



Finance & Audit Committee

CENTRAL VALLEY STATUS REPORT

February 2020 Report (data through December 2019)

Executive Summary

Overall

- The Authority and the Design-Build (DB) contractors are jointly developing revised baseline schedules (RBS) to align with the contract and scheduled completion dates.
- Central Valley construction is trending positive. Expenditures for January are anticipated to be around the \$46M mark, while in December 2019 actual expenditures of \$44M outpaced its original \$43M projection.
- Number of guideway and structures available for construction remained steady at: 72.5 miles of guideway and 36 structures.
- Report shows approximately \$4B currently under contract with a total of \$6B required under contract to fulfill ARRA grant. \$6B includes Track & Systems, and major CP 1-4 scope additions. Both are achievable with Track & Systems RFP issued, and major CP 1-4 scope modifications are underway.

Construction Package 1

- Contractor invoiced \$13M to \$6M projection.
- 7 structures substantially completed and 10 structures under construction.
- Agreements were finalized with PG&E, Fresno County, City of Fresno, Fresno Metropolitan Flood Control District (FMFCD) allowing work to start in multiple locations.
- AT&T's infrastructure is nearing completion in order for the cut-overs to start.
- Major construction and design decisions were finalized, including the Mechanically Stabilized Earth (MSE) walls, the Intrusion Protection Barriers (IPB) with the railroad, and multiple structures.
- Working with TPZP to implement design solutions that will not require design variances from the Railroad.
- Additional Right-of-Way (ROW) and Land Rights Conveyances (required prior to construction) have been identified with a 100% delivery which is scheduled for December 2020.
- The Change Order for the North Extension has been negotiated with an agreed upon estimate (\$30M+).
- The design review capacity process has been improved through increased schedule monitoring, resulting in a more proactive course and rapid response to events.

Construction Package 2-3

- Contractor invoiced \$22M to \$18M projection.
- Construction underway on (12) structures at South Ave., Conejo Ave., Peach Ave., 9th Ave., Cairo Ave., the Hanford Viaduct, Flint Ave., Kent Ave., Kansas Ave., Excelsior Ave., Ave. 88 and Tule River.
- The Incidental Take Permit (ITP) for the Intrusion Protection Barrier (IPB) has been approved.
- 19 miles of embankment have been substantially completed, and another 26 miles of embankment work is underway.
- Segment 3's soft soils resolution will open 6-7 more miles of embankment for construction which is expected to occur in the 1st quarter of 2020.
- The DFJV project teams are actively working towards mitigating and resolving the Right-of-Way and Land Rights Conveyance issues which are delaying construction at several structures.
- The project's critical developments are being evaluated on a weekly basis as the DFJV project team closely monitors the DB contractor in expediting the remaining design packages while pursuing various lean strategies to speed up the submittal process.

Construction Package 4

- Contractor invoiced \$9M to the \$10.8M projection.
- Five structures and 18 miles of guideway are available for construction.
- 80% (17 miles) of the guideway embankment is substantially complete.
- All of the main design packages have been completed except for Merced Ave. which is expected to be completed within the 1st quarter of 2020.
- The ITP amendment has increased the construction footprint to accommodate any design variations at McCombs Ave. and at Merced Ave./Scaroni Ave. interchanges with SR-43. Included with the amendment are the utility relocations, Caltrans roadway improvements, access roads, and other covered activities have been approved.

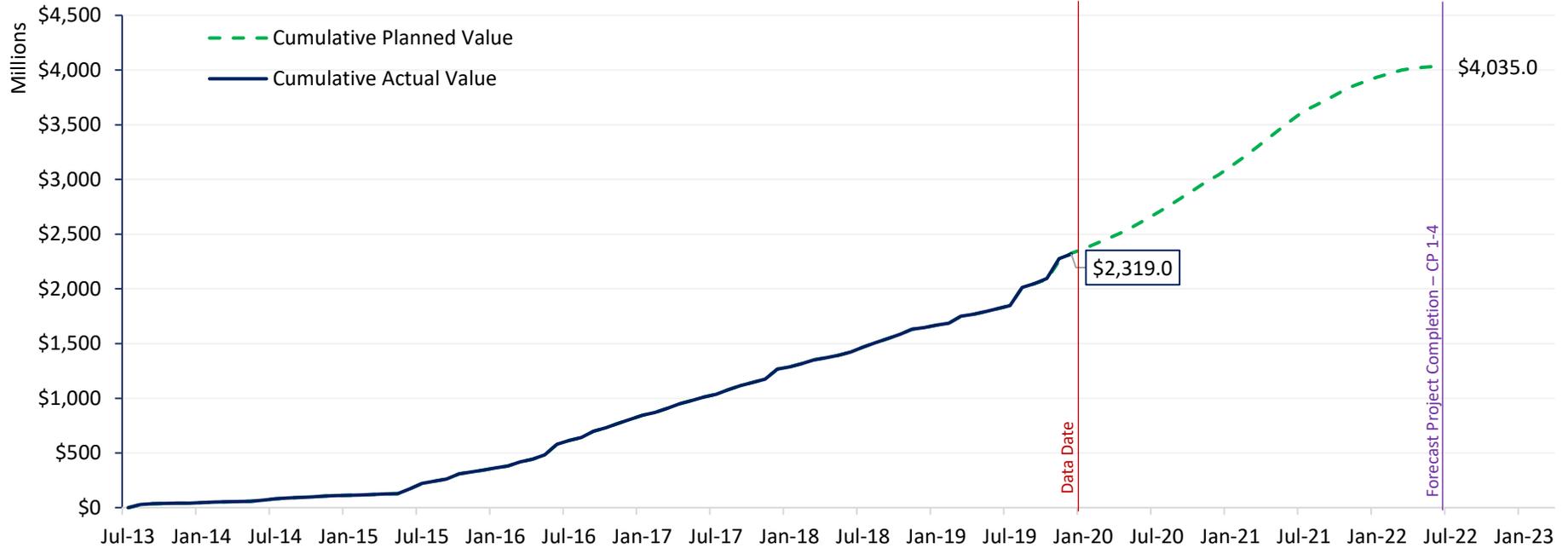
ROW Reconfiguration

- Comprehensive migration of tracking and managing ROW acquisitions from Excel to Geoamps for Acquisitions. Allowing Geoamps to be the single source of truth for ROW, PCMs, and ROW Consultants for acquisitions.
- Reassessed ROW delivery dates to optimize into the Revised Baseline Schedule.
- Tracking and managing Land Rights Conveyances has been completed in Excel, which now includes ROI forecast completion dates and critical milestone.
- Added two additional RDP Project Managers for Land Rights Conveyance production. Onboarded Psomas to accelerate Surveying/Mapping and Deed Jackets for Land Rights Conveyance.
- Re-emphasized State stewardship role and holding consultants accountable to timely results.
- Lean Six-Sigma methodology has streamlined all ROW procurement and Land Rights Conveyance processes. The majority of the processes have been reduced by half of their original time.
- Re-invigorated CALTRANS Legal support to push Eminent Domain Complaints.

Infrastructure Delivery Overview – 119-mile Central Valley Segment Construction Packages 1-4 (CP 1-4)

CP 1-4 Earned Value

CP 1-4 - Planned vs. Actual Expenditures from Contract Award through Contract Completion (\$ Millions)



Note:

- Figure 1 shows historical expenditures from the award of the first construction package through December 31, 2019. The planned values from December 2019 to December 2022 are based on the Proposed Schedules developed for all the construction packages as of December 2019. It is anticipated that the total current contractual value \$4B will be expended by end of July 2022.

CP 1-4 Projected Milestones

Milestone	Date
01. CP 1 Main Design Complete	Feb-20
02. CP 1 ROW Acquisition Complete	Nov-20
03. CP 1 Environmental Clearance Complete	Feb-20
04. CP 1 Utility Relocation Complete	Mar-21

Milestone	Date
05. CP 2-3 Main Design Complete	May-20
06. CP 2-3 ROW Acquisition Complete	Jan-21
07. CP 2-3 Environmental Clearance Complete	Jan-20
08. CP 2-3 Utility Relocation Complete	Feb-21

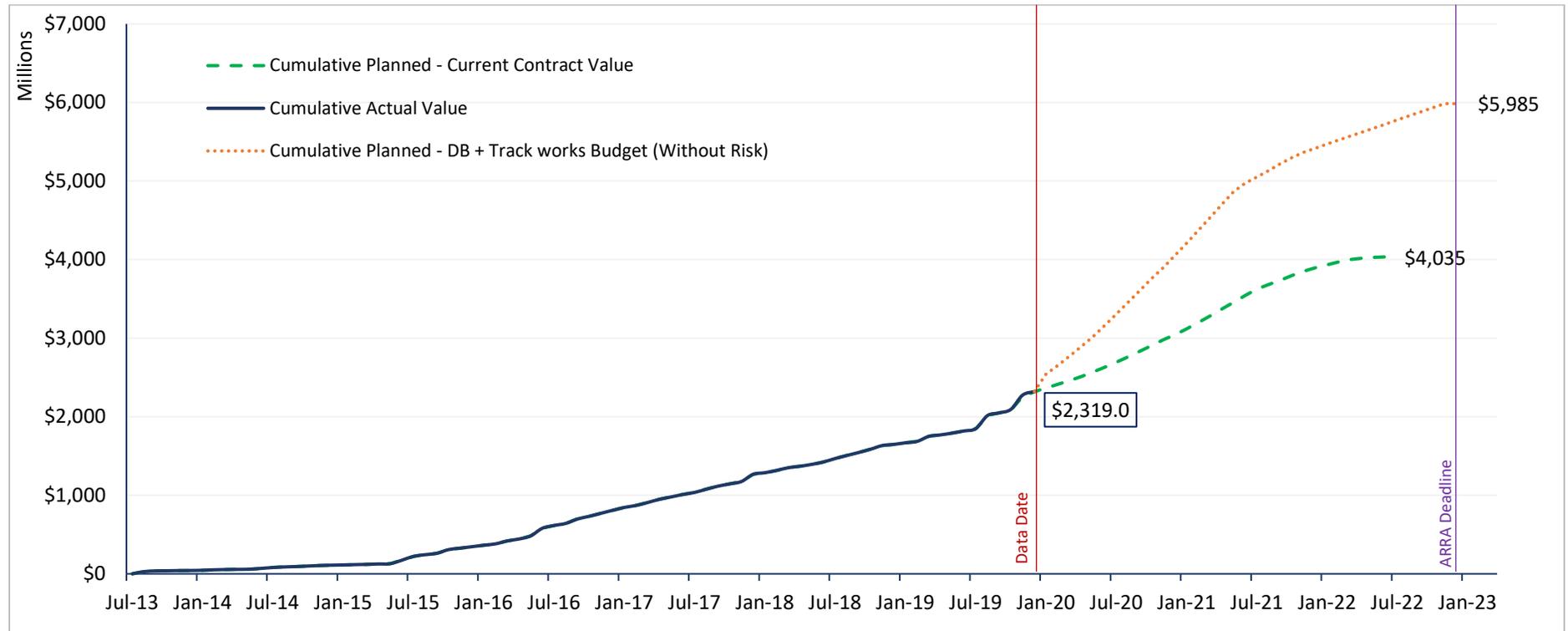
Milestone	Date
09. CP 4 Main Design Complete	Feb-20
10. CP 4 ROW Acquisition Complete	Dec-20
11. CP 4 Environmental Clearance Complete	Mar-20
12. CP 4 Utility Relocation Complete	Mar-21

Note:

- The above at completion value (\$4B) is based on the current contract values of the construction packages and does not include SR-99. This value does not include change orders that are yet to be executed.

**Remaining expenditures to achieve ARRA (DB+ Track Works) within the current baseline
(No risk included)**

\$ Millions



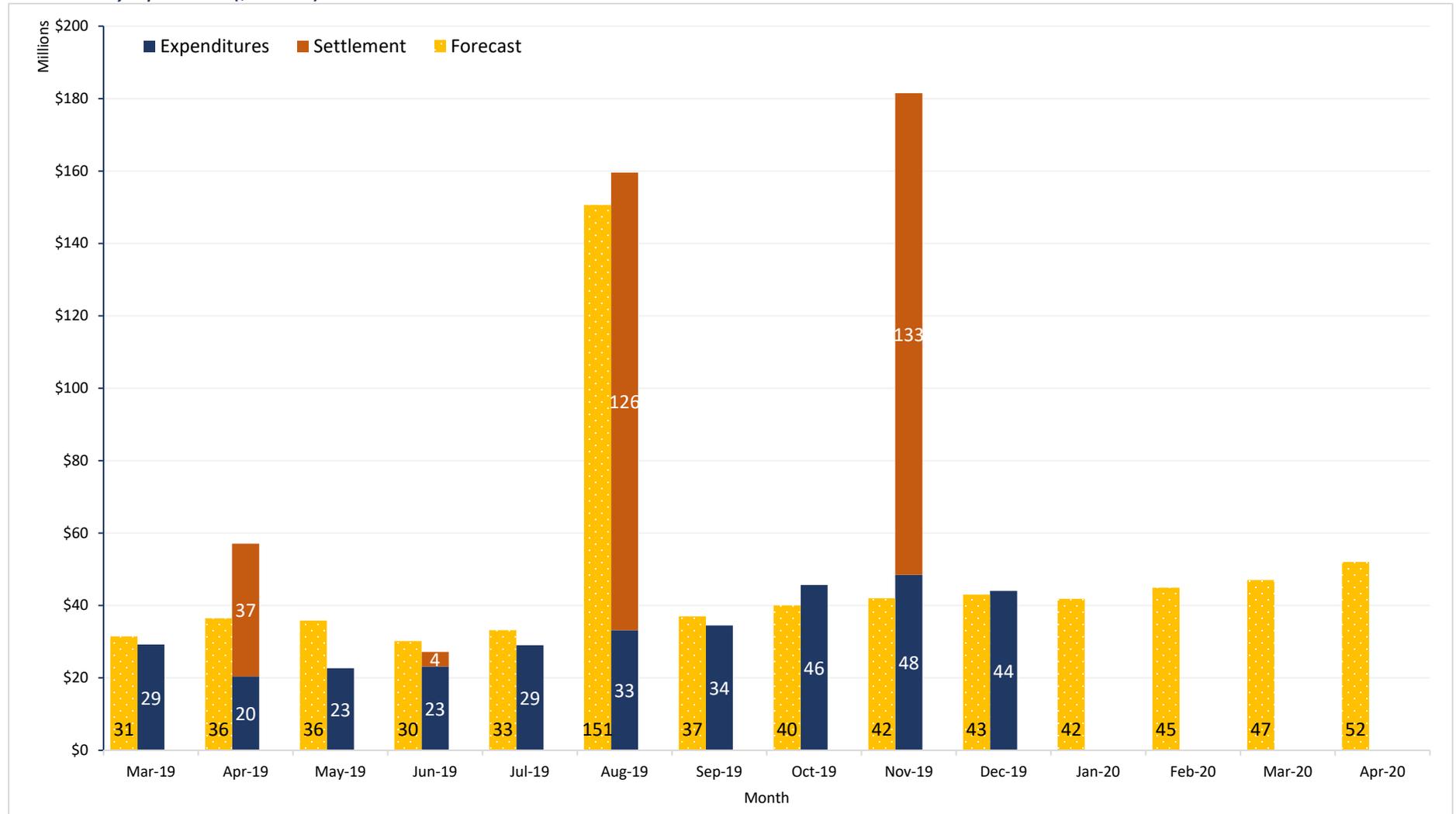
Remaining DB and Track Work Baseline Items*:
Intrusion Protection Barriers and other railroad related works
North Extension (Avenue 17 to 19 in Madera County)
Third Party related work (e.g. Additional PGE & ATT work)
Track Works (Needed for ARRA fulfillment)
Miscellaneous Works Modifications (e.g. Utility Relocation, Environmental Mitigation, Cast in Place Walls)

*The Remaining Baseline items are the Design Build future scope that are not currently contracted but are required to be completed to deliver 119-mile infrastructure.

