



CALIFORNIA
High-Speed Rail Authority

California High-Speed Rail: Construction Update

Brian Kelly
Chief Executive Officer



LEGEND

- Phase 1
- Phase 2
- 171-Mile Initial Operating Segment
- HSR Station

Central Valley Initial Operating Segment

- 171 Miles
- 100% environmentally cleared
- 119 miles currently under construction
- 52 miles starting advanced design (pre-construction work)
- Design for Central Valley Stations
- Track and Systems procurements in 2023
- Train procurement in 2024

Goal: Initial operations between 2030 to 2033

Central Valley Update

Where We Are & Where We Are Going

Achieving Construction Management in 2023

- Instituting a complete project definition
 - » Executing major change orders to capture full project scope.
Status Update: All major commercial issues have been resolved.*
- Completing right-of-way (ROW) acquisitions
 - » Improved ROW planning and management to exceed delivery forecasts.
Status Update: 98% of parcels delivered to the Design-Builder. CP4 is 100% complete.
- Focused efforts on finalizing third-party approvals
 - » Increased executive engagement and Third-Party Task Force efforts to complete third-party agreements & design approvals.
Status Update: 66 out of 68 (97%) have been resolved through Third-Party Task Force. Emerging issues are being monitored, managed and reported.
- Updating design and construction activities
 - » Working with Design-Build Contractors to re-sequence work and mitigate schedule impacts.
Status Update: Finalized Revised Baseline Schedules(RBS) for CP1 and CP4 and continue towards establishing the RBS for CP2-3.

**Cross Creek Viaduct is the only major commercial issue the remains outstanding and is currently in arbitration.*



Right-of-Way Status Update



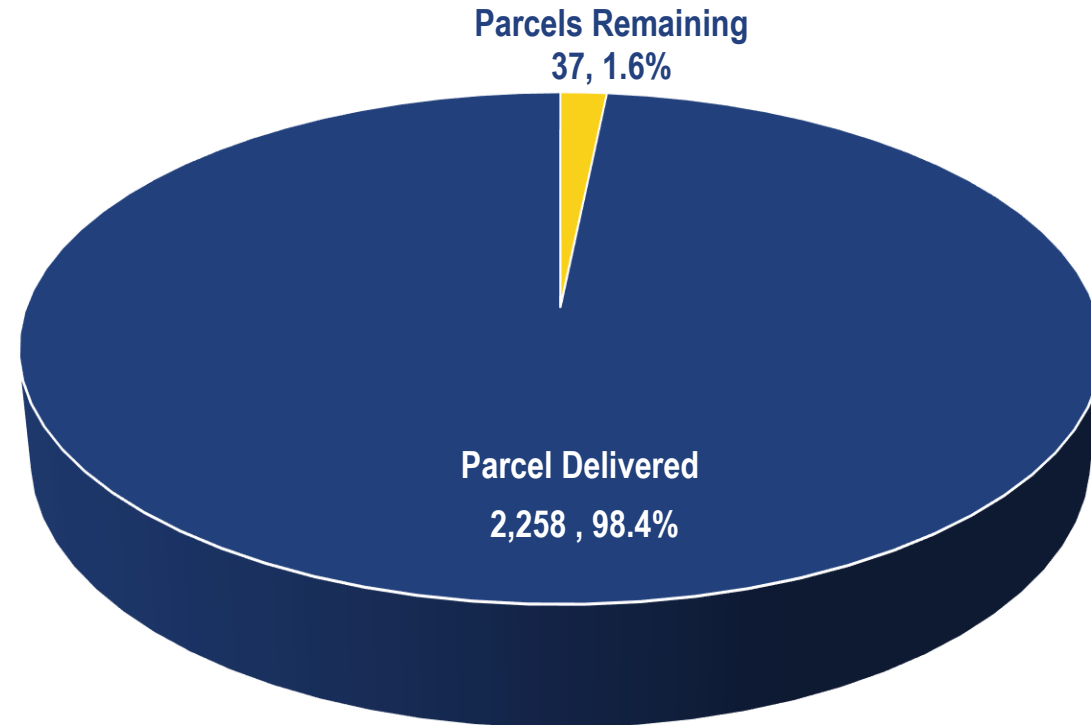
Central Valley Update

Central Valley Right of Way

2018 to 2023:

- 877 Parcels Delivered
- 37 Parcels Remaining

Parcels Required 2,295

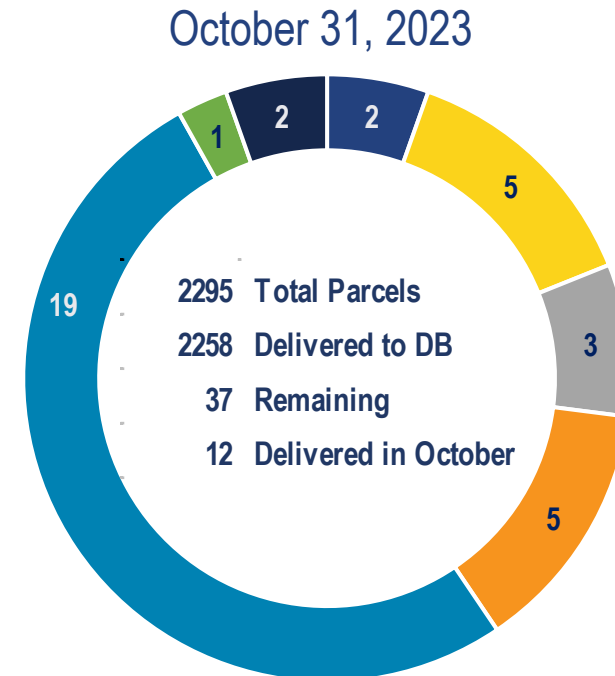
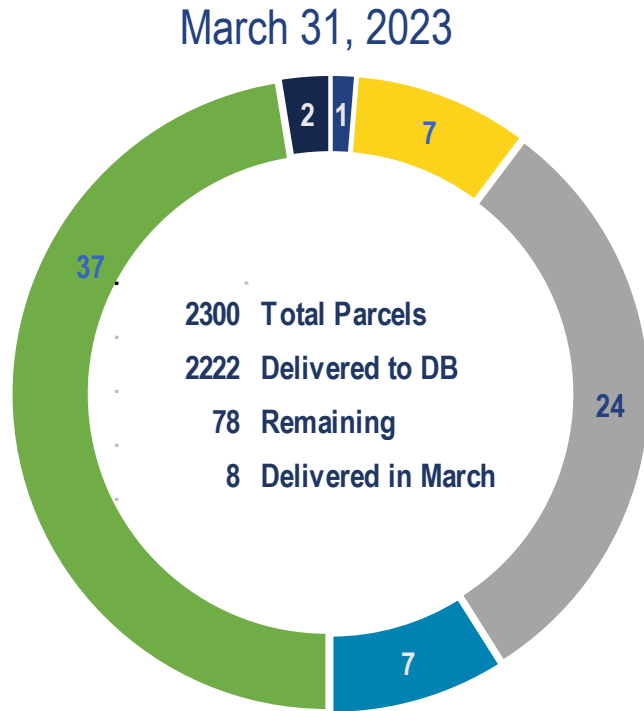


Data Date: 10/31/2023

PROGRAM UPDATE

Central Valley Right of Way

Right of Way Production Graphs



- Parcels Pending RRL
- Final Mapping
- Task Order
- Appraisal Process
- Negotiation Process
- Negotiation Process - Condemnation
- Delivery Process



