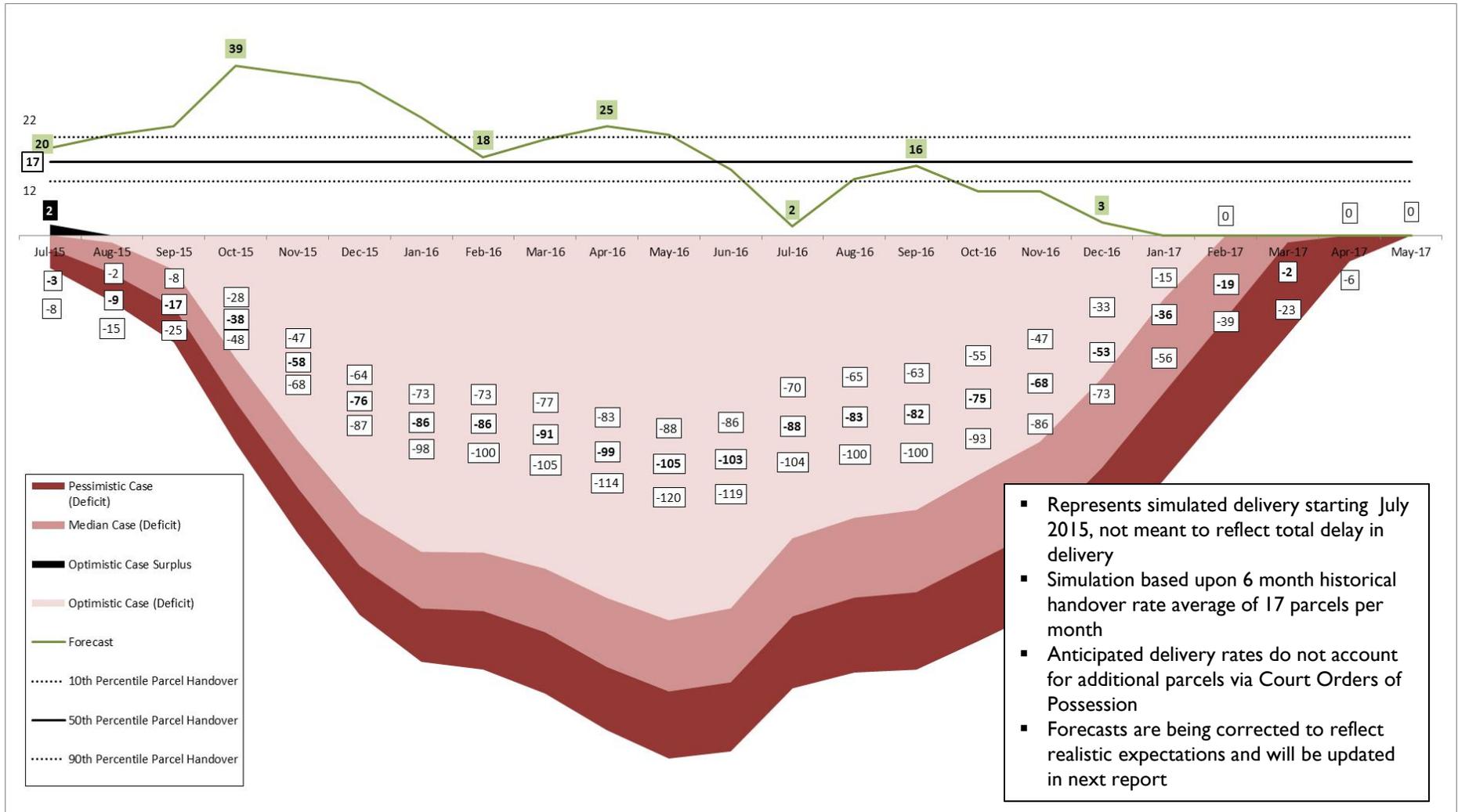
- Based on this analysis, the accumulated deficit of parcel delivery (iceberg) is large and reached 108 parcels in the median case
- The probability of handing over the requisite number of parcels by December 2016 is negligible
- It is projected that handover will not be complete until at least April 2017
- Analysis based purely on historic delivery. As such the additional parcels anticipated to be delivered court Orders of Possession starting in August and ramping up are not captured due to lack of history