**The above forecast does not include the estimated risk in the baseline budget.

CP 1-4 - Design-Build Planned vs. Actual Expenditures – Near Term

CP 1-4 Monthly Expenditures (\$ Millions)

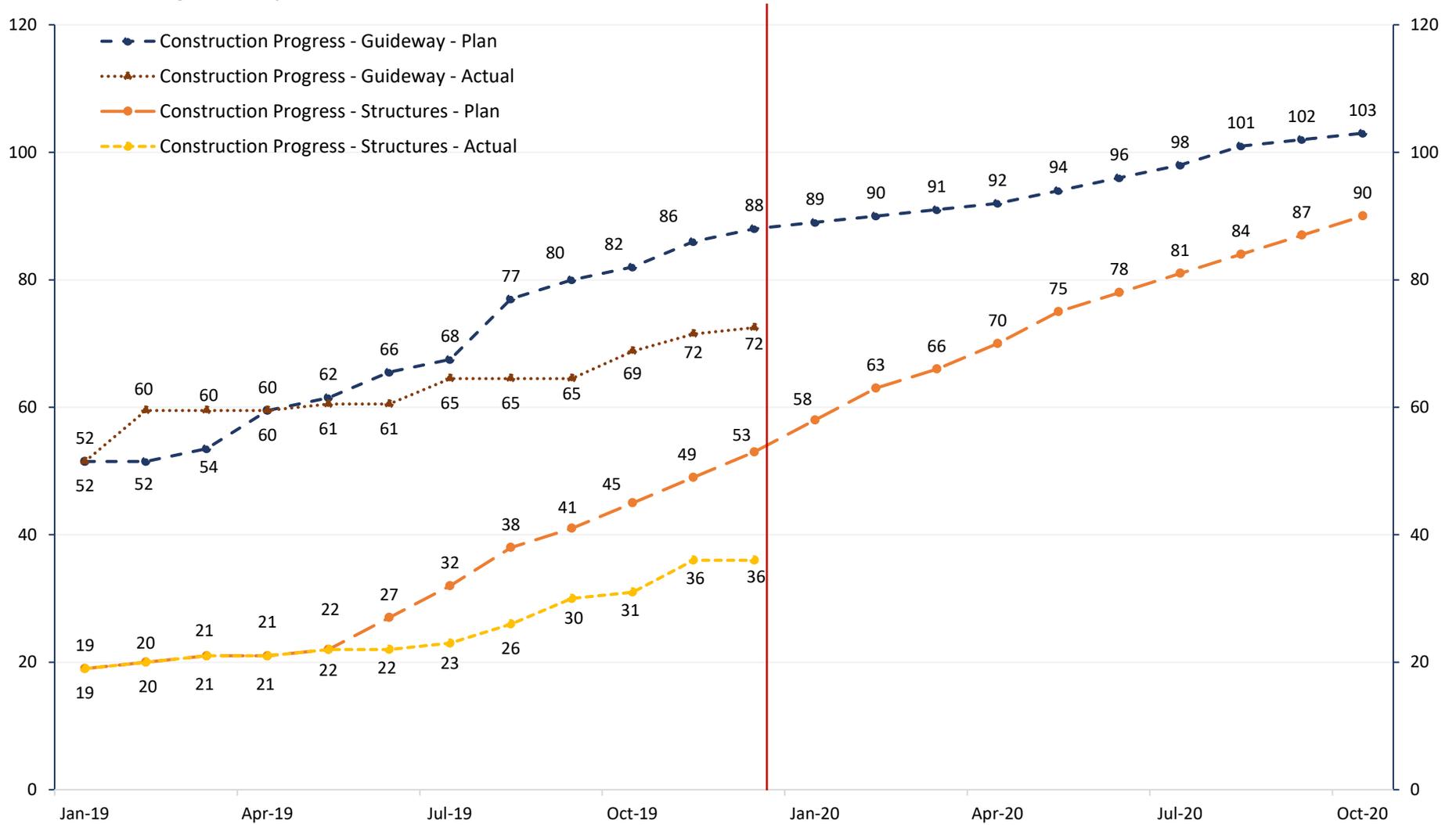


Notes:

1. Expenditures contained in the chart above are specific to the Design-Builder production and based on the certified invoice and do not include accrual adjustments.
2. Forecasted expenditures are based on the Proposed Schedules developed for CP 1-4 as of December 2019.
3. Sudden increases in the cumulative values are due to Time Impact Analysis Settlements.

CP 1-4 – Structures and Guideway Progress – Planned vs. Actuals

CP 1-4 Construction Progress to Completion – Forecast vs. Actual



Notes:

1. Total Structures: 93 each.
2. Total Guideway: 117 miles does not include mileage for SR-99.
3. This forecast is based on the get to work plans developed in January 2019.

CP 1-4 - Construction Progress

CP 1-4 Construction Progress Summary

Construction Package	Category	Planned vs. Actuals	Status Update
CP 1	Structures	Planned Progress: 25 structures Actual Progress: 17 structures Progress: 8 structures behind	<ul style="list-style-type: none"> Golden State Boulevard abutments 1 and 5 are pending execution of out grants to enable the utility cutover relocations. Bents 2, 3, & 4 plans are being finalized for construction. Jensen Trench Phase I & II gas and sewer relocations are being mitigated which could bring this forward to May 2020. Central Avenue, Avenue 15 ½, Avenue 9 and McKinley Avenue are being redesigned to avoid additional ROW requirements, and PG&E out grants are in progress with early civil packages expected by August 2020. Herndon Avenue (2 Structures – Union Pacific Rail Road and High-Speed Rail Structures) are pending additional ROW acquisition which will allow storm drain relocation construction to commence by the start of April 2020. Road 26 and Avenue 17 are pending utility redesigns and the execution of the North Extension Change Order.
CP 1	Guideway	Planned Progress: 16 miles Actual Progress: 9.5 miles Progress: 6.5 miles behind	<ul style="list-style-type: none"> Of the 13 miles that has utilities cleared, there are approximately 2 miles that are delayed in starting due to the IPB not being finalized. Circa 1.5 miles is being prevented due to Mechanically Stabilized Earth (MSE) wall approval. TPZP is successfully completing 3 test piles to progress with the guideway in Madera County.
CP 2-3	Structures	Planned Progress: 18 structures Actual Progress: 12 structures Progress: 6 structures behind	<ul style="list-style-type: none"> Adams Avenue is on hold due to the Fresno County encroachment permit. Land rights conveyance issues have been impacted by the utilities deferring their start times, however the PCM team and the Authority are actively working on mitigating any factors and issues to get them back on track. PCM team and the Authority are actively working on finalizing the agreement between BNSF and SoCal Gas on the site-specific land right agreements. The negotiations are expected to wrap up in January 2020.
CP 2-3	Guideway	Planned Progress: 51 miles Actual Progress: 45.0 miles Progress: 6 miles behind	<ul style="list-style-type: none"> Engineering is currently evaluating the three-dimensional (3D) model defining the rally waves' effect on the soil and will revise the design as necessary for the impacted areas. Currently, acquiring more information from Dragados Flat Iron Joint Venture (DFJV) on the 3D test results which are scheduled to be available in January 2020. Once the issues are resolved, 8 miles of embankment will be available for construction.
CP 4	Structures	Planned Progress: 10 structures Actual Progress: 5 structures Progress: 5 structures behind	<ul style="list-style-type: none"> Design of the structures are complete. One structure is in the process of re-design (Merced Avenue Overpass) due to pending negotiations with third parties and utilities regarding the relocation of their services. Negotiations with landowners regarding the ROW acquisition is continuing. The impact on the start of construction has been evaluated and mitigated action are being planned and implemented in order to minimize construction start date and substantial completion of the project. The construction on five structures is continuing for Garces Hwy Underpass, Pond Road Underpass, Poso Creek Underpass, Wasco Viaduct and Kimberlina Road Underpass.
CP 4	Guideway	Planned Progress: 21.1 miles Actual Progress: 18.0 miles Progress: 3.1 miles behind	<ul style="list-style-type: none"> The construction progress of the guideway is impacted by the ongoing negotiations with landowners regarding the land rights acquisition. Subgrade preparation and importing embankment, as well as clearing construction activities continued during the month for available areas. Design Builder has commenced work on Wild Life Crossings between Magnolia Ave. and Sherwood Ave. Work is continuing for relocation of utilities including PG&E, Sempra, AT&T and others.

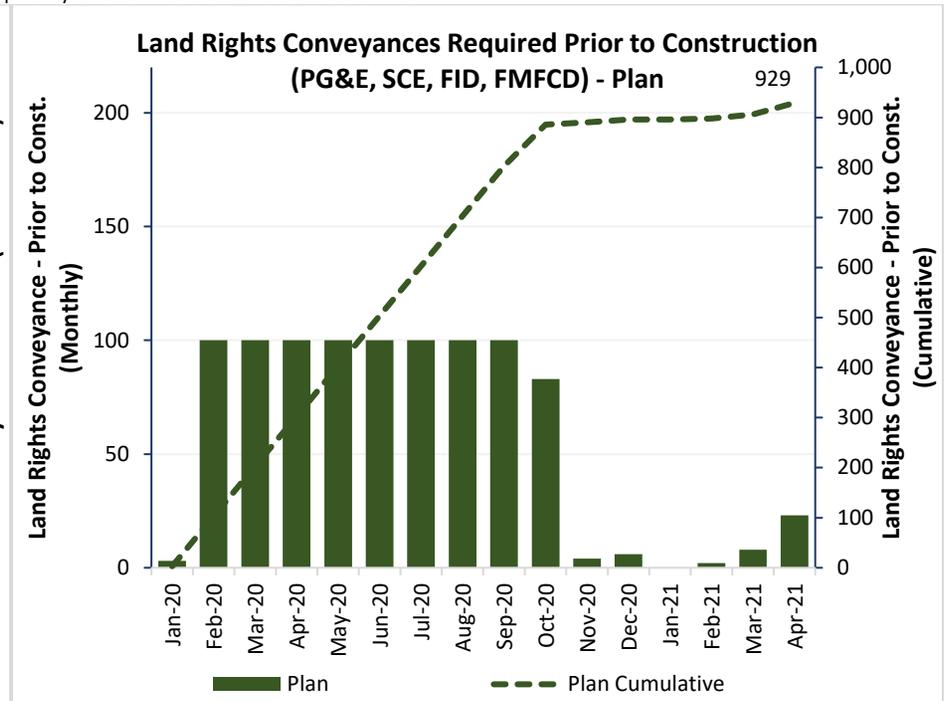
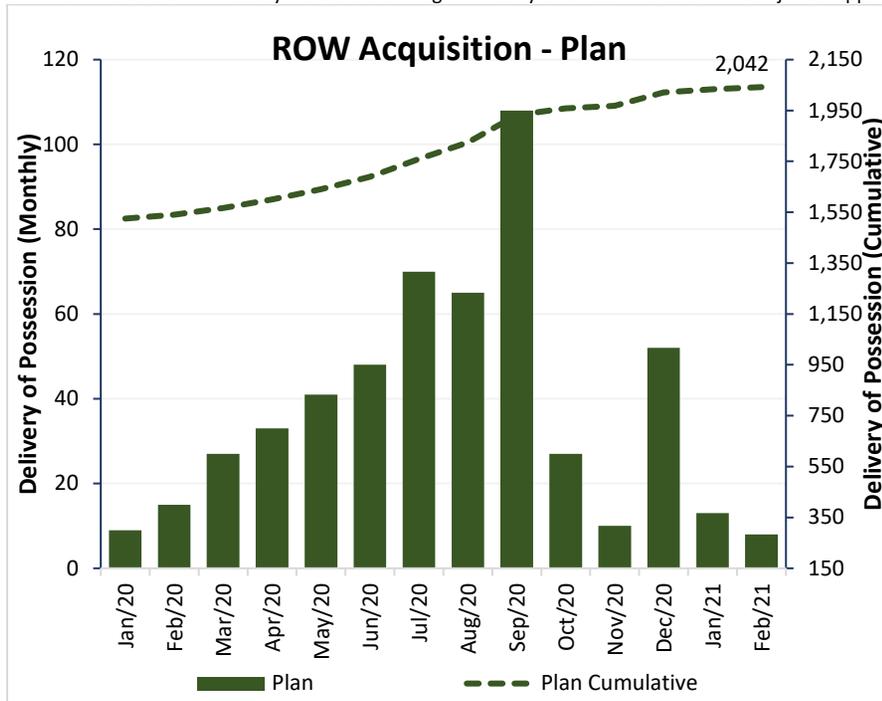
Notes:

1. Out grant refers to grant of interest or right to one to use government real property by a lease, easement, license, or permit. It is an agreement whereby a private party may, depending on the type of real estate instrument issued, enjoy an interest in or use real property.
2. Bents are the basic post and beam structure that forms a cross section for the frame that has been set in place, the bents are then lifted and simply dropped into place one by one by the crane.

CP 1-4 ROW Parcels to be Acquired and Remaining

Construction Package	Total Needed Parcels as of November 30, 2019	Total Acquired to Date as of November 30, 2019	Remaining Parcels to be Acquired as of November 30, 2019	Optimized Parcels December 2019	Parcels Acquired in December 2019	Total Parcels Remaining as of December 31, 2019
CP 1	908	804	104	0	0	104
CP 2-3	886	577	309	0	5	304
CP 4	248	159	89	0	0	89
Total	2,042	1,540	502	0	5	497

- Notes:**
1. This table has been updated to reflect the reconciliation of acquisition data within Geoamps. As a result, these re-baselines the number of parcels needed and acquired from previous reports.
 2. Total acquired is defined as parcels that are legally possessed by the Authority.
 3. Optimized parcels are reductions in parcels achieved through utility redesign.
 4. Railroad parcels are not included in this table. Reporting of railroad parcels is now included in the Land Rights Conveyance reporting in this report for each Construction Package. The property rights needed on railroad Right-of-Way is obtained through agreement rather than going through the Right-of-Way acquisition process.
 5. Land Rights Conveyances represent only those required prior to construction for Pacific Gas & Electric, Southern California Edison, Fresno Irrigation District and Fresno Metropolitan Flood Control District.
 6. The forecast delivery dates for Land Rights Conveyances will continue to be adjusted appropriately to reflect the Revised Baseline Schedule



