

# CALIFORNIA HIGH-SPEED RAIL: PROJECT UPDATE

Brian Kelly  
Chief Executive Officer  
May 20, 2021



# PROGRAM UPDATE

WHERE WE ARE NOW & WHERE WE ARE GOING

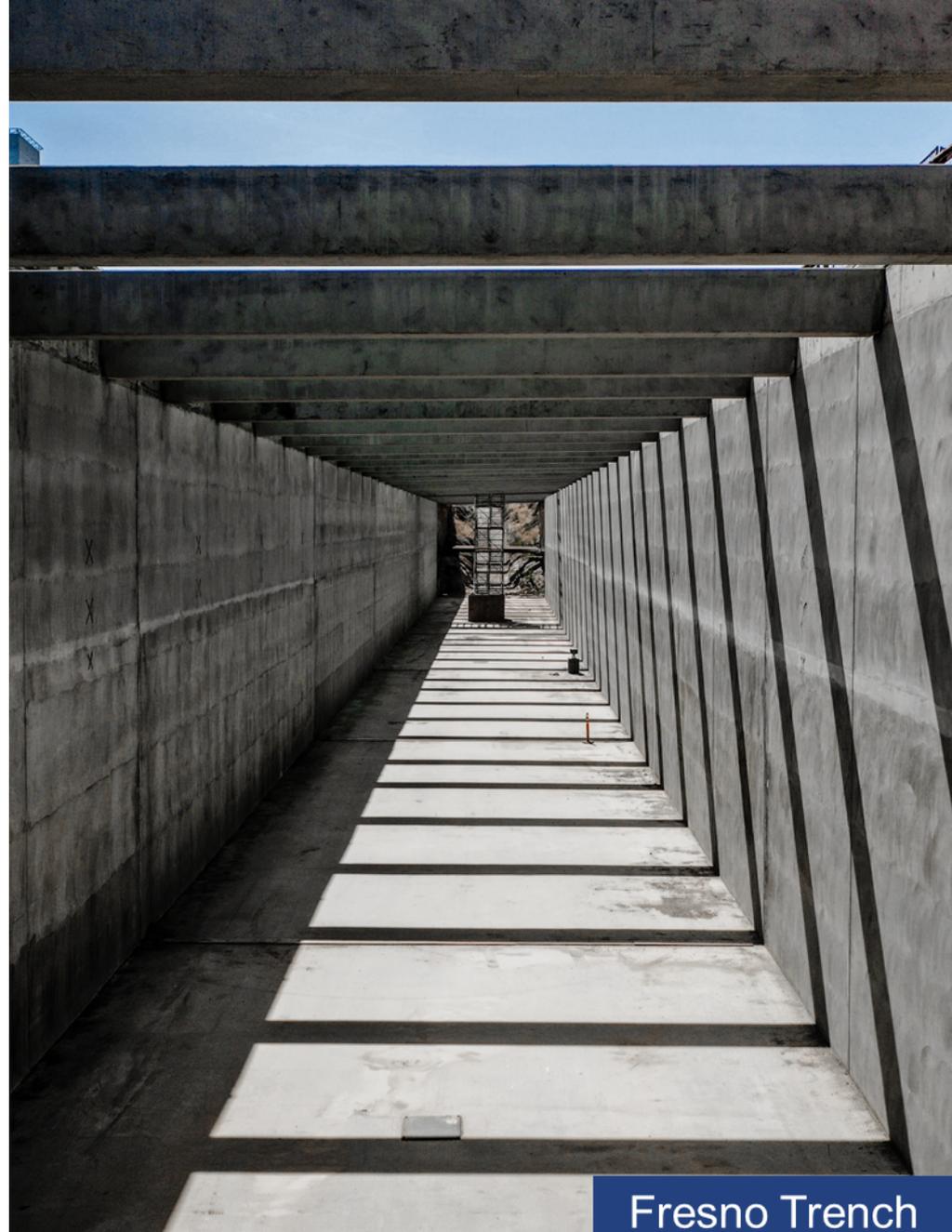
- **STATUS OF DESIGN FOR CONSTRUCTION**
- **PROGRESS OF RIGHT-OF-WAY**
- **ANTICIPATED SCOPE RELATED CHANGE ORDERS**
- **ANTICIPATED DISCUSSION ON 2021 PROGRAM BASELINE BUDGET**
  - » Staff will bring 2021 Program Baseline budget to the Board of Directors mid-year
  - » Revised budget will be necessary to get construction work done in the Central Valley
    - It will include program contingency, known cost increases (2020 Business Plan)



# PROGRAM UPDATE

## FUNDING BREAKDOWN

- **Proposition 1A (2008)**
  - » \$9.95 billion funding
  - » Remaining 4.2 B requested in 2021 Governor's May Revise Budget
- **Cap-and-Trade**
  - » 25% of annual proceeds appropriated to HSR through 2030
- **American Recovery and Reinvestment Act**
  - » \$2.5 billion awarded by Obama Administration
  - » Required construction to begin in the Central Valley
  - » Required HSR to spend grant money by September 2017 (complete)
  - » Pushed Authority into construction before design and right-of-way were complete
  - » Required Authority to match funding by December 2022 (complete)
- **FY 10 grant**
  - » \$929 million
  - » Entered litigation after Trump Administration rescinded money
  - » In active settlement negotiations with Biden Administration