ROW – CPI: Projected surpluses and deficits based on prior 6 month's handover rates (Jan – Jun 2015)

Deficits are projected to be *less than Pessimistic Case 90% of the time*

Deficits are projected to be *greater than Optimistic Case 90% of the time*



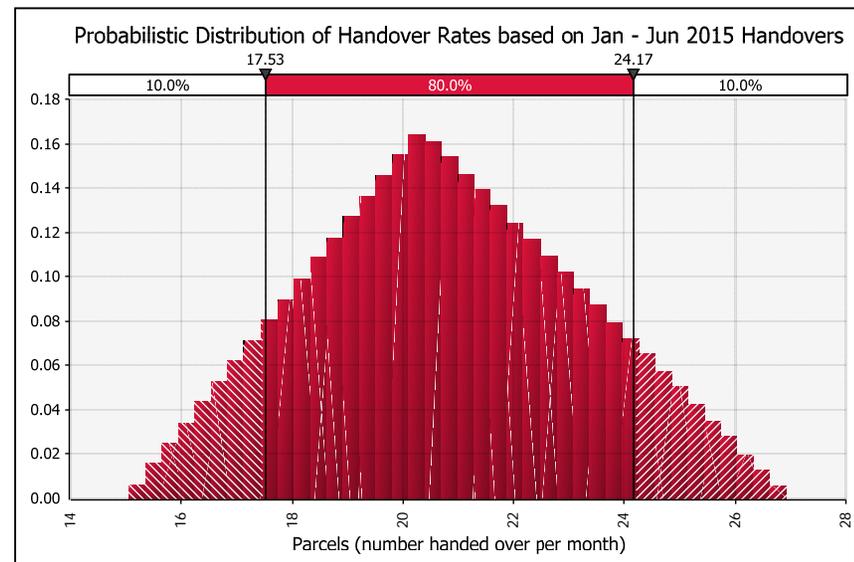
ROW – CPI: Probability of meeting or bettering forecast based upon 3 month’s results (March to May 2015)

Date	CLEAN SLATE Probability of meeting or bettering forecast	ROLL-OVER Probability of meeting or bettering forecast
Jul-15	60.9%	60.9%
Aug-15	20.0%	33.9%
Sep-15	5.0%	9.4%
Oct-15	0.0%	0.0%
Nov-15	0.0%	0.0%
Dec-15	0.0%	0.0%
Jan-16	0.0%	0.0%
Feb-16	85.9%	0.0%
Mar-16	31.2%	0.0%
Apr-16	5.0%	0.0%
May-16	20.0%	0.0%
Jun-16	100.0%	0.0%
Jul-16	100.0%	0.0%
Aug-16	100.0%	0.0%
Sep-16	98.4%	0.1%
Oct-16	100.0%	3.6%
Nov-16	100.0%	24.4%
Dec-16	100.0%	85.6%

It is projected that CPI will carry a deficit for much of the remaining ROW acquisition period, though the deficit is projected to diminish from Jun 16 forward and clear by the end of the handover period (Dec 2016).

The accumulated deficit of parcels delivery is less significant than the 6 month analysis and reaches 58 parcels in the median case