119-Mile Central Valley Segment - Third Party Agreements

CP 1-4 Look Ahead - Estimated completion timeline for key Third Party Agreements

Entity	Project Section	Result of Resolution	Estimated Completion
Calif. Dept. of Toxic Substances Control	CP 1	Provides for environmental review and mitigation between the design-builder and Calif. Dept. of Toxic Substances Control.	Completed
County of Fresno	CP 1	Updates road locations to be closed to reflect design changes since original Cooperative Agreement and provide further clarity regarding remediation of County property post-construction.	Jan-20
County of Fresno	CP 1	Defines the ownership and maintenance of grade separations between the Authority and County in perpetuity.	Jan-20
Fresno Metropolitan Flood Control District	CP 1	CCUA template allows for prompt execution of the CCUA land conveyances. FMFCD and HSR ROW Engineering are finalizing format of mapping and legal descriptions for use with the template. FMFCD will not approve template until the format is finalized.	Jan-20
Fresno Metropolitan Flood Control District	CP 1	JUA template allows for prompt execution of the JUA land conveyances. FMFCD and HSR ROW Engineering are finalizing format of mapping and legal descriptions for use with the template. FMFCD will not approve template until the format is finalized.	Jan-20
Madera Valley Water Company	CP 1	Obtain cooperation in our project and capture the essential terms of how we will work together to relocate Madera Valley Water Company's facilities. MVWC's latest revisions required substantial overhaul of agreements. Completion pending MVWC approval of revisions – marked for January due to upcoming holidays.	Jan-20
Corcoran Irrigation District	CP 2-3	Provides for CID's review of technical engineering documents, coordination with the Authority, and review of documents for JUA/CCUA.	Feb-20
County of Fresno	CP 2-3	Updates the road locations to be closed to reflect design changes since original Cooperative Agreement and provides further clarity regarding remediation of County property post-construction.	Jan-20
County of Fresno	CP 2-3	Defines the ownership and maintenance of grade separations between the Authority and County in perpetuity.	Jan-20
County of Kings	CP 2-3	Covers the transfer of Right-of-Way between the Authority and the County. Allows the Authority's immediate right of possession and use of existing Right-of-Way to construct the HSR project.	Mar-20
County of Tulare	CP 2-3	Defines the ownership and maintenance of grade separations between the Authority and County in perpetuity.	Jan-20
Kings County Water District	CP 2-3	CCUA template allows for prompt execution of the CCUA land conveyances.	Mar-20
Kings County Water District	CP 2-3	JUA template allows for prompt execution of the JUA land conveyances.	Mar-20
Lower Tule River Irrigation District	CP 2-3	Provides for Lower Tule's review of technical engineering documents, coordination with the Authority, and review of documents for JUA/CCUA.	Jan-20
Lakeside Ditch Company	CP 2-3	Provides for the necessary coordination for the development of JUA/CCUA.	Completed

CP 1-4 Look Ahead - Estimated completion timeline for key Third Party Agreements (cont'd)

Entity	Project Section	Result of Resolution	Estimated Completion
Settler's Ditch Company	CP 2-3	Provides for Settler's review of technical engineering documents, coordination with the Authority, and review of documents for JUA/CCUA. Still going through CPB review to be sent to Settler's for execution.	Jan-20
People's Ditch Company	CP 2-3	Provides for People's review of technical engineering documents, coordination with the Authority, and review of documents for JUA/CCUA. Still going through CPB review to be sent to People's for execution.	Jan-20
Southern California Edison	CP 2-3	Utility agreement addendum for Duct and Substructure Work for Construction. Template language is finalized; awaiting SCE management approval in light of recent SCE management changes.	Jan-20
City of Wasco	CP 4	Covers the transfer of Right-of-Way between the Authority and the City. It allows the Authority's immediate right of possession and use of existing Right-of-Way to construct the HSR project.	Feb-20
City of Wasco	CP 4	Defines the ownership and maintenance of grade separations between the Authority and City in perpetuity.	Feb-20
City of Wasco	CP 4	Design and construction of a pedestrian underpass at the Wasco Amtrak station.	Feb-20
City of Wasco	CP 4	Design and construction of a grade separation at Poso Ave. in Wasco.	Feb-20
Semi-tropic Water Storage District	CP 4	This agreement is for design and construction of facilities. In final negotiations; going to January 2020 Board meeting.	Feb-20
Semi-tropic Water Storage District	CP 4	JUA template allows for prompt execution of the JUA land conveyances. In final negotiations; going to January 2020 Board meeting.	Feb-20
Semi-tropic Water Storage District	CP 4	CCUA template allows for prompt execution of the CCUA land conveyances. In final negotiations; going to January 2020 Board meeting.	Feb-20
Southern California Edison	CP 4	Utility agreement addendum for Duct and Substructure Work for Construction. Template language is finalized; awaiting SCE management approval in light of recent SCE management changes.	Jan-20

119-Mile Central Valley Segment – Environmental Clearance - Incidental Take Permits (ITP) Summary

Merced-Fresno 2081 ITP, Permit Number 2081-2013-025-04, Issued on 12-Mar-14

ITP Name	Amendment Status	Construction Project	ITP Amendment Construction Implications	Date of Approval / Issue
Utility Design Refinements	Contractor Revising	CP 1	Documents the changes in utility design at various locations in CP 1.	Feb-20
Hairy Orcutt Grass	In Review with CDFW	CP 1	Administrative to identify the mitigation site for HOG. no impact on construction.	Feb-20
North Extension Separation of Rail	In draft with contractor	CP 1	Accommodates increase in construction footprint to realign the HST away from existing freight rail lines in the North Extension of CP 1.	Mar-20
Utility & BNSF Access Road Cleanup	TPZP/PCM	CP1	Incomplete amendment currently under review. To be resubmitted to CDFW after review is complete.	Mar-20

Fresno-Bakersfield, 2081 ITP, Permit Number 2081-2015-024-04, Issued on 15-Jun-15

ITP Name	Amendment Status	Construction Project	ITP Amendment Construction Implications	Date of Approval / Issue
Deer Creek/Cross Creek	CDFW Deemed Complete	CP 2-3	Accommodates design changes in the Deer and Cross Creek areas.	Feb-20
Table 5	In Review with CDFW	CP 2-3	Administrative map book amendment to finalize the locations of dedicated wildlife crossings.	Feb-20
BNSF/PG&E	In Review with CDFW	CP 4	Covers additional ROW adjacent to the mainline required for relocation of 3 rd party utilities and access to utilities and BNSF operations areas. Also, to include various other small footprint adjustments along alignment.	Apr-20

Note:

1. The above table represents a snapshot in time of the ITP amendments needed to complete CP 1-4. Some additional design changes may occur to complete utility relocations. As design progresses and achieves final approval, the risk of additional amendments shrinks.

CONSTRUCTION PACKAGE 1 (CP 1) OVERVIEW

CP 1 – Design-Build Contract Summary

Milestones

Milestone	Date
RFQ Date:	11/15/2011
SOQ Date:	12/19/2011
RFP Date:	3/22/2012
Proposal:	1/18/2013
Bid Open Date:	4/13/2013
Award Date:	8/16/2013
NTP 1 Date:	10/15/2013
NTP 2 Date:	11/22/2013
NTP 3 Date:	7/11/2014
Original Completion Date:	3/31/2018
Current Completion Date:	11/2/2021

Contract Value

Description	Amount
Fixed Bid Price:	\$969,988,000.00
Provisional Sums:	\$53,000,000.00
Original Contract Price:	<u>\$1,022,988,000.00</u>
Executed Change Orders:	\$808,754,087.33
Current Contract Amount:	<u>\$1,831,742,087.33</u>
Approved Invoices to Date ¹ :	\$1,147,678,765.65
Remaining Contract Balance:	<u>\$684,063,321.68</u>

Contract Time Status

Description	Duration
Original Contract Days:	1,628
Extension of Time Awarded:	1,312
Current Contract Days:	2,940
Work Days Spent (thru 12/31/2019):	2,268

Expended to Date

Description	Percentage
Time:	77.1%
Dollars:	62.7%

Growth %

Description	Percentage
Time:	80.6%
Dollars:	79.1%

Note:

1. Includes estimated earned value for the reporting period.

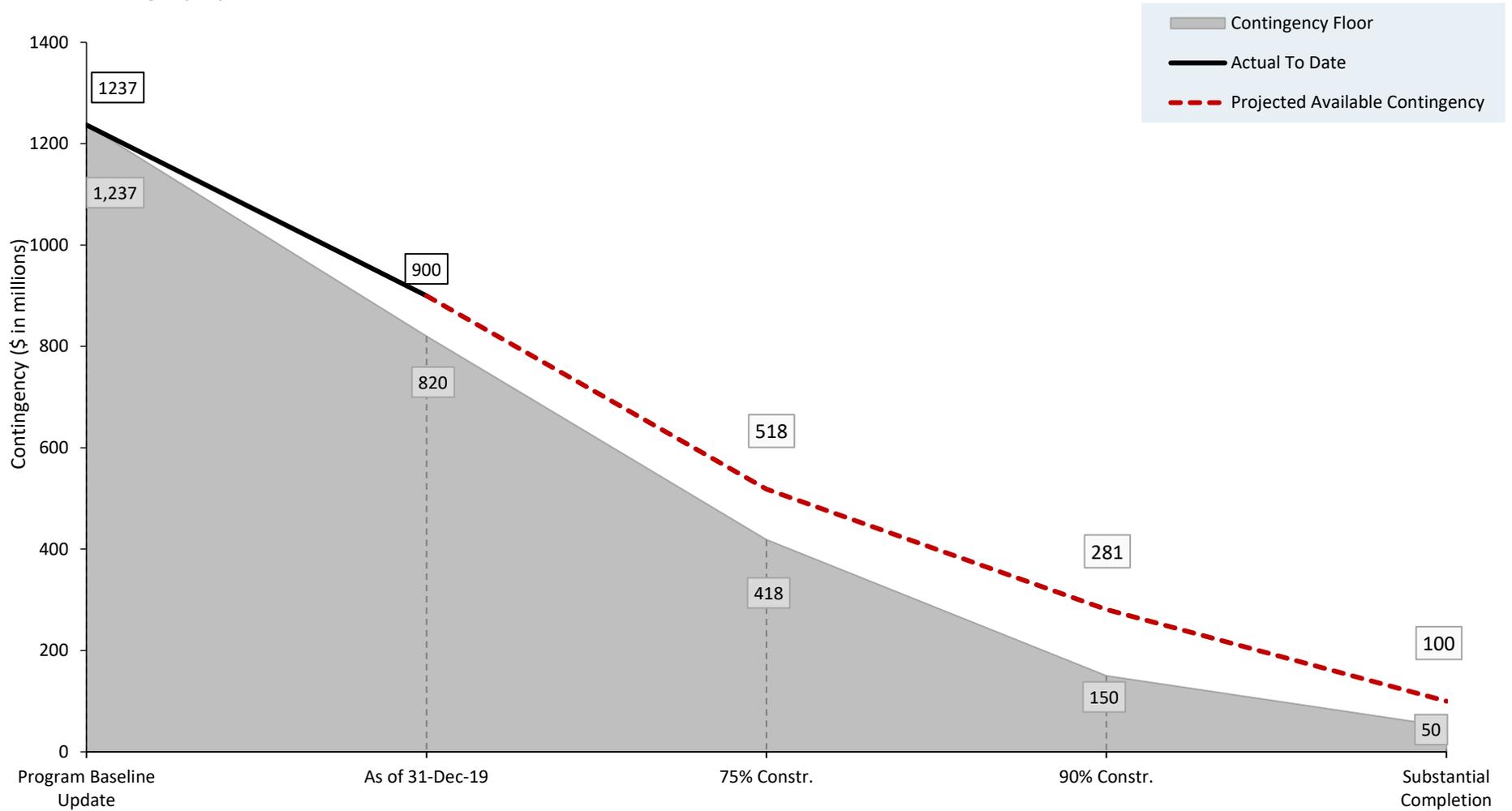
CP 1 – Executed Change Order Status

CP 1 – Executed Change Order Status

CO Number	Title	Change Status	Amount	Executed Date
00165.1	Solid Barrier on Type 2 Overhead Structures	Executed	\$37,900.43	06-Dec-19
00272	FB-10-0503 Unidentified UST Removal	Executed	\$24,514.84	20-Dec-19
00133.03	Avenue 12 HST OH Structure - RFC to AFC	Executed	\$2,306,730.21	08-Jan-20
00285	Third-Party Property Rights Verification	Executed	\$5,956,386.19	08-Jan-20
Total			\$8,325,531.67	

CP 1 – Risk - Contingency Report

CP 1 – Risk - Contingency Report

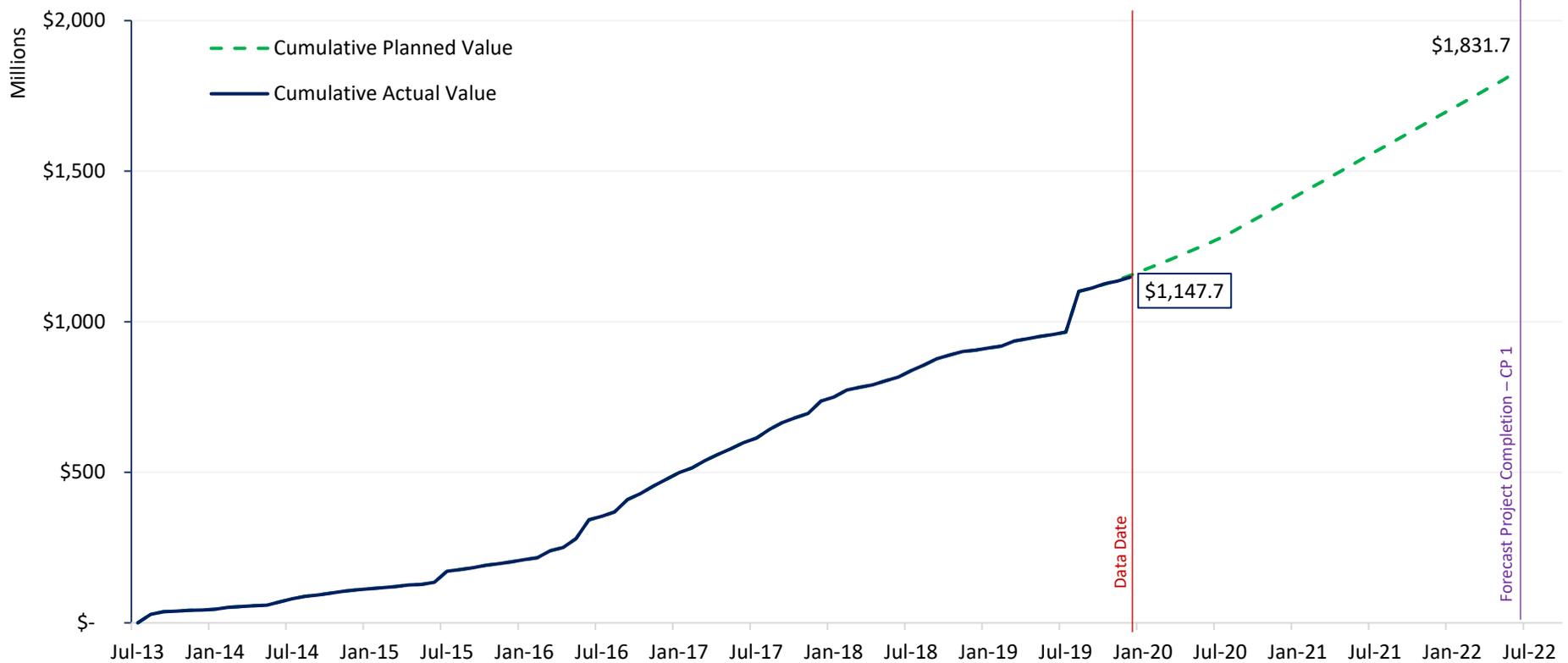


Notes:

1. The Program Baseline Update was presented to and accepted by the CHSRA Board in May 2019. The adoption of the Program Baseline Update resulted in changes to contingency amounts. The contingency drawdown curve has been revised to reflect updated contingency amount for the entire CP 1 Project.
2. Contract through December 31, 2019.