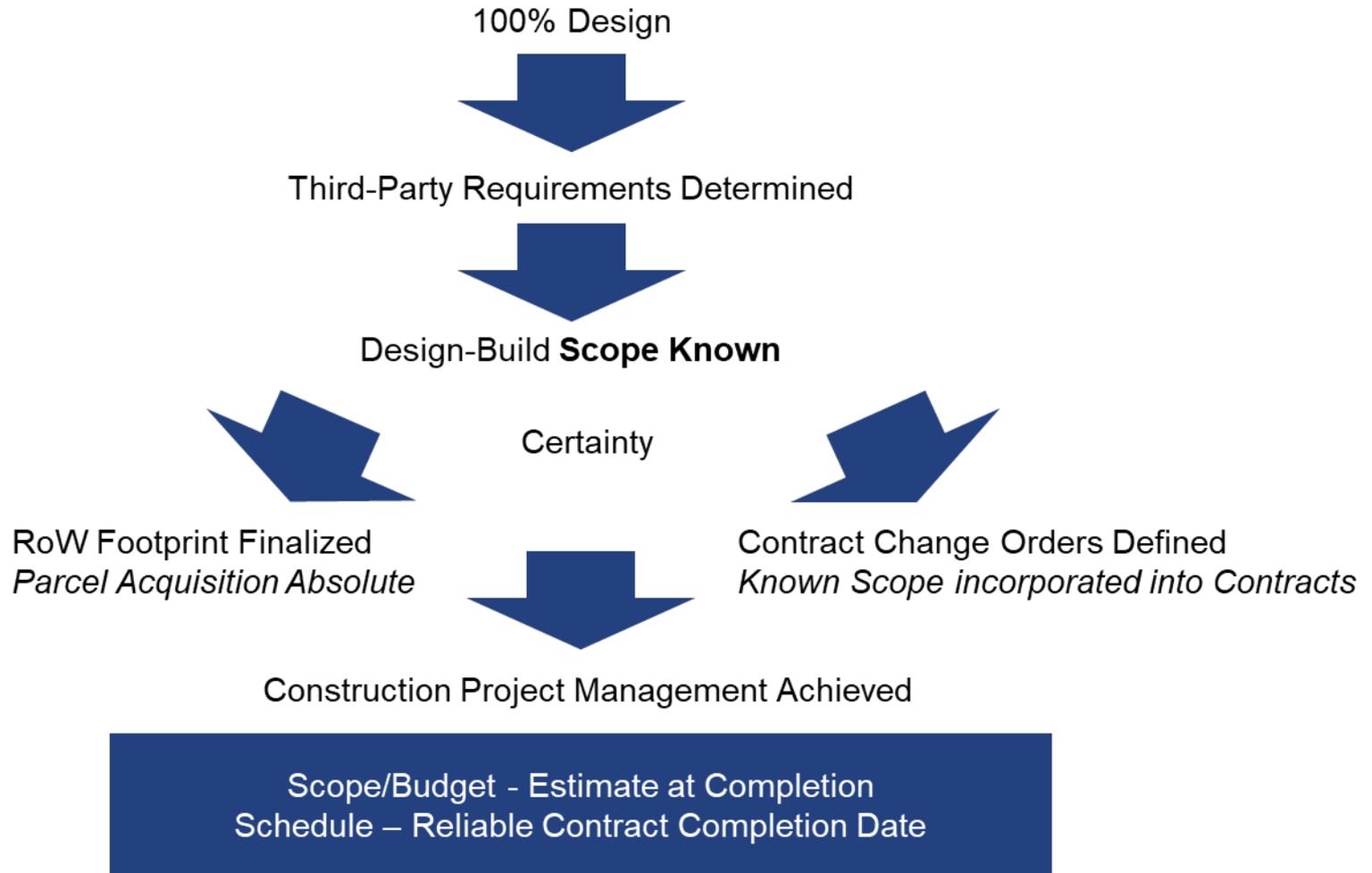


Fresno Trench



# PROGRAM UPDATE

## WHAT DOES GETTING TO 100% DESIGN MEAN



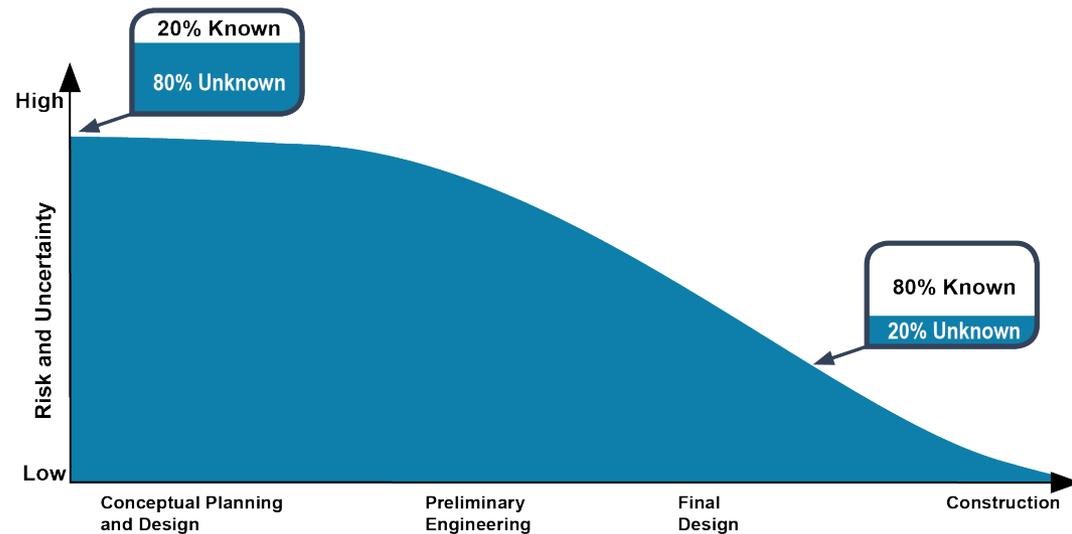
*Move to earned-value metric for project monitoring*



# PROGRAM UPDATE

## DESIGN NEAR COMPLETION

- The three Design-Build contracts were awarded early in the design process – at the time design was only at about 15%
- Typical design-build contracts:
  - » Design at 30% or greater
  - » Key pre-construction activities are substantially complete before construction begins, including right-of-way acquisition
- Typical Design-Bid-Build Contract:
  - » Design at 100% at time of contract award
- In 2021, with design now nearly 100% complete the number of right-of-way parcels is 2,304 (1,812 delivered)
- Authority's Stage Gate process will:
  - » Strengthen project development, risk management and oversight
  - » Ensure design is well-advanced before construction contracts are award



Modified version of Project Management Institute, A Guide to the Project Management Body of Knowledge (PMBOK Guide) - Fifth Edition, Project Management Institute, Inc.



# OVERALL



# PROGRAM UPDATE

## 119-MILES OF CONSTRUCTION

- **CONSTRUCTION PACKAGE 1**

- » 32 Miles
- » Avenue 19 in Madera County to just South of American Avenue in Fresno County

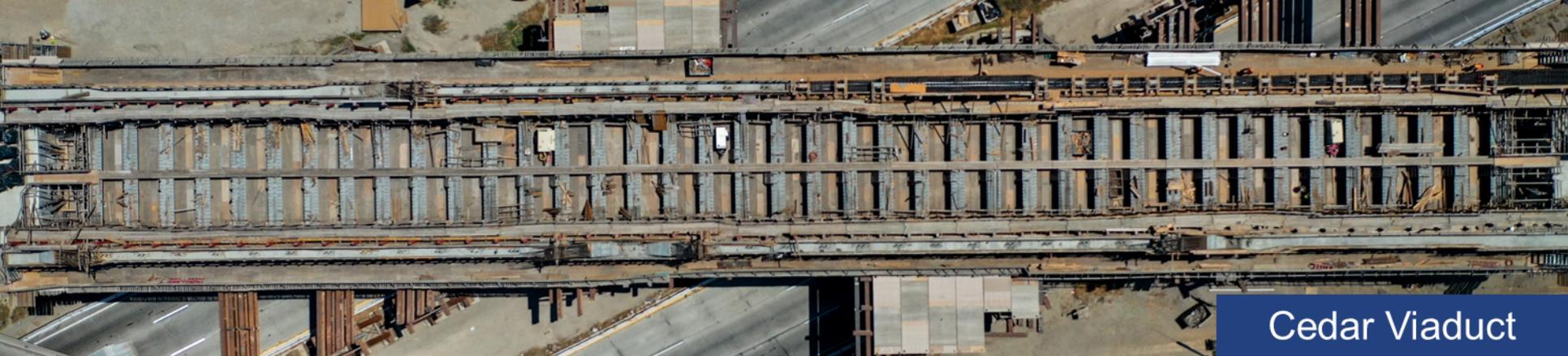
- **CONSTRUCTION PACKAGE 2-3**

- » 65 Miles
- » Just south of Fresno to 1 Mile North of the Tulare/Kern County Line