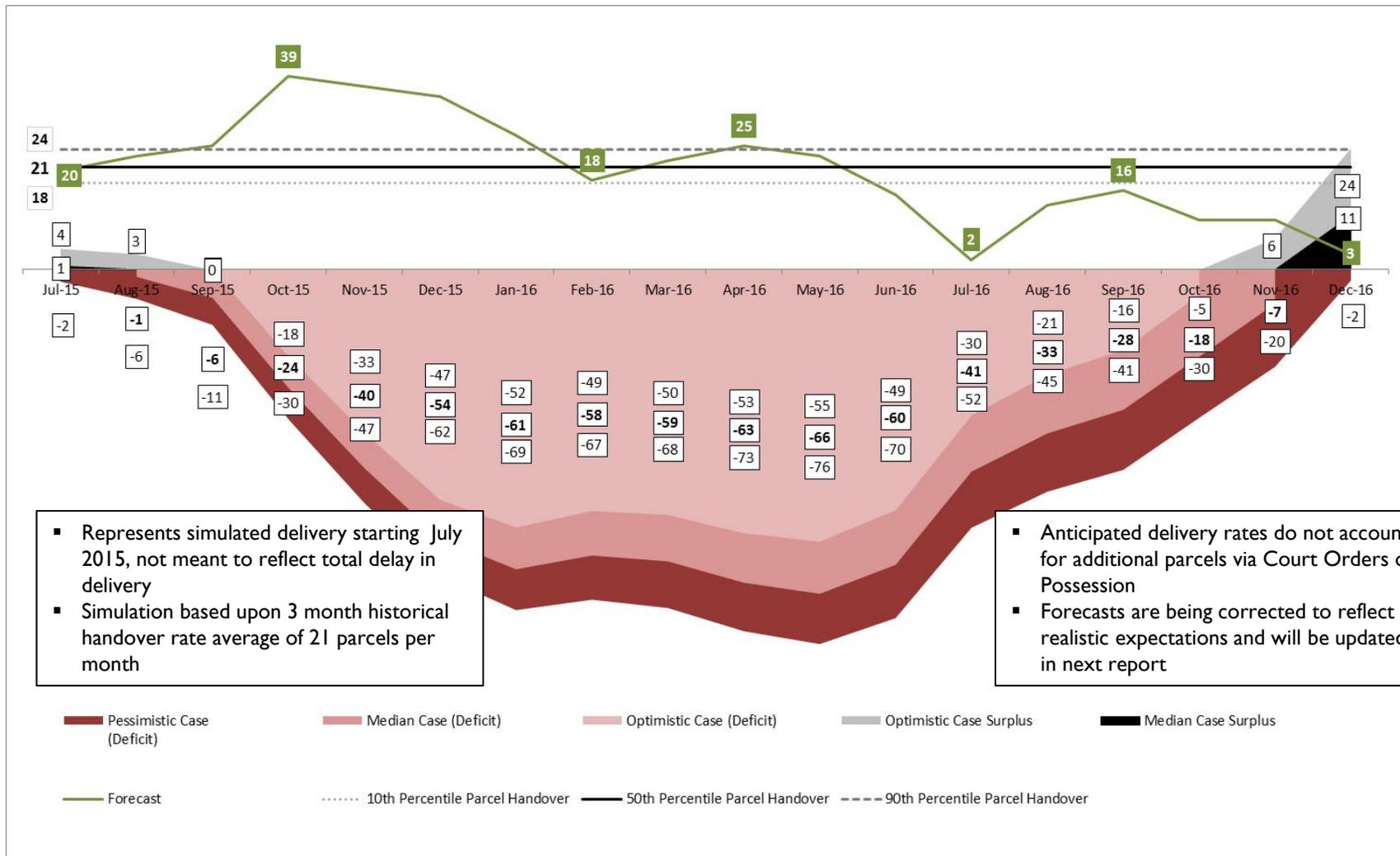
While 9 of 18 remaining months have individual forecasts that could be met by current handover rates, in 7 of these 9 handover rates are insufficient to address both the parcels due in that period and deficits accrued from previous periods



ROW – CPI: Projected surpluses and deficits end of July 2015 to end of December 2016 based upon 3 month's results (March to May 2015)

Deficits are projected to be *less than Pessimistic Case 90%* of the time

Deficits are projected to be *greater than* and *Surpluses are projected to be smaller than Optimistic Case 90%* of the time



- Represents simulated delivery starting July 2015, not meant to reflect total delay in delivery
- Simulation based upon 3 month historical handover rate average of 21 parcels per month

- Anticipated delivery rates do not account for additional parcels via Court Orders of Possession
- Forecasts are being corrected to reflect realistic expectations and will be updated in next report

■ Pessimistic Case (Deficit)
 ■ Median Case (Deficit)
 ■ Optimistic Case (Deficit)
 ■ Optimistic Case Surplus
 ■ Median Case Surplus
— Forecast
 - - - 10th Percentile Parcel Handover
 — 50th Percentile Parcel Handover
 - - - 90th Percentile Parcel Handover