CP 1 – Earned Value

CP 1 – Planned vs. Actual Expenditures from Contract Award through Contract Completion (\$ Millions)



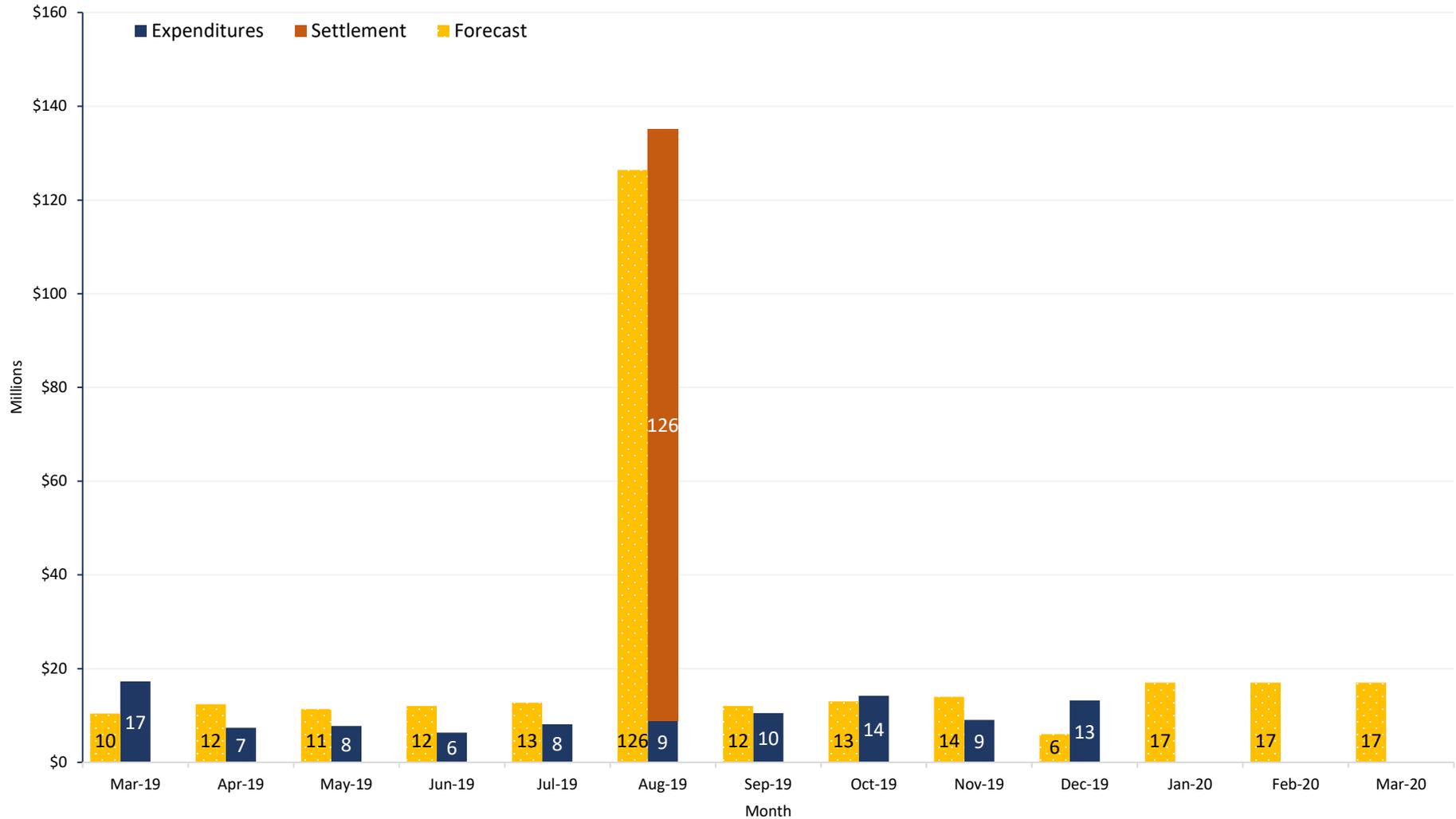
CP 1 – Projected Milestones

Milestone	Date	Milestone	Date
Main Design Complete	Jan-20	Environmental Clearance Complete	Feb-20
ROW Acquisition Complete	Nov-20	Utility Relocation Complete	Mar-21

- Notes:**
- The Planned Value and Contract Substantial Completion Date is based on the CP 1 Proposed Schedule as of December 2019. This is expected to be refined as future change orders are issued and a revised RBS is finalized.
 - The sudden increase in the cumulative value is due to Time Impact Analysis settlement.
 - The Current Contract Value at completion does not include unexecuted change orders including IPB, Herndon, SR99 section remaining works, and North Extension Revision.

CP 1 – Design-Build Planned vs. Actual Expenditures – Near Term

CP 1 – Fiscal Year Expenditures (\$ Millions)



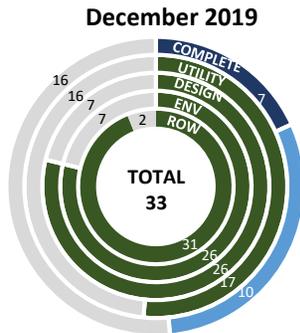
Notes:

1. Expenditures in the chart above are specific to the Design-Builder production and based on the certified invoice and do not include accrual adjustments.
2. The sudden increase in the cumulative value is due to Time Impact Analysis settlement.

CP 1 – Construction Progress

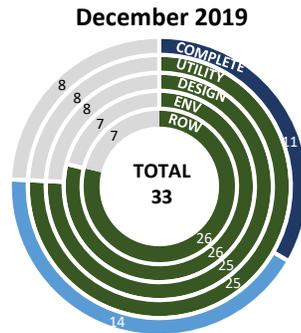
CP 1 – Construction Progress

Actual Structures



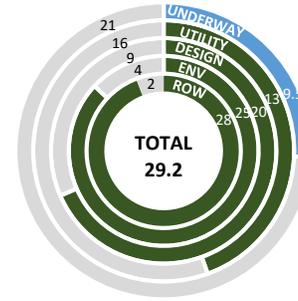
Cleared 52% | 17 Structures

Forecasted Structures



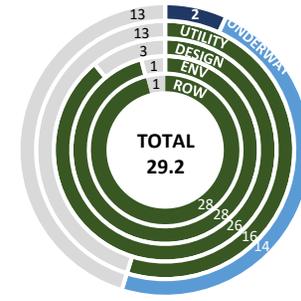
Cleared 76% | 25 Structures

December 2019



Cleared 32.5% | 9.5 Miles

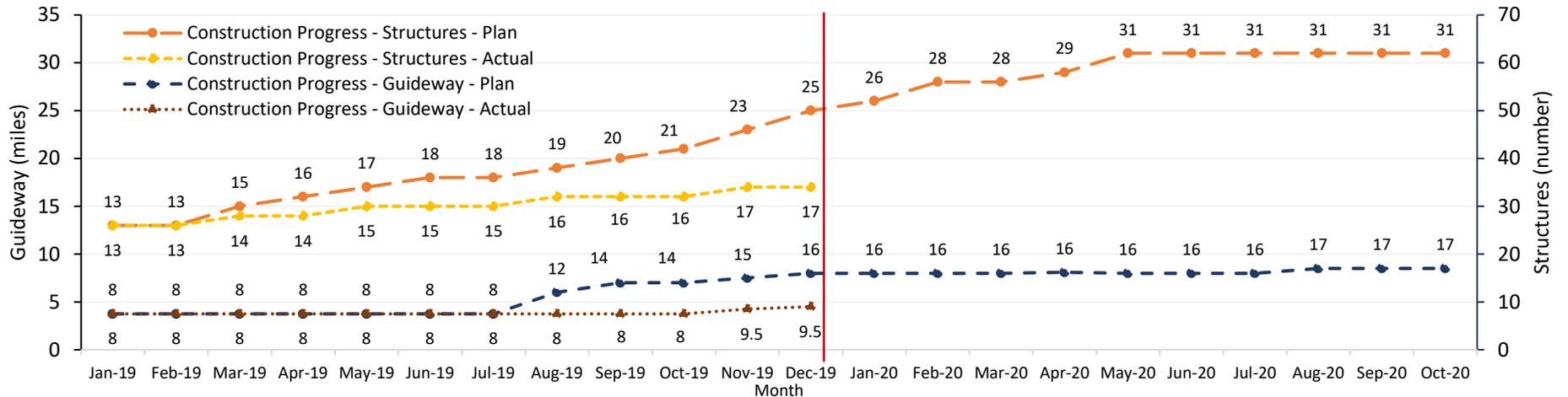
December 2019



Cleared 55% | 16 Miles

■ Cleared for Construction
 ■ Construction Underway
 ■ Construction Substantially Complete
 ■ Remaining

CP 1 – Construction Progress to Completion – Forecast vs. Actual

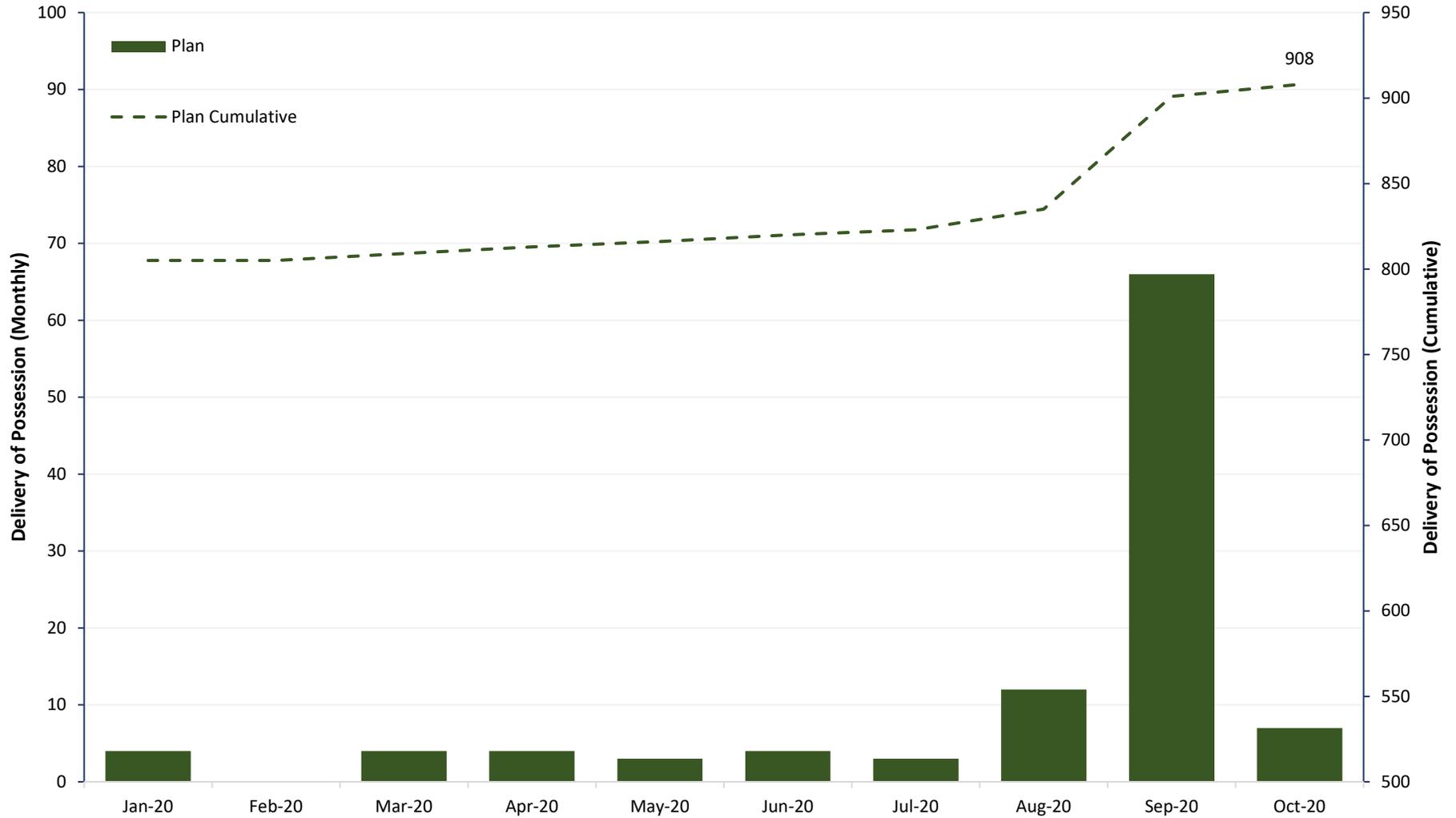


Notes:

1. Total Structures: 33 structures.
2. Total Guideway: 29 miles. (this does not include SR-99 section)
3. This forecast is based on the get to work plans developed in Jan 2019.

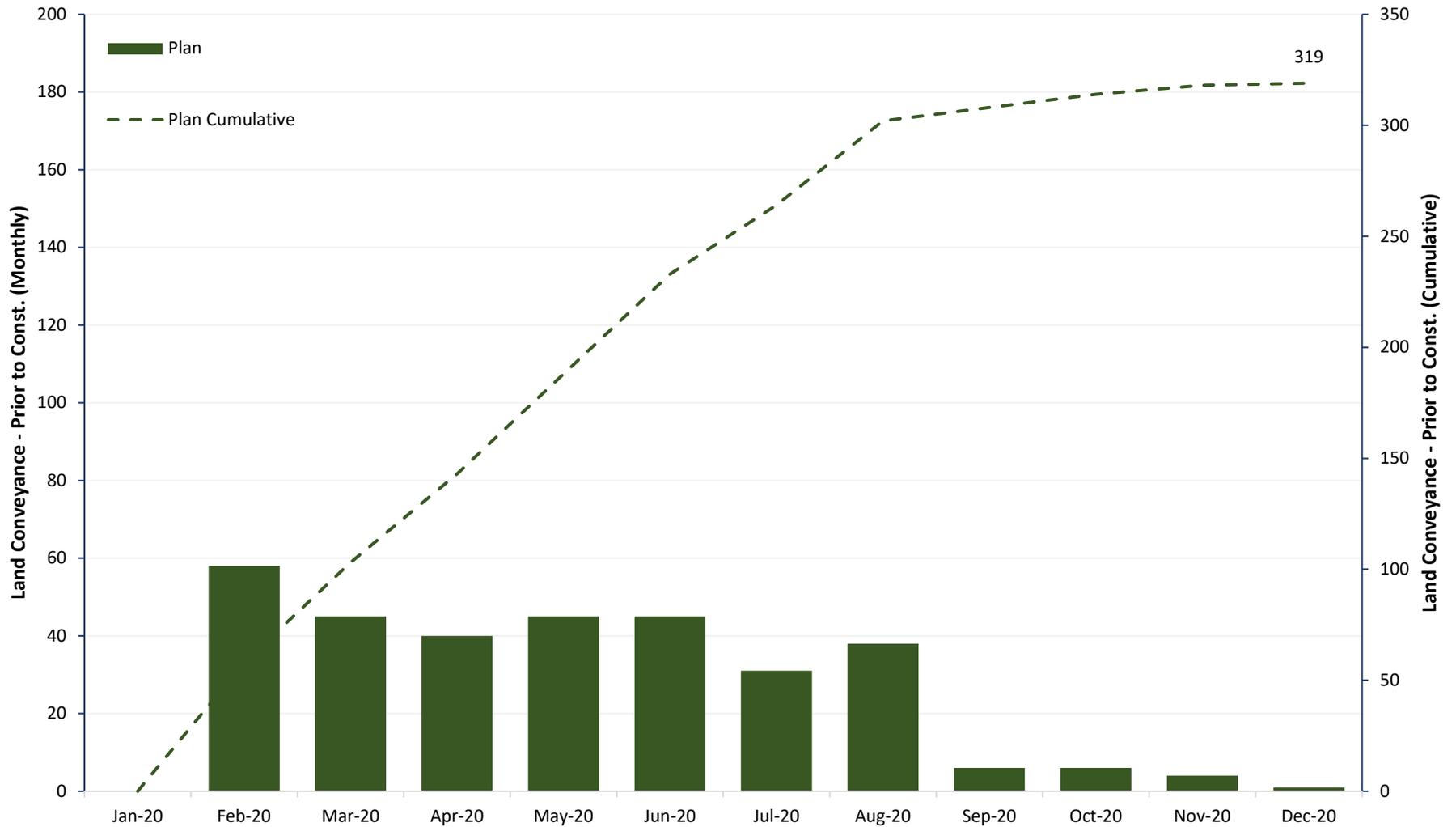
CP 1 – ROW Parcel Acquisition by Month – Plan