- **CONSTRUCTION PACKAGE 4**

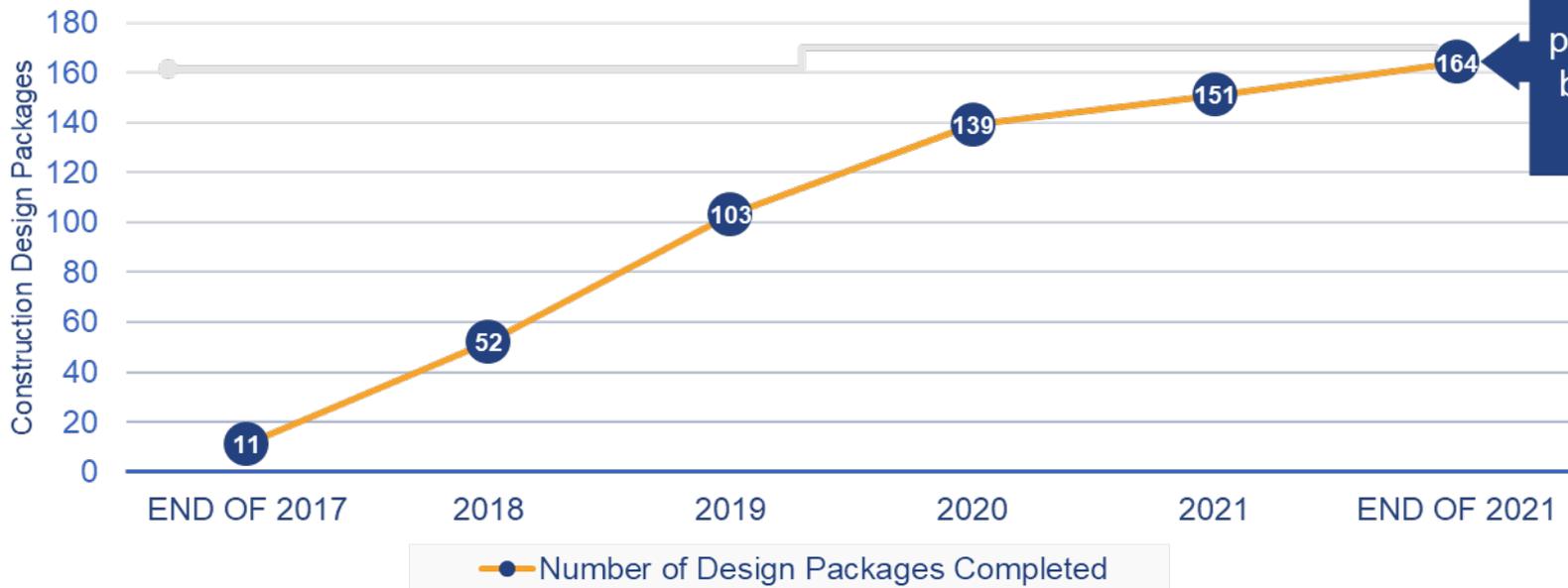
- » 22 Miles
- » Tulare/Kern County Line to Poplar Avenue





## Cedar Viaduct

### DESIGN PROGRESS BETWEEN START OF 2018 TO MARCH 2021 PROGRAM WIDE – READY FOR CONSTRUCTION (RFC) DESIGN PACKAGES



# PROGRAM UPDATE

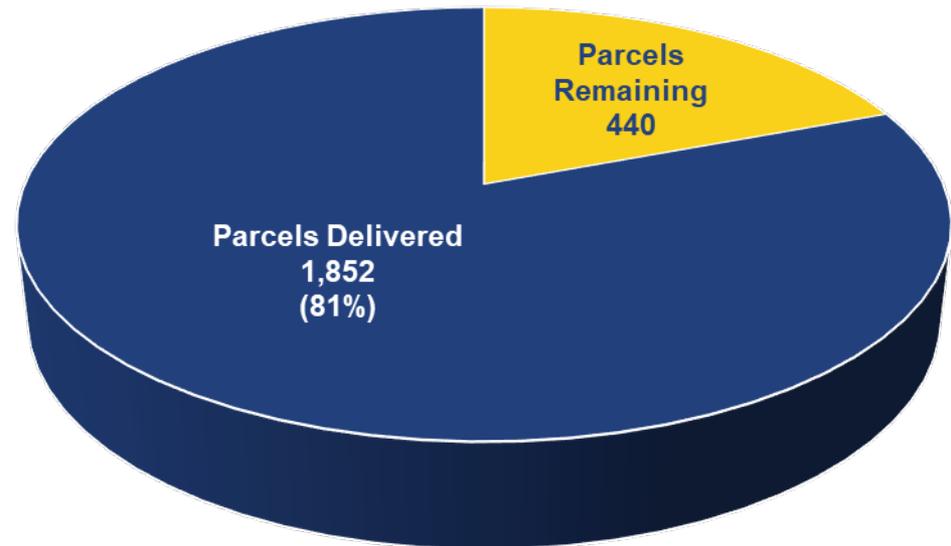
## CENTRAL VALLEY RIGHT-OF-WAY

### 2018 to 2021:

- 487 Parcels Delivered
- 399 Additional parcels added due to refined design

Parcels Required 2,292

(As of May 20, 2021)



# CONSTRUCTION PACKAGE 1



# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 1

### SAN JOAQUIN RIVER VIADUCT



- Construction Package 1 (CP 1) is the first construction contract executed on the Initial Operating Section
- Extends 32-miles between Avenue 19 in Madera County to East American Avenue in Fresno County
- Includes 22 grade separations, 3 viaducts, a major river crossing over the San Joaquin River and 2 trenches. **Estimated Completion Date: December 2023**

# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 1

		CP 1
	Design Completed	92.5%
	Right-Of-Way Parcels Acquired	82.3%
	Utility Relocation	57.3%
	Structures Complete/In Progress	69.7%
	Miles of Guideway Complete/In Progress	40.6%
	Overall Contract	62.8%