CP 1 – Parcel Acquisition by Month



CP 1 – ROW Land Right Conveyances Required Prior to Construction (PG&E, SCE, FID, FMFCD) by Month - Plan

CP 1 – Land Right Conveyance by Month



CONSTRUCTION PACKAGE 2-3 (CP 2-3) OVERVIEW

CP 2-3 – Design Build Contract Summary

Milestones

Milestone	Date
RFQ Date:	10/9/2013
SOQ Date:	12/13/2013
RFP Date:	4/3/2014
Proposal:	10/30/2014
Bid Open Date:	12/11/2014
Award Date:	6/10/2015
NTP 1 Date:	6/12/2015
NTP 2 Date:	7/25/2015
Original Completion Date:	8/19/2019
Current Completion Date:	4/18/2022

Contract Value

Description	Amount
Fixed Bid Price:	\$1,205,335,890.00
Provisional Sums:	\$160,000,000.00
Original Contract Price:	<u>\$1,365,335,890.00</u>
Executed Change Orders:	\$312,657,422.42
Current Contract Amount:	<u>\$1,677,993,312.42</u>
Approved Invoices to Date:	\$922,566,058.62
Remaining Contract Balance:	<u>\$755,427,253.80</u>

Contract Time Status

Description	Duration
Original Contract Days:	1,486
Extension of Time Awarded:	973
Current Contract Days:	2,459
Work Days Spent (thru 12/31/2019):	1,620

Expended to Date

Description	Percentage
Time:	65.9%
Dollars:	55.0%

Growth %

Description	Percentage
Time:	65.5%
Dollars:	22.9%

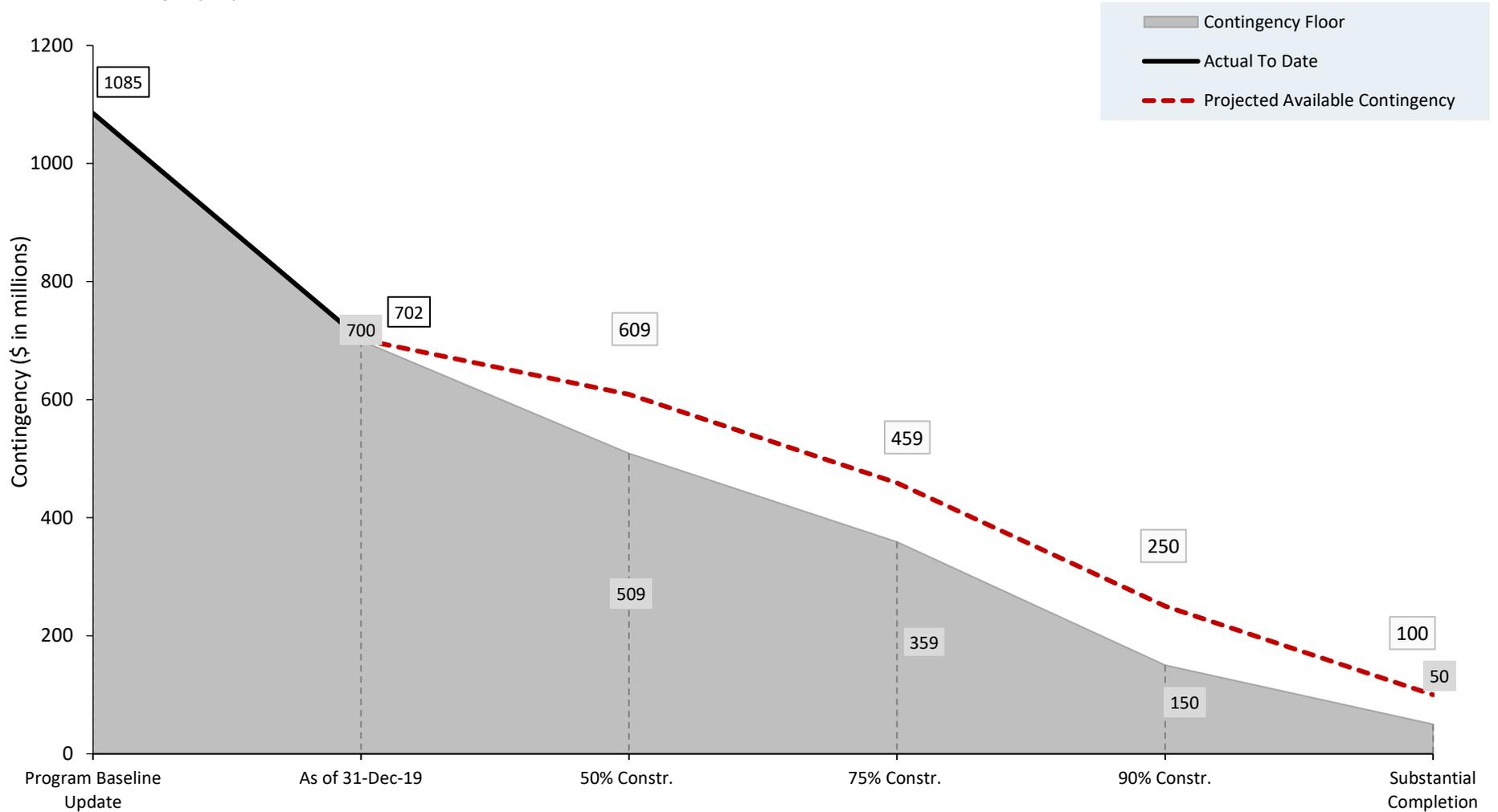
CP 2-3 – Executed Change Order Status

CP 2-3 – Executed Change Order Status

CO Number	Title	Change Status	Amount	Executed Date
00116	Davis Ave. Ancillary Redesign	Executed	\$40,219.00	05-Dec-19
00106	Caltrans Median Study	Executed	\$133,750.00	05-Dec-19
00111	SR43 Crossing Tule River-3H-17	Executed	\$1,123,500.00	05-Dec-19
00086.7	Private Irrigation Crossing S 1	Executed	\$244,872.00	06-Dec-19
00010.9	TCO Sub UA 1.07-Ave. 24 Reconstruction	Executed	\$1,343,756.00	06-Dec-19
00076.5	Private Irrigation Crossings Design	Executed	\$255,685.00	06-Dec-19
00121	Hanford Viaduct Reallocation	Executed	\$0.00	14-Dec-19
Total			\$3,141,782.00	

CP 2-3 – Risk - Contingency Report

CP 2-3 – Risk - Contingency Report

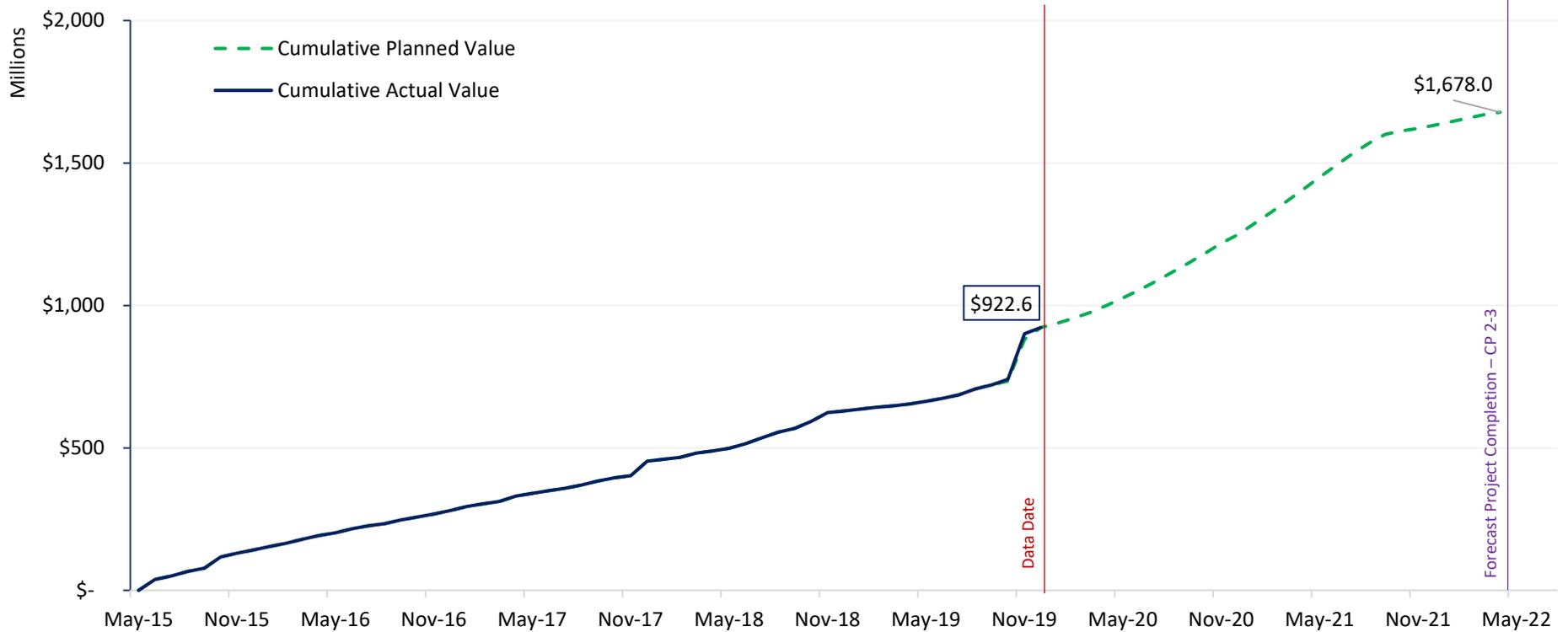


Notes:

1. The Program Baseline Update was presented to and accepted by the CHSRA Board in May 2019. The adoption of the Program Baseline Update resulted in changes to contingency amounts. The contingency drawdown curve has been revised to reflect updated contingency amount for the entire CP 2-3 Project.
2. Contract through December 31, 2019.

CP 2-3 – Earned Value

CP 2-3 – Planned vs. Actual Expenditures from Contract Award through Contract Completion (\$ Millions)



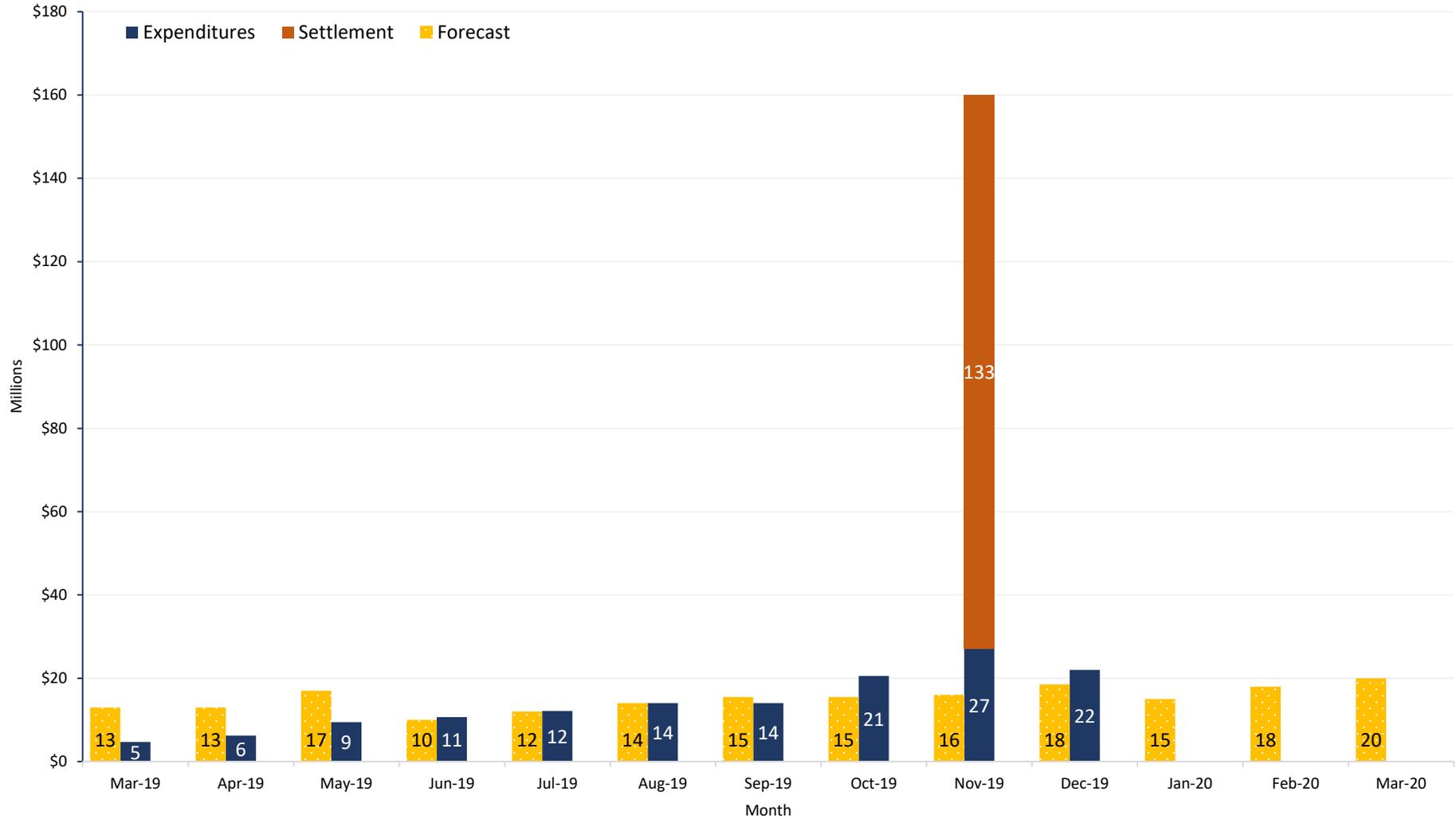
CP 2-3 – Projected Milestones

Milestone	Date	Milestone	Date
Main Design Complete	May-20	Environmental Clearance Complete	Jan-20
ROW Acquisition Complete	Jan-21	Utility Relocation Complete	Mar-21

- Notes:**
1. The Planned Value and Contract Substantial Completion Date is based on the CP 2-3 Proposed Schedule as of December 2019. This is expected to be refined as future change orders are issued and a revised RBS is finalized.
 2. The sudden increase in the cumulative value is due to Time Impact Analysis settlement.
 3. The Current Contract Value does not include unexecuted change orders including Project 517, the latest TIA settlement, IPB change orders.

CP 2-3 – Design-Build Planned vs. Actual Expenditures – Near Term

CP 2-3 – Fiscal Year Expenditures (\$ Millions)



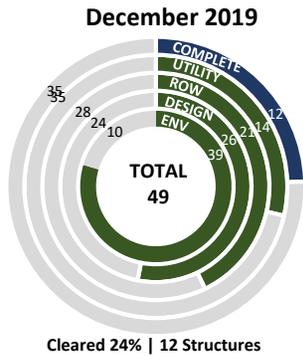
Notes:

1. Expenditures in the chart above are specific to the Design-Builder production and based on the certified invoice and do not include accrual adjustments.
2. The sudden increase in the cumulative value is due to Time Impact Analysis settlement.

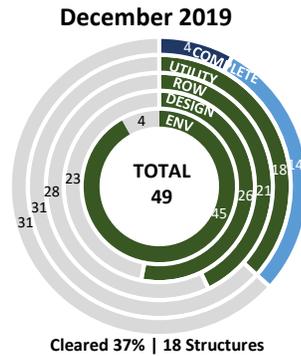
CP 2-3 – Construction Progress

CP 2-3 – Construction Progress

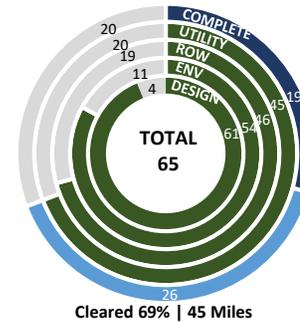
Actual Structures



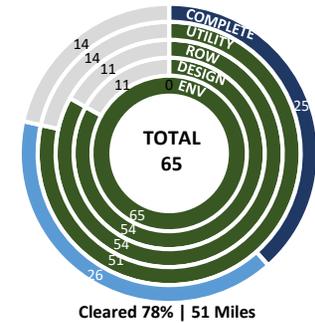
Forecasted Structures



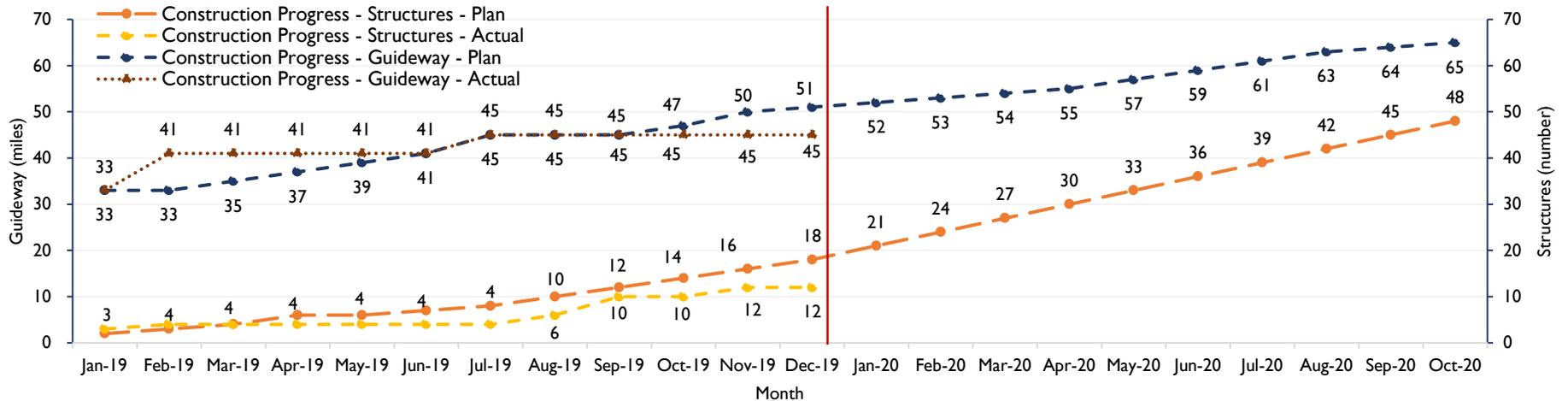
December 2019



December 2019



CP 2-3 – Construction Progress to Completion – Forecast vs. Actual

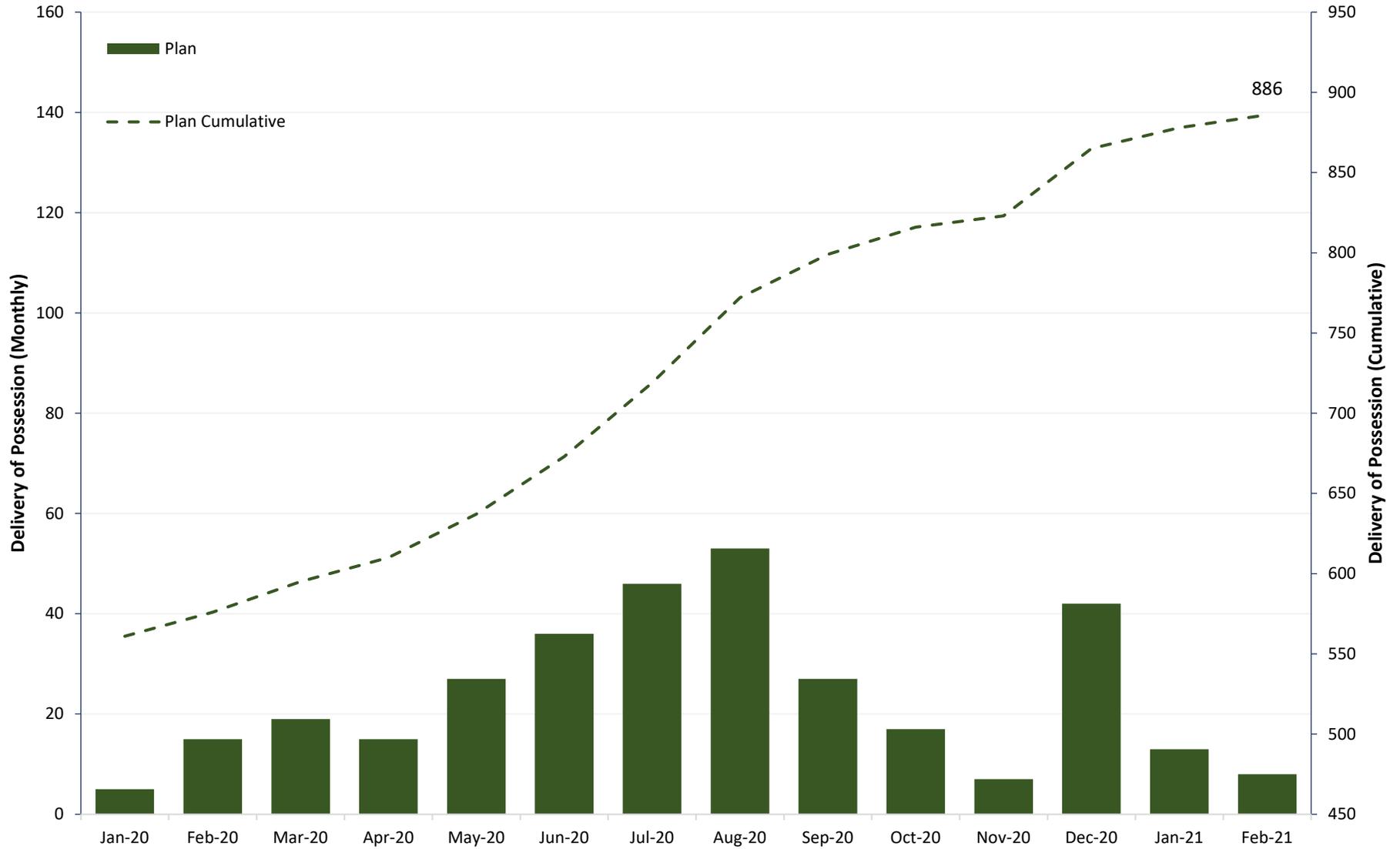


Notes:

- Total Structures: 49 each. This count has been reduced from 50 due to combining the structures resulting from Project 517.
- Total Guideway: 65 miles.
- This forecast is based on the get to work plans developed in Jan 2019.

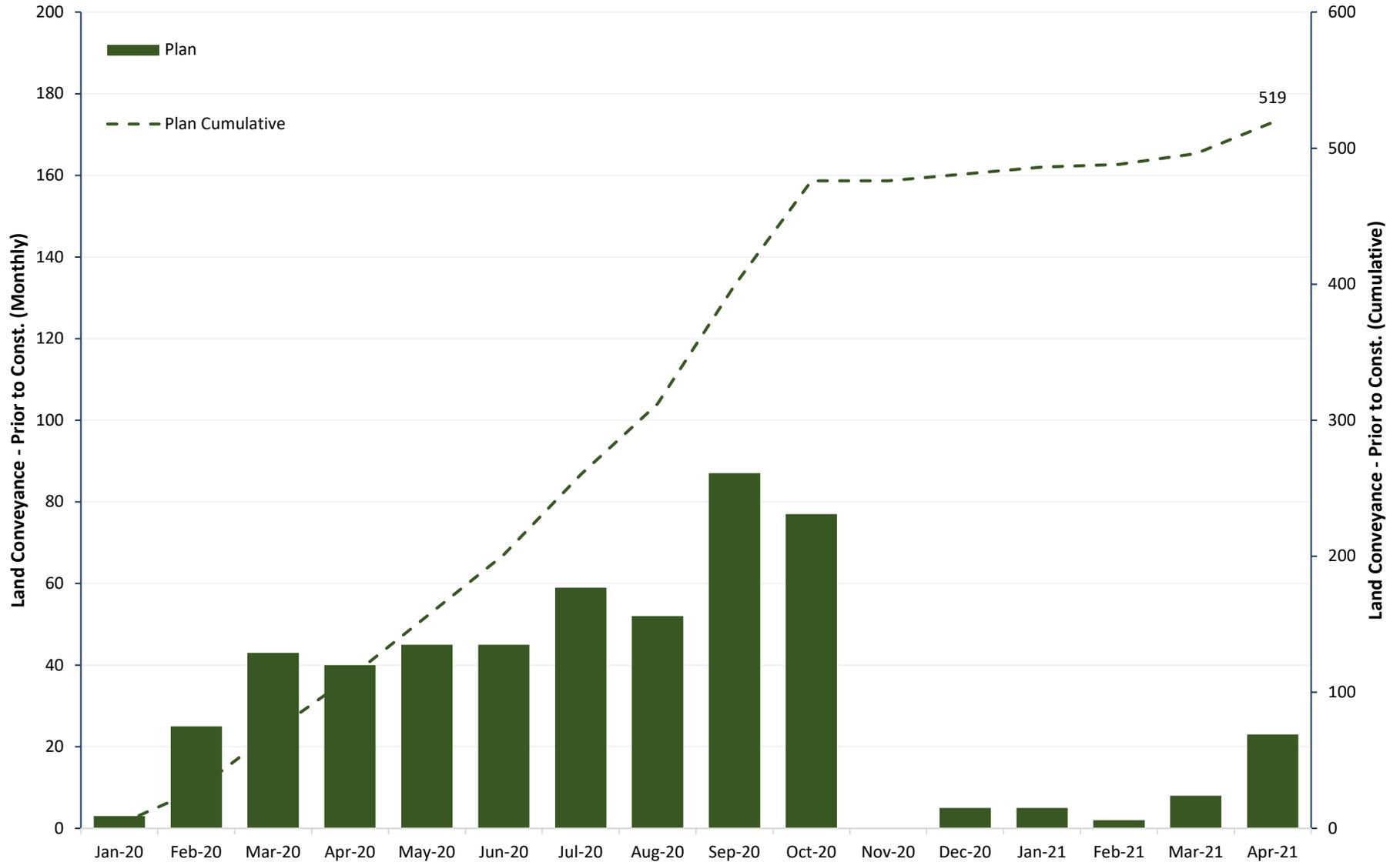
CP 2-3 – ROW Parcel Acquisition by Month – Plan

CP 2-3 – Parcel Acquisition by Month



CP 2-3 – ROW Land Right Conveyances Required Prior to Construction (PG&E, SCE, FID, FMFCD) by Month - Plan

CP 2-3 – Land Right Conveyance by Month



CONSTRUCTION PACKAGE 4 (CP 4) OVERVIEW

CP 4 – Design Build Contract Summary

Milestones

Milestone	Date
RFQ Date:	11/20/2014
SOQ Date:	1/30/2015
RFP Date:	5/27/2015
Proposal:	11/25/2015
Bid Open Date:	1/5/2016
Award Date:	2/29/2016
LNTP Date:	3/1/2016
NTP Date:	4/15/2016
Original Completion Date:	6/3/2019
Current Completion Date:	6/30/2021

Contract Value

Description	Amount
Fixed Bid Price:	\$337,247,000.00
Provisional Sums:	\$107,000,000.00
Original Contract Price:	\$444,247,000.00
Executed Change Orders:	\$81,036,631.02
Current Contract Amount:	\$525,283,631.02
Approved Invoices to Date ² :	\$248,993,871.00
Remaining Contract Balance:	\$276,289,760.02

Contract Time Status

Description	Duration ¹
Original Contract Days:	1,144
Extension of Time Awarded:	757
Current Contract Days:	1,901
Work Days Spent (thru 12/31/2019):	1,354

Expended to Date

Description	Percentage
Time:	71.3%
Dollars:	47.4%

Growth %

Description	Percentage
% Time Growth:	66.2%
% Dollars Growth:	18.2%

Notes:

1. Calendar Days.
2. Included actuals through November and Estimate for January 2020.

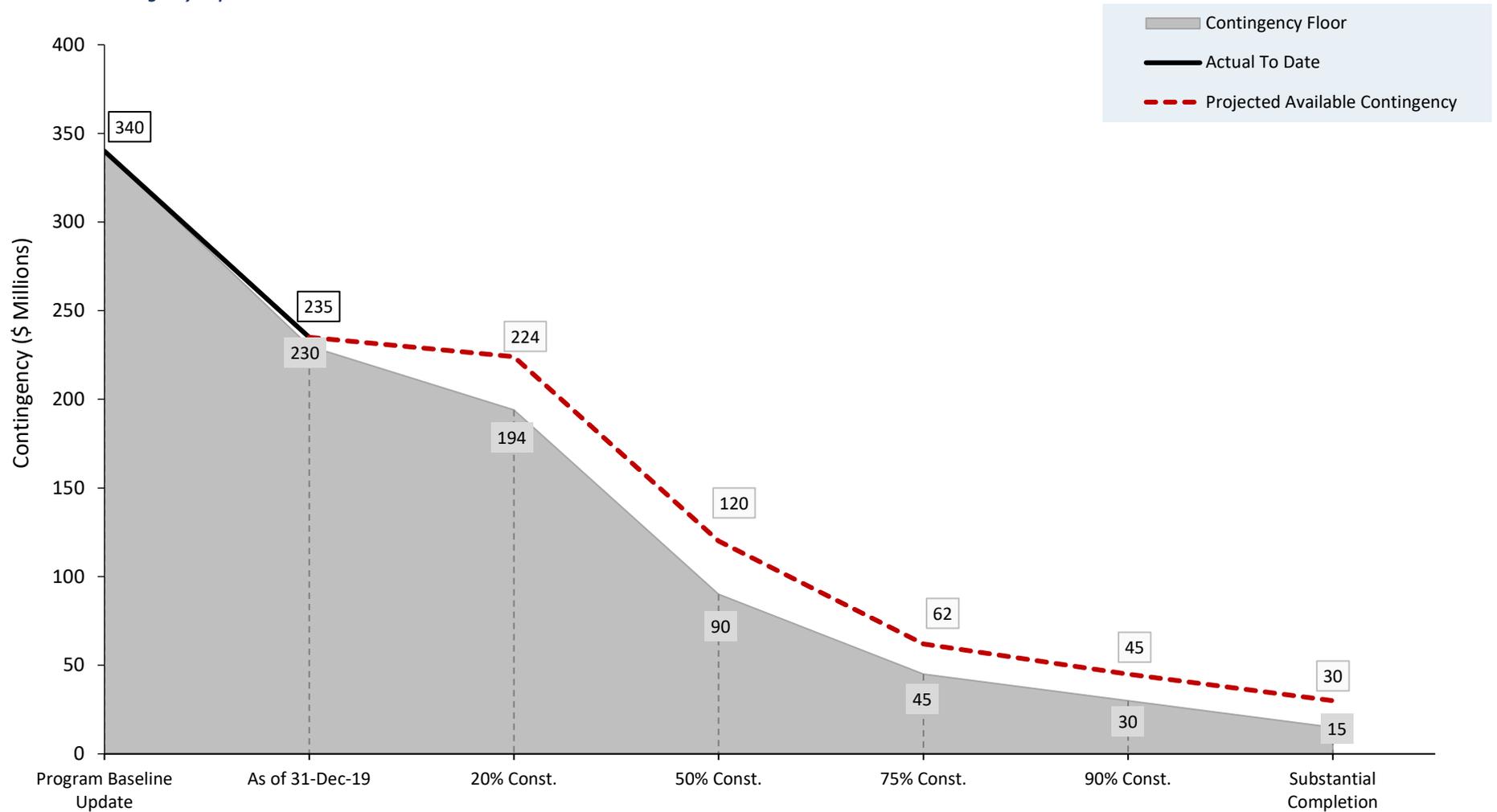
CP 4 – Executed Change Order Status

CP 4 – Executed Change Order Status

CO Number	Title	Change Status	Amount	Executed Date
00048	Kimberlina CIDH Piling Work Resequencing	Executed	\$265,860.94	04-Dec-19
00018R3	Additional Environmental Surveys & Investigation	Executed	\$1,875,000.00	04-Dec-19
00039R1	IPB Construction	Executed	\$13,977,559.30	10-Dec-19
00049	Water Service at Parcel FB-15-00-28	Executed	\$83,978.62	10-Dec-19
Total:			\$16,202,398.86	