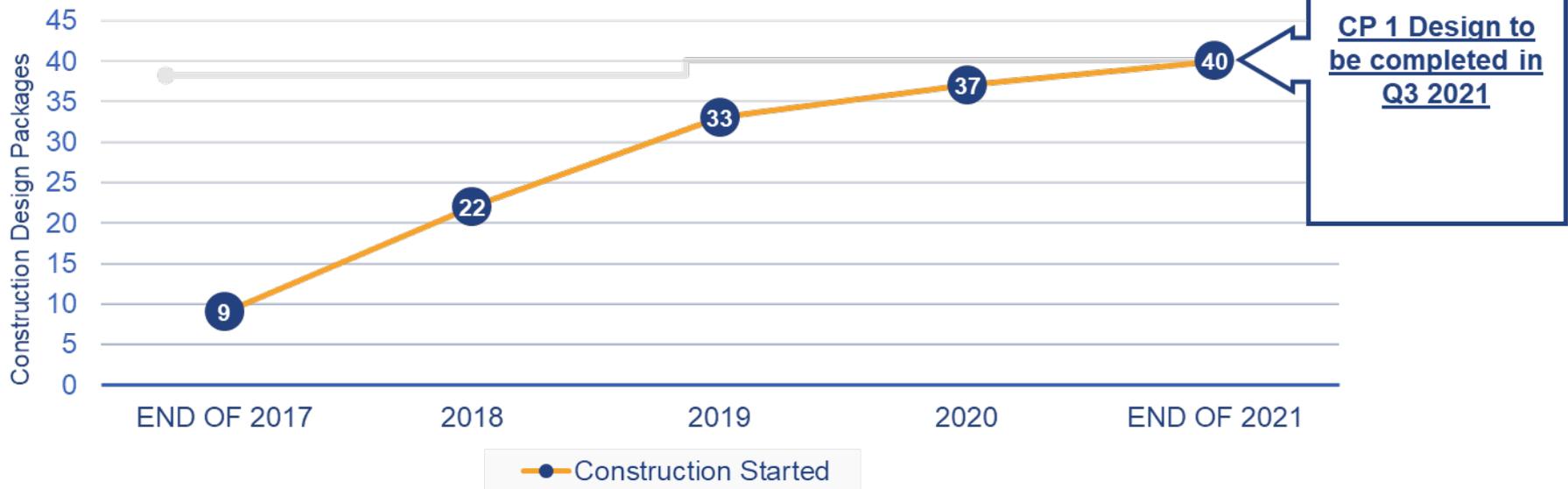
Fresno River Viaduct





Road 27

## DESIGN PROGRESS BETWEEN START OF 2018 TO MARCH 2021 CP1 – READY FOR CONSTRUCTION (RFC) DESIGN PACKAGES



# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 1



Design Packages  
Ready for Construction

**2018**

**9 of 38**

VS.

**2021**

**37 of 40**

**100% Designed**

**Q3 2021**



# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 1

- **Change Orders**

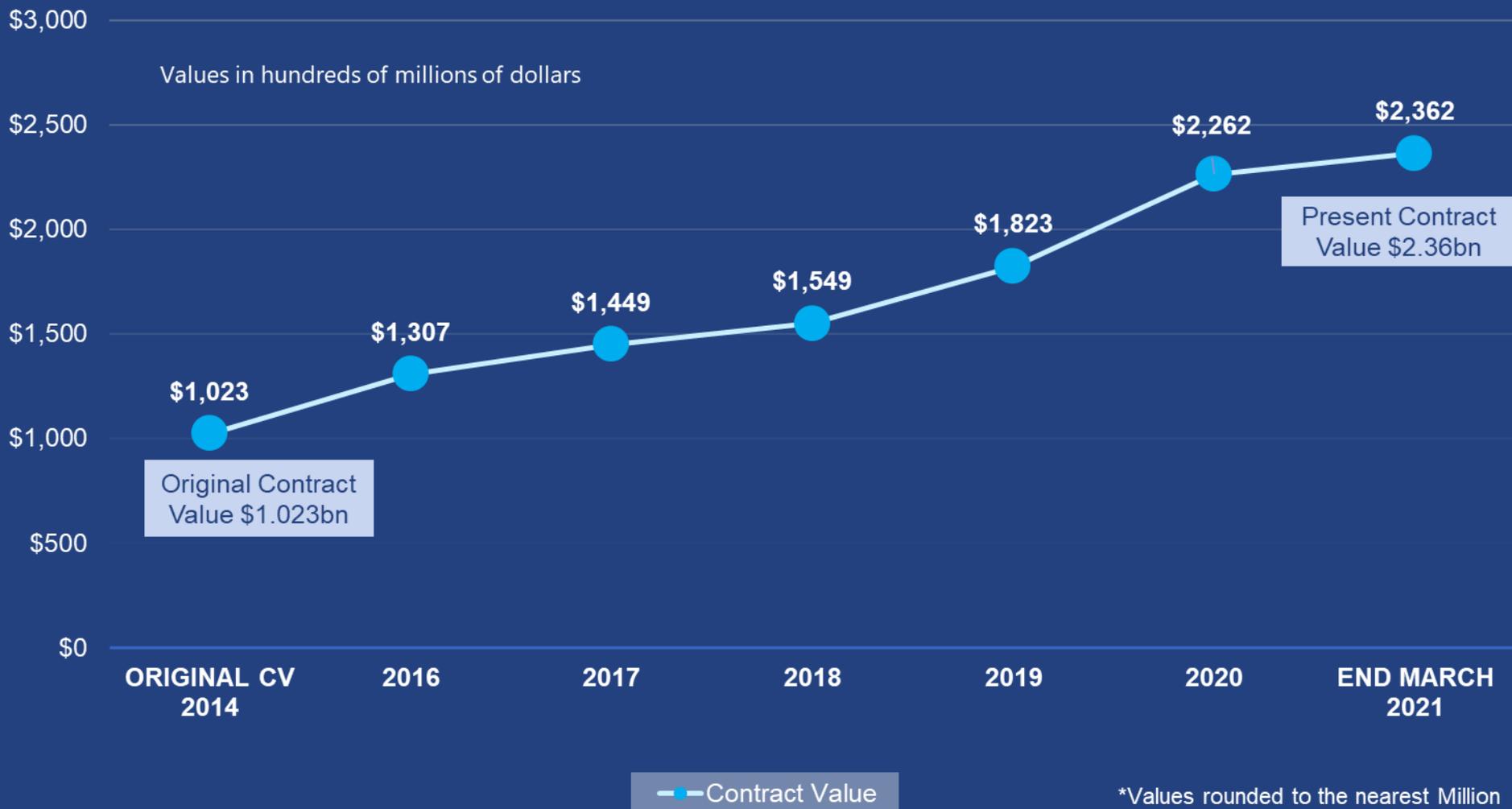
- » Total number of change orders 383 (executed through Feb 2021)
  - Percent of change orders (dollar value) that are time impact **16%** (Executed)
  - Percent of change orders (dollar value) that are scope **84%** (Executed)

- **Most due to 5 major change orders**

» Intrusion Protection Barriers	\$280M
» Northern Extension	\$202M
» Third Party Utility Relocations	\$250M
» Herndon Ave Grade Separation	\$ 85M
» Time Related Change Orders	\$190M



# CP 1 ORIGINAL -v- REVISED CONTRACT VALUE



# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 1

### Significant Pending Change Orders to Complete Construction

#### » Golden State Boulevard (Fresno)

- Realignment – North/South: 3.8 miles total realignment; increase from 2-4 lanes, widen sidewalk and add bicycle lanes
- Utilities- Add water, sewer and storm water utilities to accommodate realignment
  - » Purpose: Agreement with City of Fresno to avoid impact on existing businesses

#### » McKinley Avenue – North Weber Avenue Junction Configuration

- Change configuration to increase bridge length, relocate traction power substation, City of Fresno traffic control system and utility work
  - » Purpose: City of Fresno changed designation of the road

#### » Belmont Avenue Overcrossing and Grade Separation

- Relocate proposed bridge to deconflict with AT&T line, including demolition of UPRR bridge, increasing bridge length and width and changing the Fresno Trench design under Belmont overpass
  - » Purpose: City of Fresno requested design refinement



# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 1

### Significant Pending Change Orders to Complete Construction

#### » BNSF/UPRR Maintenance Roads

- Construct access roads for adjacent railroad maintenance (10.5 miles for UPRR and 11.2 miles for BNSF)
  - » Purpose: Included as a commitment in the agreements with the railroads

#### » Guideway Construction for Caltrans SR-99 (Between Clinton and Ashlan Avenues)

- Construct additional 2.5 miles of at-grade guideway plus Intrusion Protection Barrier walls between Clinton and Ashlan Avenues
  - » Purpose: Scope was unassigned prior to October 2019 and was not included in original scope to be constructed by Caltrans.



# CONSTRUCTION PACKAGE 2-3



# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 2-3

Conejo Avenue Viaduct

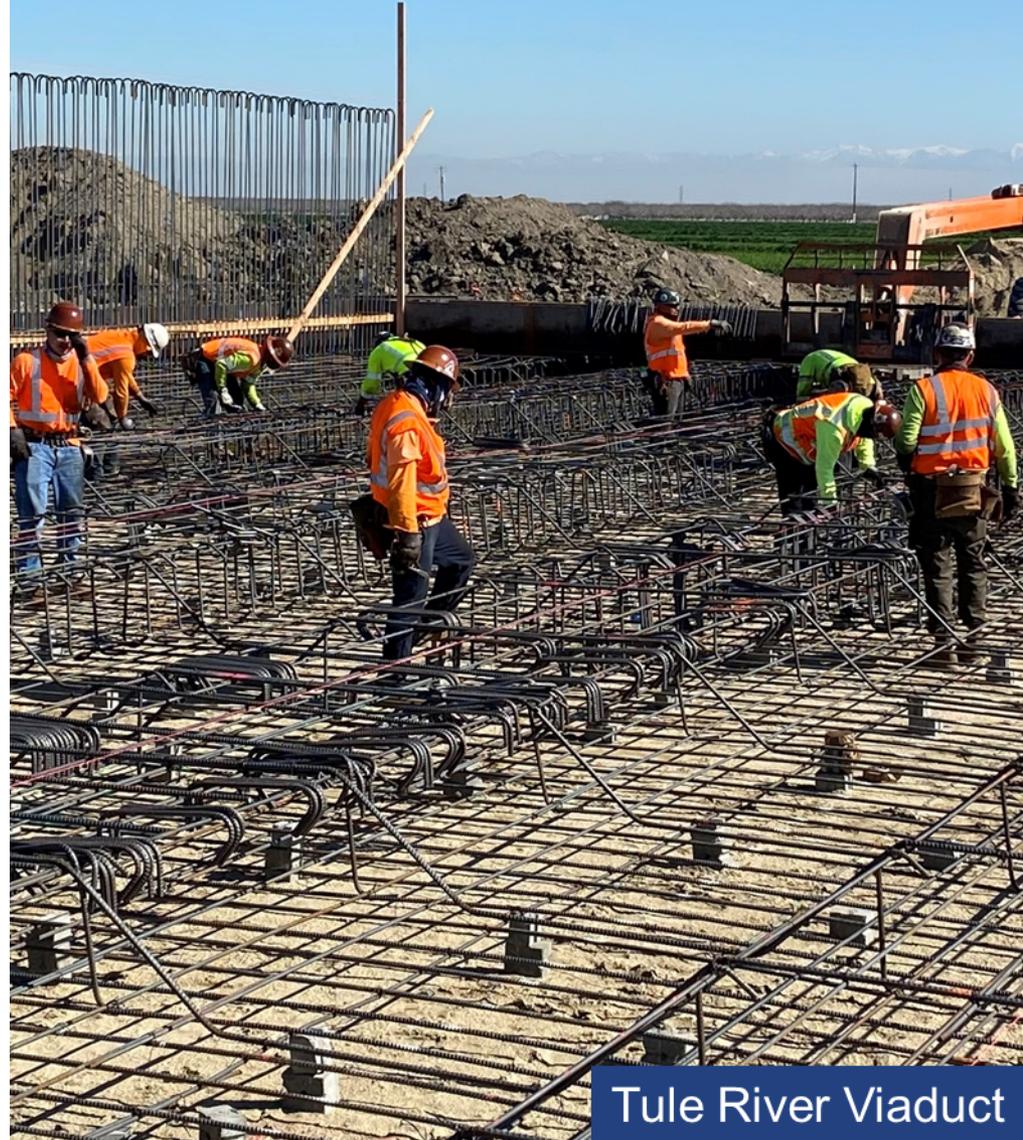


- Construction Package 2-3 (CP 2-3) is the second significant construction contract executed on the Initial Operating Section
- Extends approximately 65 miles from the terminus of Construction Package 1 at East American Avenue in Fresno to one mile north of the Tulare-Kern County line
- Includes approximately 36 grade separations in the counties of Fresno, Tulare and Kings, including viaducts, underpasses and overpasses.  
**Estimated Completion Date: December 2023**

# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 2-3

	CP 2-3
 Design Completed	91.7%
 Right-Of-Way Parcels Acquired	72.2%
 Utility Relocation	49.1%
 Structures Complete/In Progress	53.1%
 Miles of Guideway Complete/In Progress	70.8%
 Overall Contract	62.3%