CP 4 – Risk - Contingency Report

CP 4 – Risk - Contingency Report

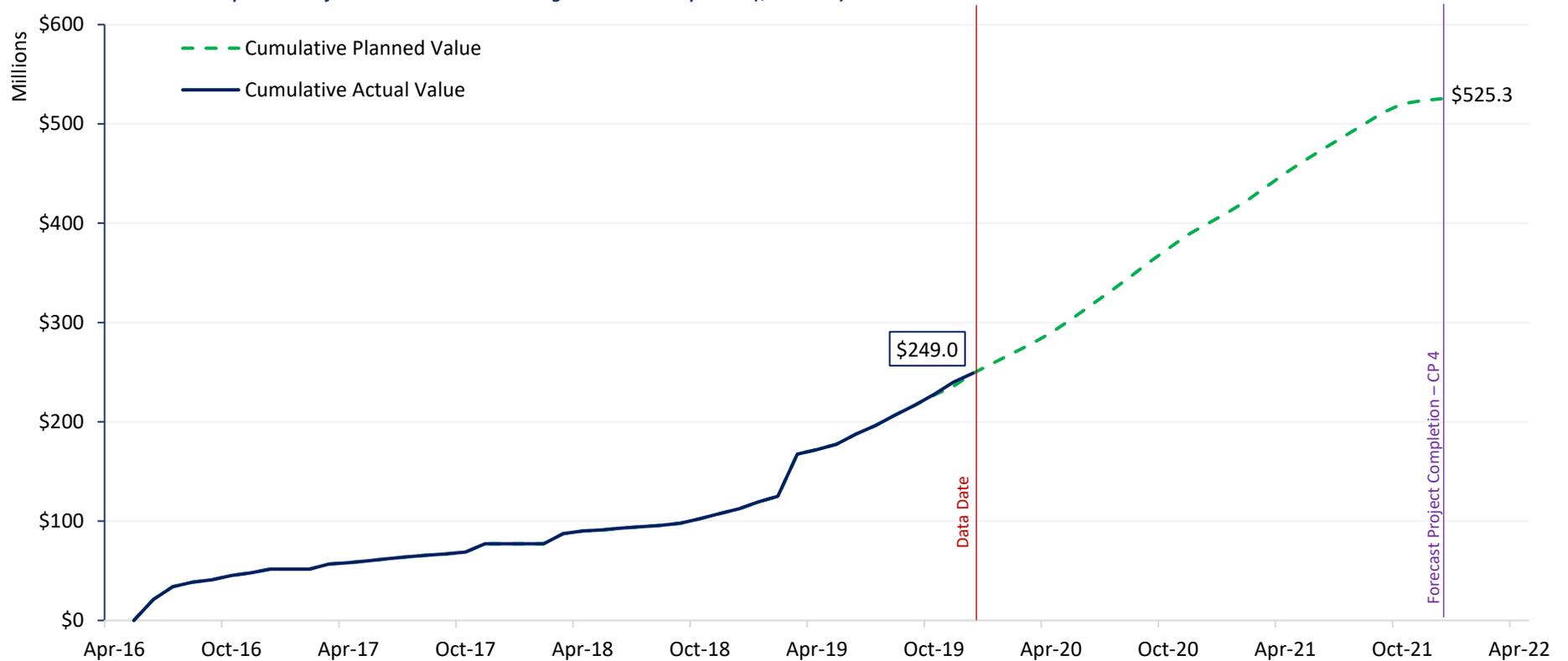


Notes:

1. The Program Baseline Update was presented to and accepted by the CHSRA Board in May 2019. The adoption of the Program Baseline Update resulted in changes to contingency amounts. The contingency drawdown curve has been revised to reflect updated contingency amount for the entire CP 4 Project.
2. Contract through December 31, 2019.

CP 4 – Earned Value

CP 4 – Planned vs. Actual Expenditures from Contract Award through Contract Completion (\$ Millions)



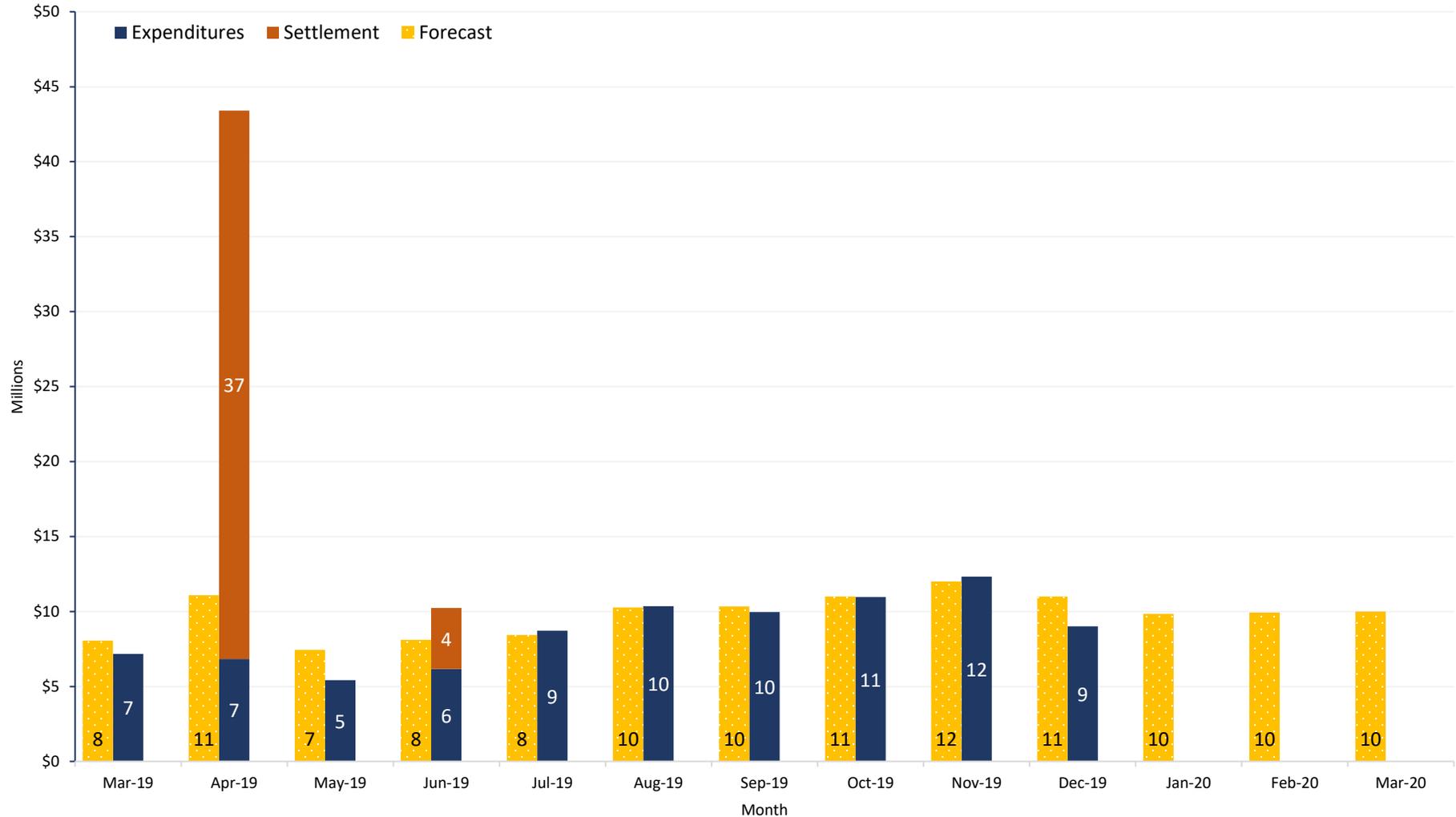
CP 4 – Projected Milestones

Milestone	Date	Milestone	Date
Main Design Complete	Feb-20	Environmental Clearance Complete	Mar-20
ROW Acquisition Complete	Dec-20	Utility Relocation Complete	Mar-21

- Notes:**
- The Planned Value and Contract Substantial Completion Date is based on the CP 4 Proposed Schedule as of December 2019. This is expected to be refined as future change orders are issued and a revised RBS is finalized.
 - The above contract value does not include unexecuted change orders including SR46 BNSF structure and IPB.

CP 4 – Design-Build Planned vs. Actual Expenditures – Near Term

CP 4 – Fiscal Year Expenditures (\$ Millions)



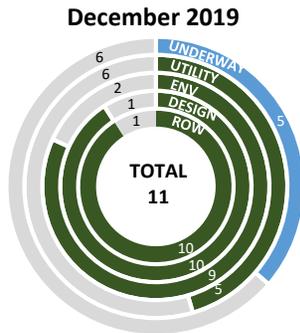
Notes:

1. Expenditures in the chart above are specific to the Design-Builder production and based on the certified invoice and do not include accrual adjustments.
2. The sudden increase in the cumulative value is due to Time Impact Analysis settlement.

CP 4 – Construction Progress

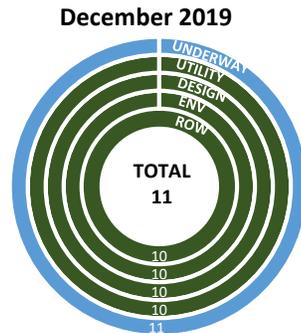
CP 4 – Construction Progress

Actual Structures



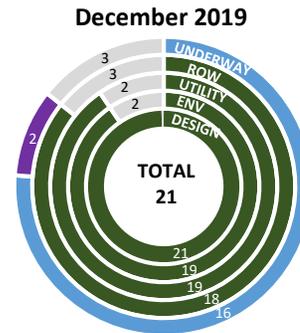
Cleared 45% | 5 Structures

Forecasted Structures



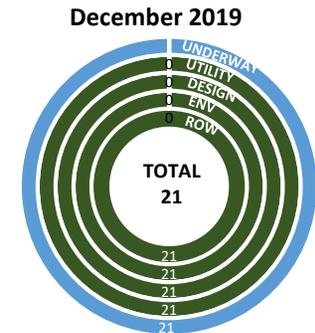
Cleared 100% | 11 Structures

Actual Guideways



Cleared 86% | 18 Miles

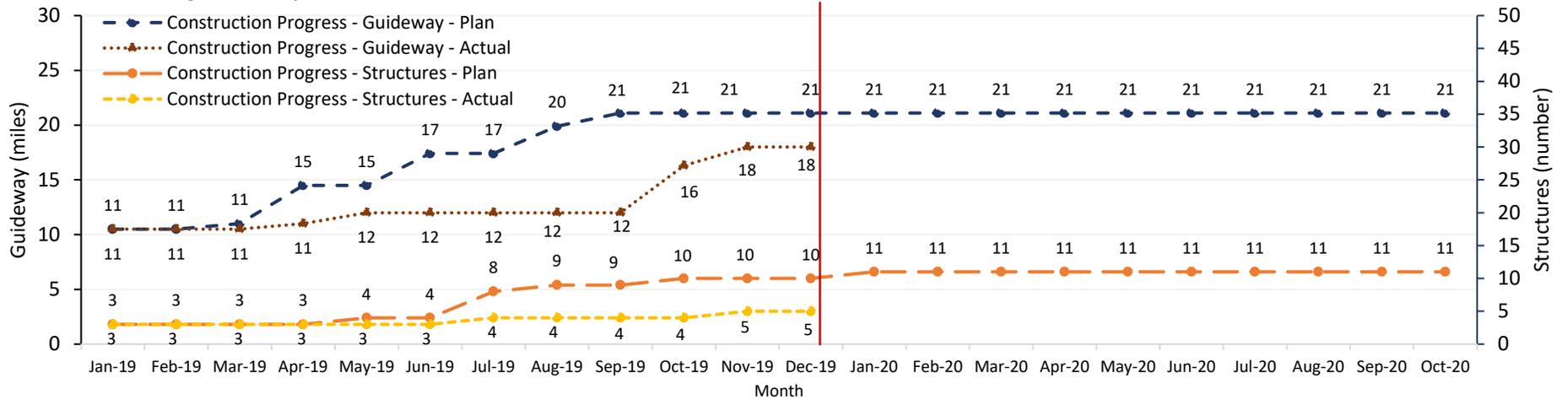
Forecasted Guideways



Cleared 100% | 21 Miles



CP 4 – Construction Progress to Completion – Forecast vs. Actual

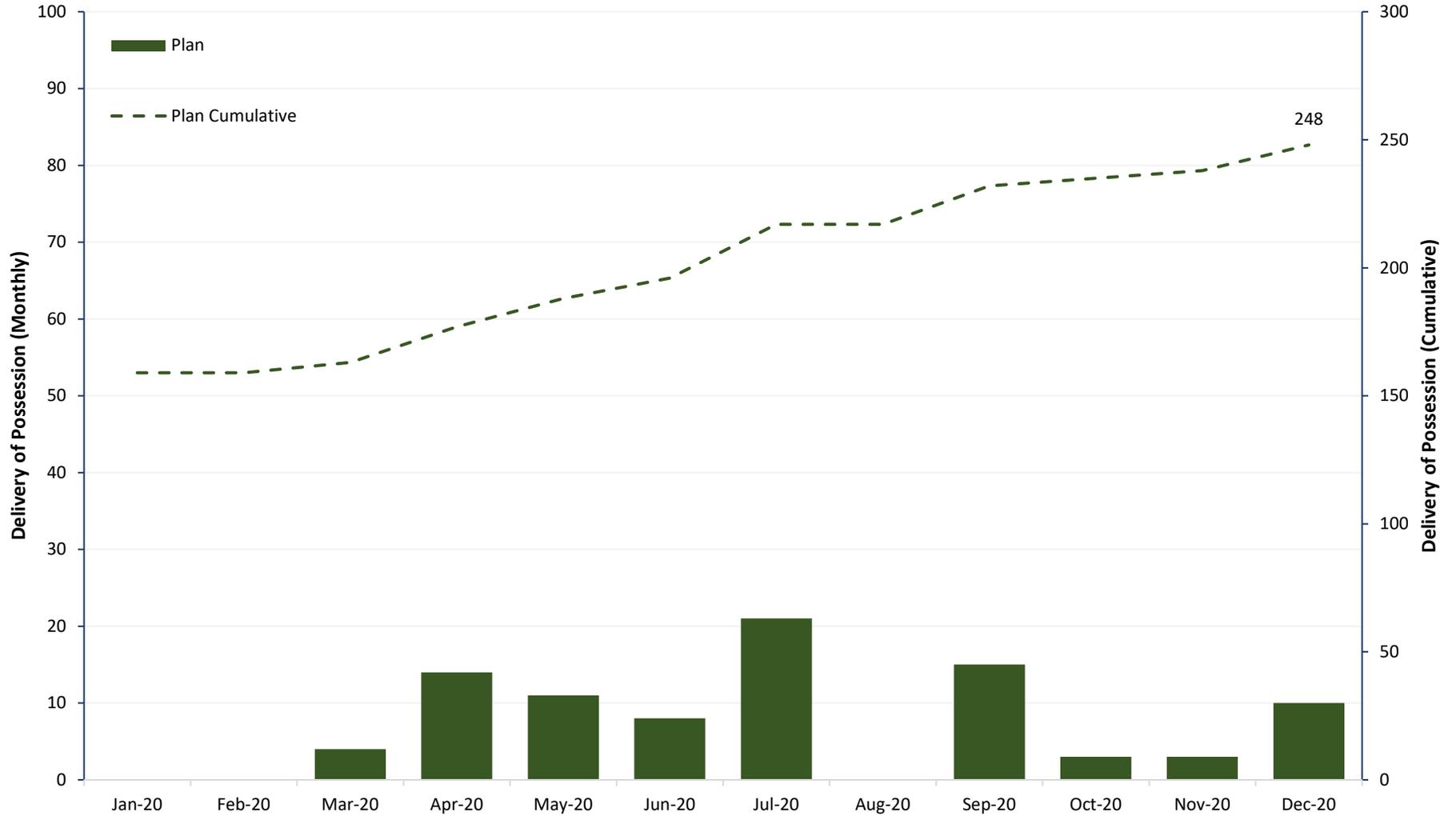


Notes:

1. Total Structures: 11 structures.
2. Total Guideway: 21 miles.
3. Two miles of guideway have been cleared but not started.
4. This forecast is based on the get to work plans developed in Jan 2019.