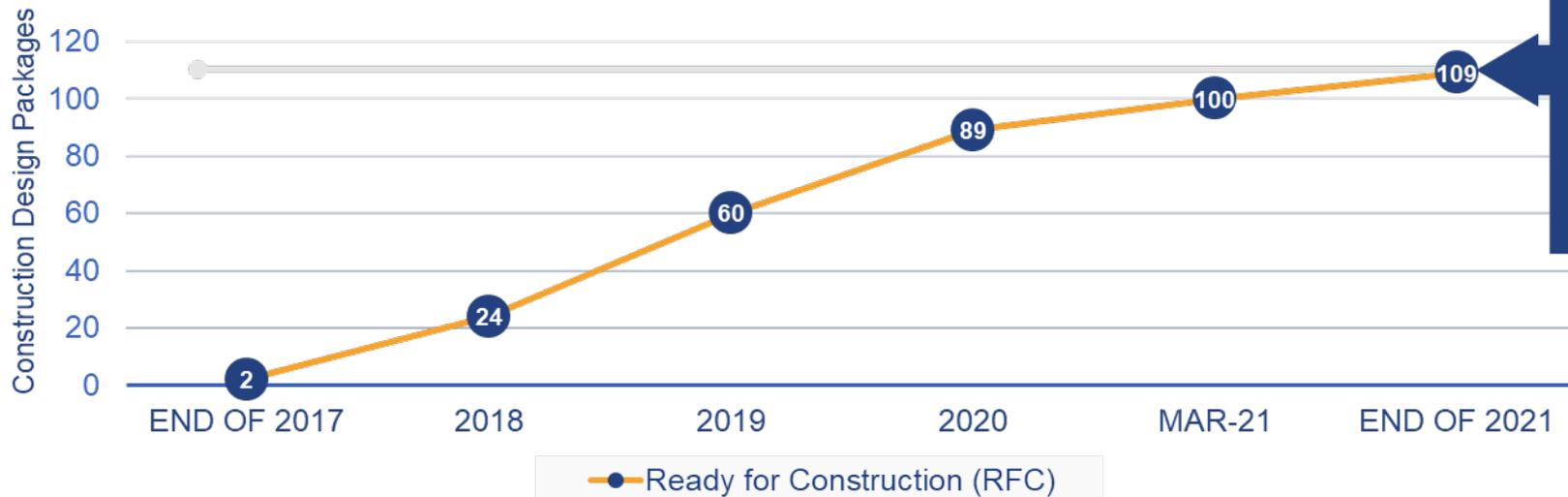
Tule River Viaduct





## Conejo Pergola

### DESIGN PROGRESS BETWEEN START OF 2018 TO MARCH 2021 CP2-3 – READY FOR CONSTRUCTION (RFC) DESIGN PACKAGES



We anticipate final design on the remaining 4 Structure Packages will be complete by Q3, 2021.



# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 2/3



Design Packages Ready  
for Construction (of 109)

**2018**

**2021**

**100% Designed**

**2**

VS.

**100**

**Q3 2021**



Peach Ave



# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 2/3

- **Change Orders**

- » Total number of change orders 297 (executed through Feb 2021)

- Percent of change orders (dollar value) that are time impact **29%**  
(Executed)

- Percent of change orders (dollar value) that are scope **71%** (Executed)

- **Most due to the following change orders**

- » Agreement Settlement/Time Impact \$185M

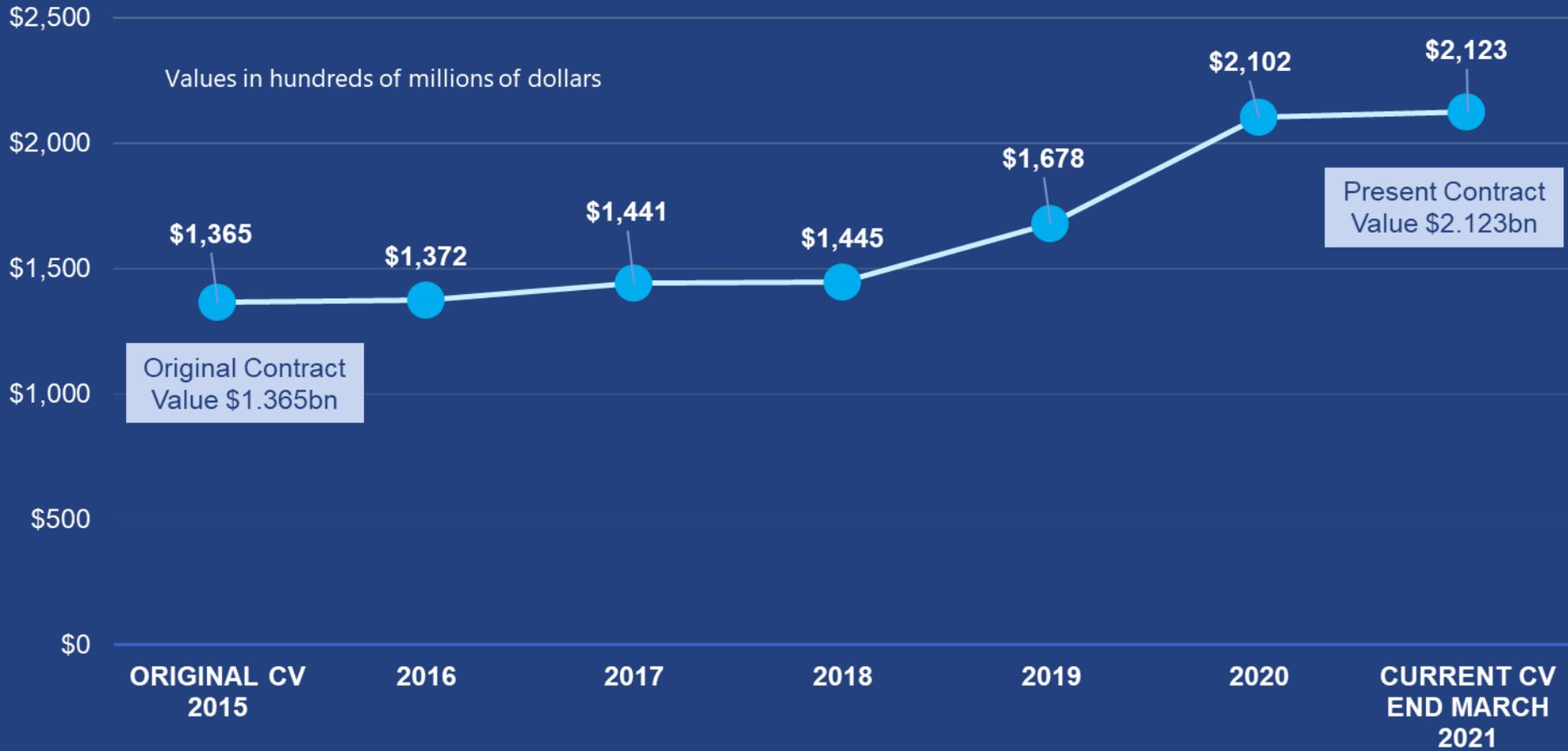
- » Hanford Viaduct Substructure \$109M

- » Third Party Utility Relocations \$ 90M

- » Subsidence and Loss of Ditch Excavation \$ 61M



# CP2/3 Original -v- Revised Contract Value



—●— Contract Value

\*Values rounded to the nearest Million



# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 2/3

### Significant Pending Change Orders/ Dispute Resolution to Complete Construction

#### » Hanford Viaduct Superstructure

- Finish superstructure of 6000-foot elevated guideway, configuration change due to Alternative Technical Concept accepted during original procurement

#### » BNSF Intrusion Protection Barrier

- Construct 15 miles of barrier
  - » Purpose: Commercial issue related to how the contractor interpreted the RFP requirements from draft railroad agreement at the time of proposals



# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 2/3

### Significant Pending Change Orders/ Dispute Resolution to Complete Construction

#### » Deer Creek Viaduct

- Contractor redesigned to 3000-foot viaduct to minimize elevated guideway
  - » Purpose: Commercial issue pending dispute resolution

#### » Cross Creek Viaduct

- Contractor redesigned to 2500-foot viaduct to minimize elevated guideway
  - » Purpose: Commercial issue pending dispute resolution



# CONSTRUCTION PACKAGE 4



# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 4

### Wasco Viaduct

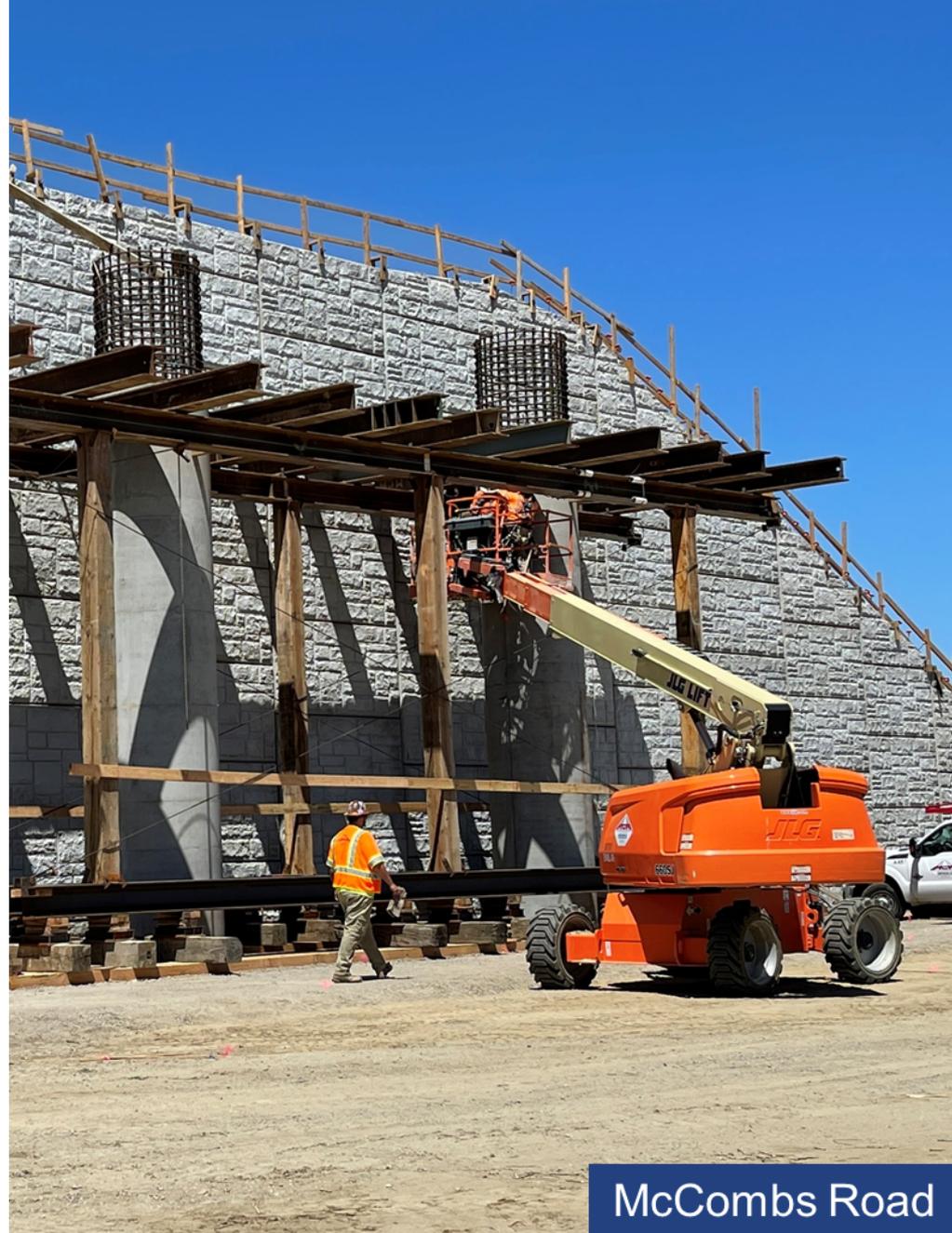


- Construction Package 4 (CP 4) is the third significant construction contract executed on the Initial Operating Section
- 22-mile stretch bounded by a point approximately one mile north of the Tulare/Kern County Line at the terminus of Construction Package 2-3 and Poplar Avenue to the south
- Will include construction of at-grade, retained fill and aerial sections of the high-speed rail alignment and the relocation of four miles of existing Burlington Northern Santa Fe (BNSF) tracks **Estimated Completion Date: April 2022**

# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 4

		CP 4
	Design Completed	100%
	Right-Of-Way Parcels Acquired	77.2%
	Utility Relocation	28.6%
	Structures Complete/In Progress	90.9%
	Miles of Guideway Complete/In Progress	100%
	Overall Contract	65.9%



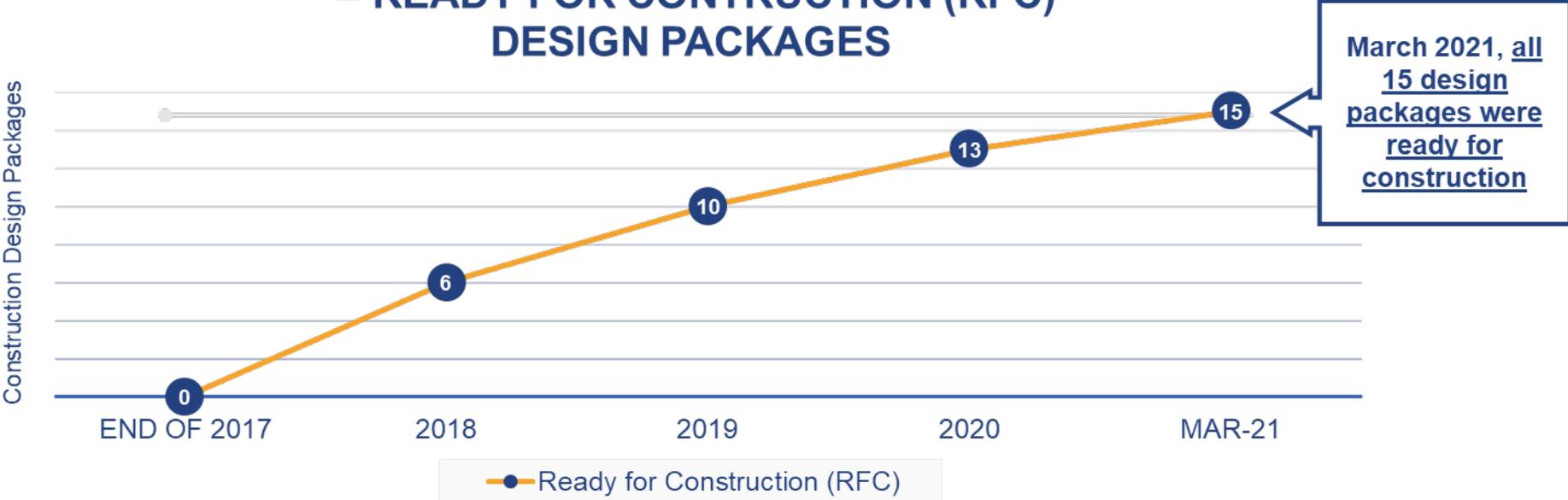
McCombs Road





Poso Creek

### DESIGN PROGRESS BETWEEN START OF 2018 TO MARCH 2021 CP4 – READY FOR CONSTRUCTION (RFC) DESIGN PACKAGES



# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 4



Design Packages Ready  
for Construction (of 15)

**2018**

**0**

vs.

**2021**

**15**

**100% Designed**

**Complete**



Garces Highway



# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 4

- **Change Orders**

- » Total number of change orders 94 (executed through Feb 2021)

- Percent of change orders (dollar value) that are time impact **35%**  
(Executed)

- Percent of change orders (dollar value) that are scope **65%** (Executed)

- **Most due to the following change orders**

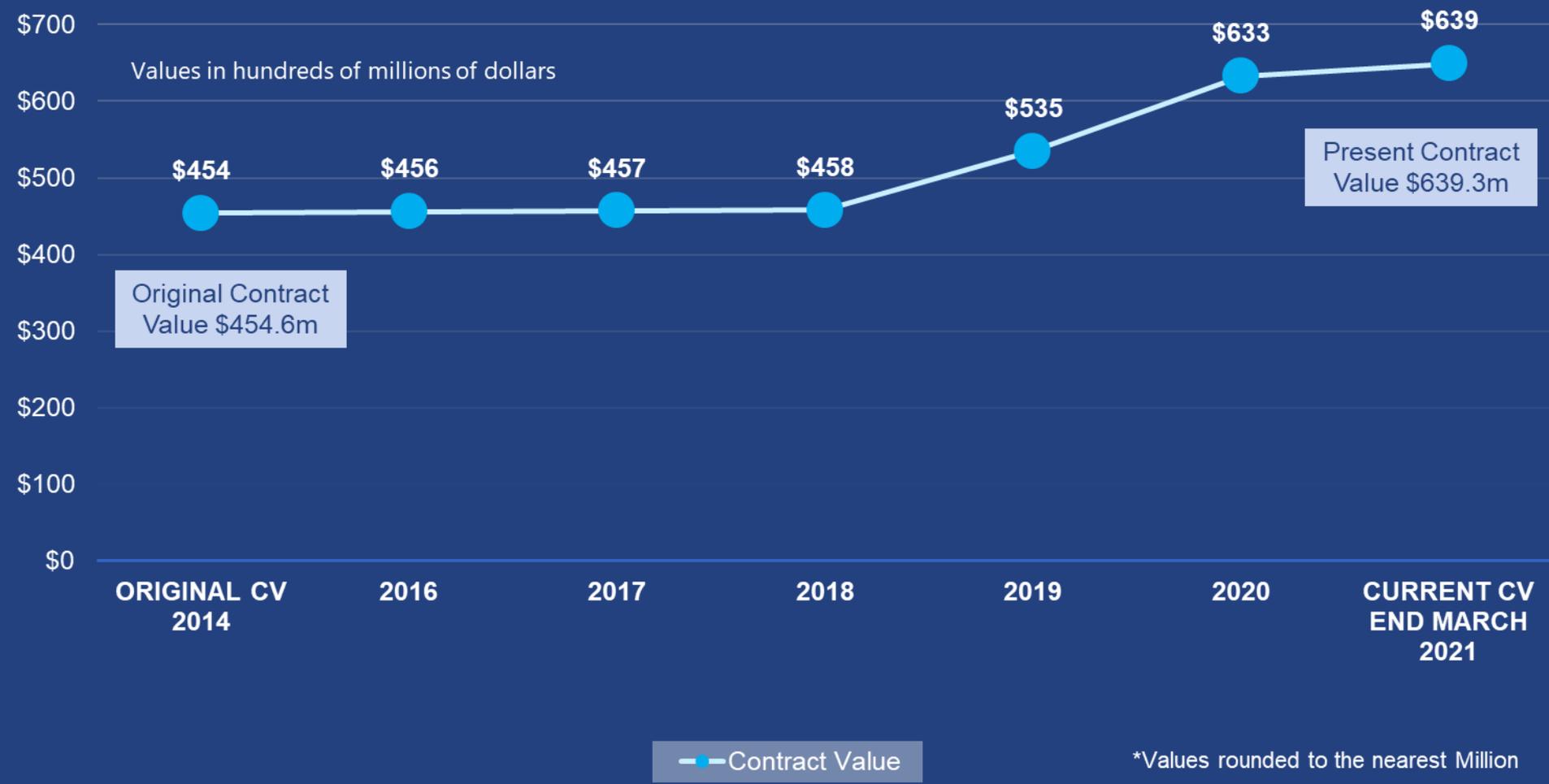
- » Agreement Settlement/Time Impact                      \$51M

- » Intrusion Protection Barrier                                      \$51M

- » Wildlife Crossings    \$17M



# CP4 Original -v- Present Contract Value



# PROGRAM UPDATE

## CONSTRUCTION PACKAGE 4

### Pending Change Orders to Complete Construction

#### » SR 46 Construction

- Lengthen and widen BNSF bridge to accommodate future SR 46 widening to 4 lanes plus associated Wasco roadway realignments (this segment is not required to fulfill the ARRA grant agreement scope/schedule)
  - » Purpose: Result of an agreement made with Kern County



# PROGRAM UPDATE

## CALIFORNIA HIGH-SPEED RAIL TODAY

- **5,500 + construction jobs created since construction began**
  - » 3,700 National Targeted Worker hiring (disadvantaged communities)
- **609 small businesses employed**
  - » 192 are Disabled Business Enterprises
  - » 129 located in disadvantaged communities
  - » 67 Disabled Veteran Business Enterprises
- **CA High-Speed Rail spurring the economy**
  - » 60,000 job years created to date
  - » \$11.4 billion total economic output through January 2021



# PROGRAM UPDATE

## LOOKING AHEAD

### Over the next 12-15 months:

- » Appropriation of remaining Proposition 1A funds (2021 Budget Act)
- » Environmental clearance of first two segments into Los Angeles County
  - » Bakersfield to Palmdale
  - » Burbank to Los Angeles
- » Award Track and Systems contract, commence work in 2022
- » Complete negotiations with Federal Railroad Administration on grant schedule and FY 10 funding
- » Award contracts to advance design work on Merced and Bakersfield extensions
- » Procurement for trainsets – 2022



**Questions?**



# CALIFORNIA HIGH-SPEED RAIL



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