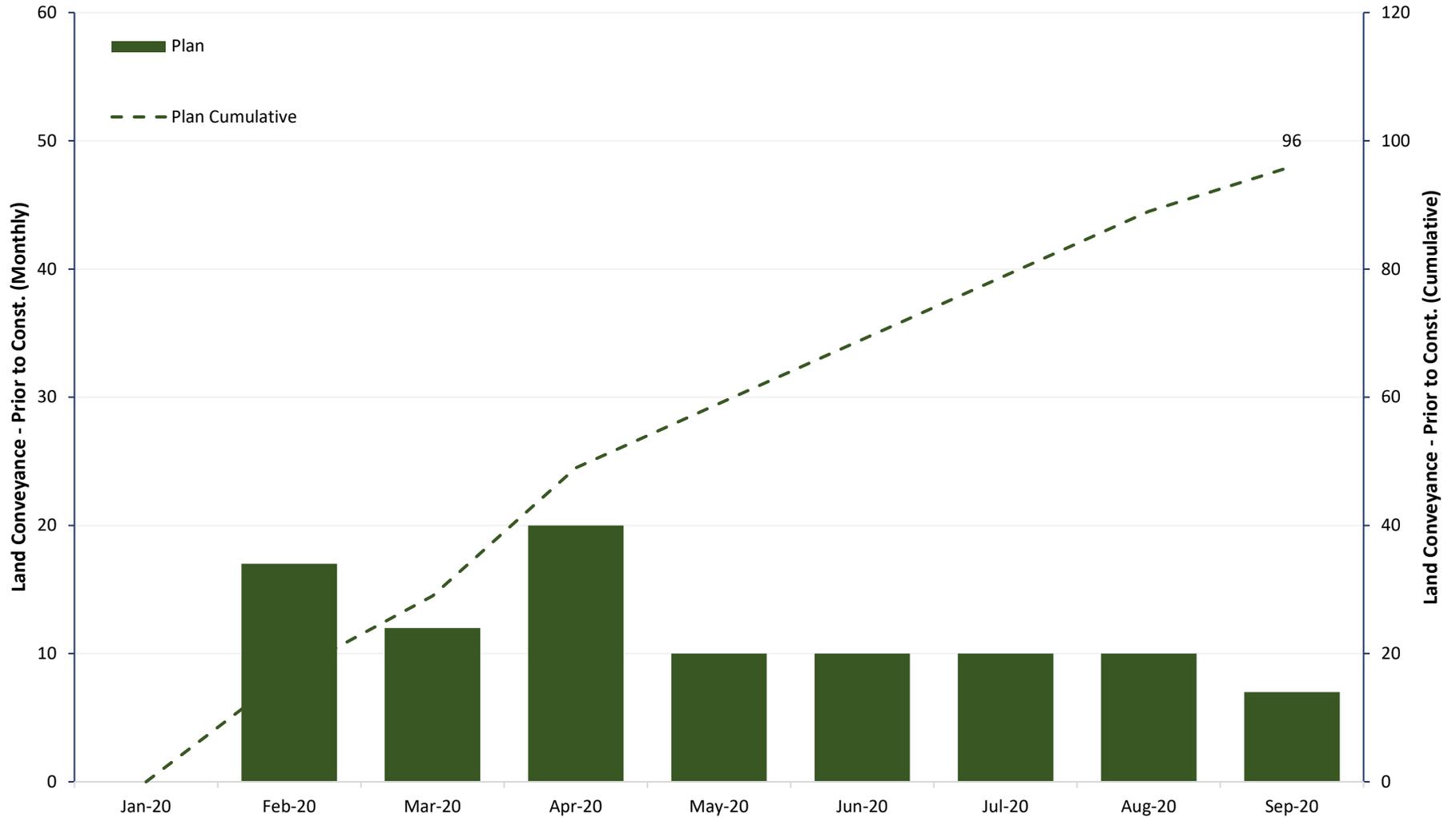
CP 4 – ROW Parcel Acquisition by Month – Plan

CP 4 – Parcel Acquisition by Month



CP 4 – ROW Land Right Conveyances Required Prior to Construction (PG&E, SCE, FID, FMFCD) by Month - Plan

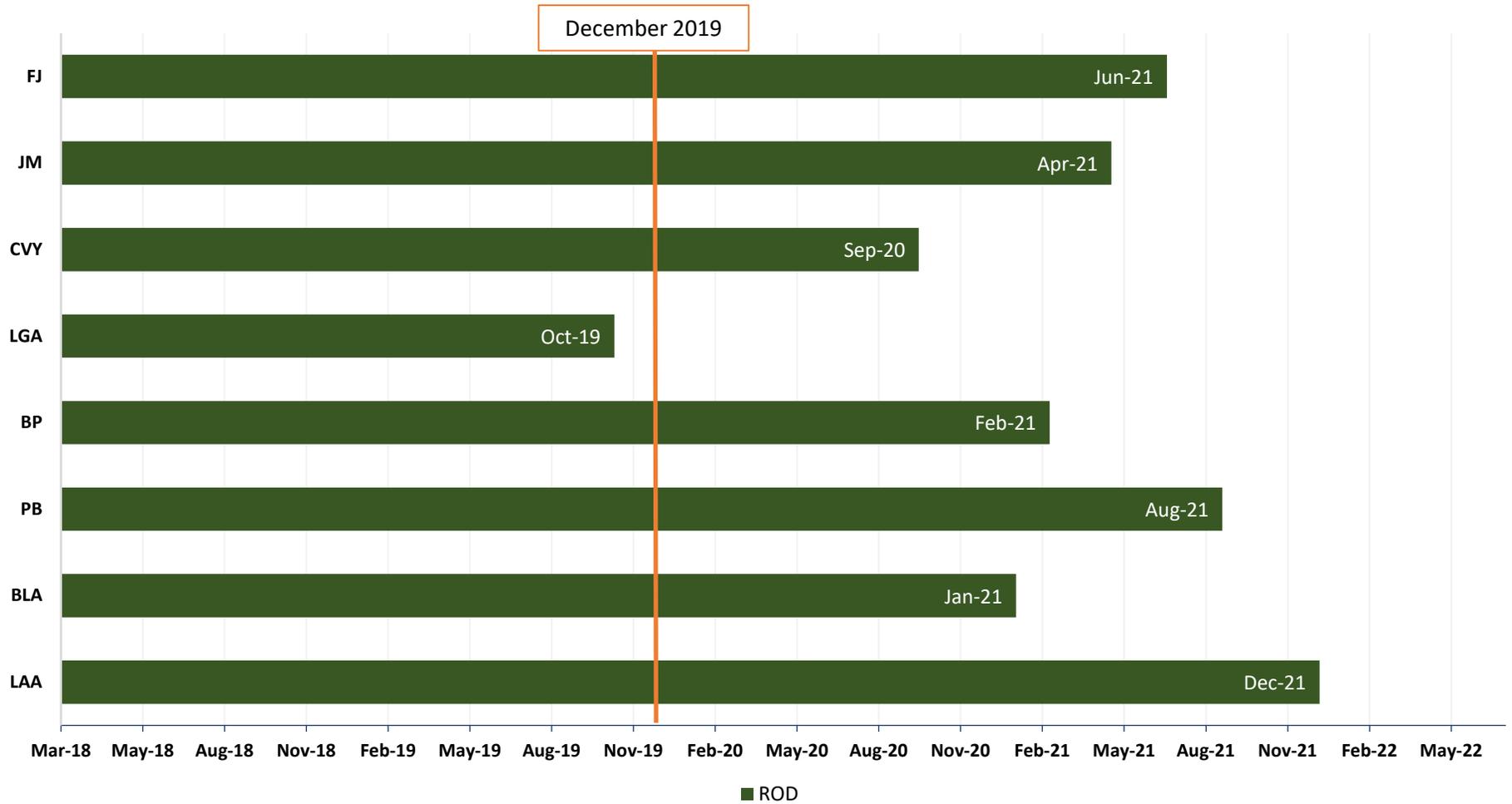
CP 4 – Land Right Conveyance by Month



Project Development Schedule – Record of Decision (ROD)

Phase 1 Environmental Approval Schedule

Environmental Approval NOD/ROD Schedules



Project Development Schedule (to ROD)

Program Priority	Segment	Progress	Complete Purpose & Need Statement		Complete Alternatives Analysis		Board Concurrence of Preliminary Preferred Alt. Draft EIR/EIS		Publish Draft EIR/EIS		Publish Final EIS & Obtain ROD		Date EIR/EIS To Be Completed	
			Number	Section	Due Dates	Last Month	Current	Last Month	Current	Last Month	Current	Last Month	Current	Last Month
Document Complete	Merced to Fresno	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%
Document Complete	Fresno to Bakersfield	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%
Document Complete	CV Electrical Interconnections	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%
1	San Francisco to San Jose	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Mar-20 Apr-20 45%	Apr-20 Apr-20 47%	Apr-21 Jun-21 0%	Jun-21 Jun-21 0%	Jun-21	Jun-21
2	San Jose to Merced	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Dec-19 Mar-20 50%	Mar-20 Mar-20 53%	Dec-20 Apr-21 0%	Apr-21 Apr-21 0%	Apr-21	Apr-21
3	Central Valley Wye (M-F)	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Apr-20 Sep-20 20%	Apr-20 Sep-20 50%	Sep-20	Sep-20
4	Locally Generated Alternative (F-B)	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%
5	Los Angeles to Anaheim	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Nov-20 Nov-20 68%	Nov-20 Jan-21 68%	Dec-21 Dec-21 0%	Dec-21 Dec-21 0%	Dec-21	Dec-21
6	Burbank to Los Angeles	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Feb-20 Feb-20 80%	Feb-20 Apr-20 80%	Aug-20 Jan-21 0%	Jan-21 Jan-21 0%	Jan-21	Jan-21
7	Palmdale to Burbank	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Dec-19 Jan-20 64%	Feb-20 Feb-20 66%	Feb-21 Feb-21 0%	Aug-21 Aug-21 ¹ 0%	Aug-21	Aug-21
8	Bakersfield to Palmdale	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Jul-19 Mar-20 85%	Jan-20 Jan-20 87%	Jun-20 Jun-20 0%	Feb-21 Feb-21 ² 0%	Feb-21	Feb-21
9	HMF	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Apr-16 TBD 0%	Apr-16 TBD 0%	Sep-16 TBD 0%	Sep-16 TBD 0%	Feb-21 TBD 0%	Feb-21 TBD 0%	TBD	TBD

Notes:

1. Actual 6-month delay (external agency coordination: Una Lake). Developing mitigation plans to minimize or eliminate associated schedule impacts.
2. Actual 8-month delay (external agency coordination: CCNM). Developing mitigation plans to minimize or eliminate associated schedule impacts.

Project Development – Key Actions

During December, the Authority conducted EIR/EIS document reviews for several project sections. This included Finishing Team reviews for distributing to the cooperating agencies the San Jose to Merced and San Francisco to San Jose Project Section Administrative Draft EIR/EIS documents. The NEPA Assignment Team also conducted its review responsibilities for the Bakersfield to Palmdale Administrative Draft EIR/EIS and completed a review for the Burbank to Los Angeles Administrative Draft EIR/EIS. For permitting, work continued to obtain environmental approvals (e.g., a Biological Opinion from the U.S. Fish and Wildlife Service) and Valley-to-Valley permits needed for project construction.

Project Development – Key Actions Summary

Project Section	Key Actions
San Francisco to San Jose	<ul style="list-style-type: none"> Initiated Finishing Team review of the Administrative Draft EIR/EIS November 4. Prepared Vistacion Creek Feasibility analyses to support environmental permitting with the Bay Conservation and Development Commission as part of ongoing coordination efforts. Checkpoint C Submittal #4 was submitted to legal counsel and CEQA/NEPA review.
San Jose to Merced	<ul style="list-style-type: none"> Distributed the administrative draft EIR/EIS to the cooperating/responsible agencies on November 27 for 30-day review. Updated Checkpoint C report and associated technical studies for consistent with U.S. Army Corps of Engineers (USACE) preliminary jurisdictional determination. Met with California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) staff to discuss wildlife corridor analysis and approach for mitigation impacts for Soap Lake and Grasslands Ecological Area Important Bird Areas.
Central Valley Wye	<ul style="list-style-type: none"> Prepared and sent for legal review draft responses for over 600 comments received by the Authority following public circulation of the Draft EIR/EIS. Sent the Checkpoint C closure letter to the U.S. Environmental Protection Agency (USEPA) and USACE on November 26.
Locally Generated Alternative	<ul style="list-style-type: none"> The Combined Supplemental Record of Decision and Final Supplemental Environmental Impact Statement was released to the public and noticed in the Federal Register on November 8, 2019. Readied for Authority review and approval Section 404 and Section 401 Clean Water Act permits and Section 1602 permit for project construction.
Bakersfield to Palmdale	<ul style="list-style-type: none"> Finalized project footprint for the Refined CCNM Design Option and began the environmental analysis. Incorporated the Refined CCNM Design Option into the Draft EIR/EIS. Preparing for public meetings in January prior to circulation of the Draft EIR/EIS to the public.
Palmdale to Burbank	<ul style="list-style-type: none"> Coordination continued with USACE and USEPA on Checkpoint B (for approvals and permits) with regard to impacts to Una Lake. Completed Record Set Preliminary Engineering for Project Definition (PEPD) documents and made available to FRA for review and comment. Submitted compiled administrative draft EIR/EIS for Finishing Team review. Cooperating agency review of the EIR/EIS is planned for January 2020.
Burbank to Los Angeles	<ul style="list-style-type: none"> Continued to conduct consultation with municipalities and agencies within the project section by providing preliminary engineering plans for their review. From this review, refinements were made to the construction phasing plans. Cooperating agency review of the EIR/EIS was completed in December 2019. Comments are being incorporated into the Draft EIR/EIS.
Los Angeles to Anaheim	<ul style="list-style-type: none"> Coordination continued with BNSF on project elements and analysis methods for inclusion in the draft EIR/EIS. Continued coordination with Metro, Metrolink and other stakeholder agencies on shared corridor strategies.