Construction Package 4



Central Valley Update

Construction Package 4

Poso Avenue Underpass



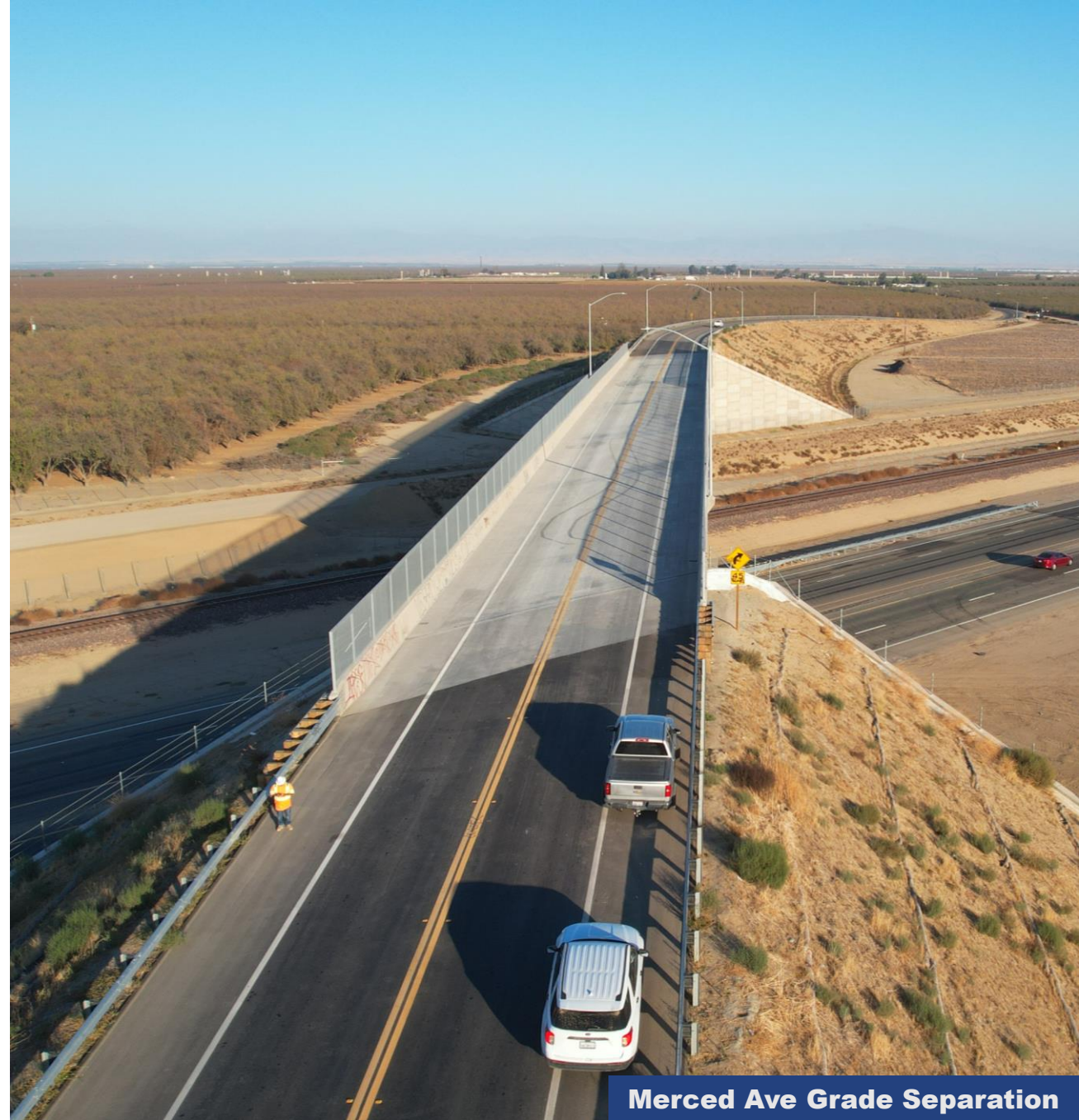
- Construction Package 4 (CP 4) is the third significant construction contract executed on the Initial Operating Section.
- 22.5-mile stretch bounded by a point approximately one mile north of the Tulare/Kern County Line at the terminus of Construction Package 2-3 and Poplar Avenue to the south.
- Will include construction of at-grade, retained fill and aerial sections of the high-speed rail alignment.
- **Of the 22.5-mile segment, the last 400-foot section at North Kern Water Storage District (NKWSD) is the final issue needing resolution.**

Central Valley Update

Construction Package 4

		CP 4
	Authority Approved Design Completed	100%
	Right-Of-Way Parcels Delivered to DB	100%
	Utility Relocation Complete/In-Progress	100%
	Structures Complete/In Progress	100%
	Miles of Guideway Complete/In Progress	100%
	Overall Contract	98%

Data Date: 10/31/2023



Merced Ave Grade Separation

Central Valley Update

Construction Package 4

Remaining Risk

1. Only 400-feet of guideway remains in progress due to outstanding land conveyance issues related to Canal 9-22.

Risk Mitigation Underway

1. The Authority, including the CEO and Board Chair, is engaged with the North Kern Water Storage District (NKWSD) to resolve outstanding land-right issues and complete the 400-foot section of the guideway.



Construction Package 1



Central Valley Update

Construction Package 1



Avenue 9 Grade Separation



- 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 19 grade separations, 3 viaducts (a major river crossing over the San Joaquin River) and 2 trenches.
- **Substantial Completion in November 2026.**

Central Valley Update

Construction Package 1

		CP 1
	Authority Approved Design Completed	100%
	Right-Of-Way Parcels Delivered to DB	98%
	Utility Relocation Complete/In-Progress	82%
	Structures Complete/In Progress	85%
	Miles of Guideway Complete/In Progress	63%
	Overall Contract	70%

Data Date: 10/31/2023



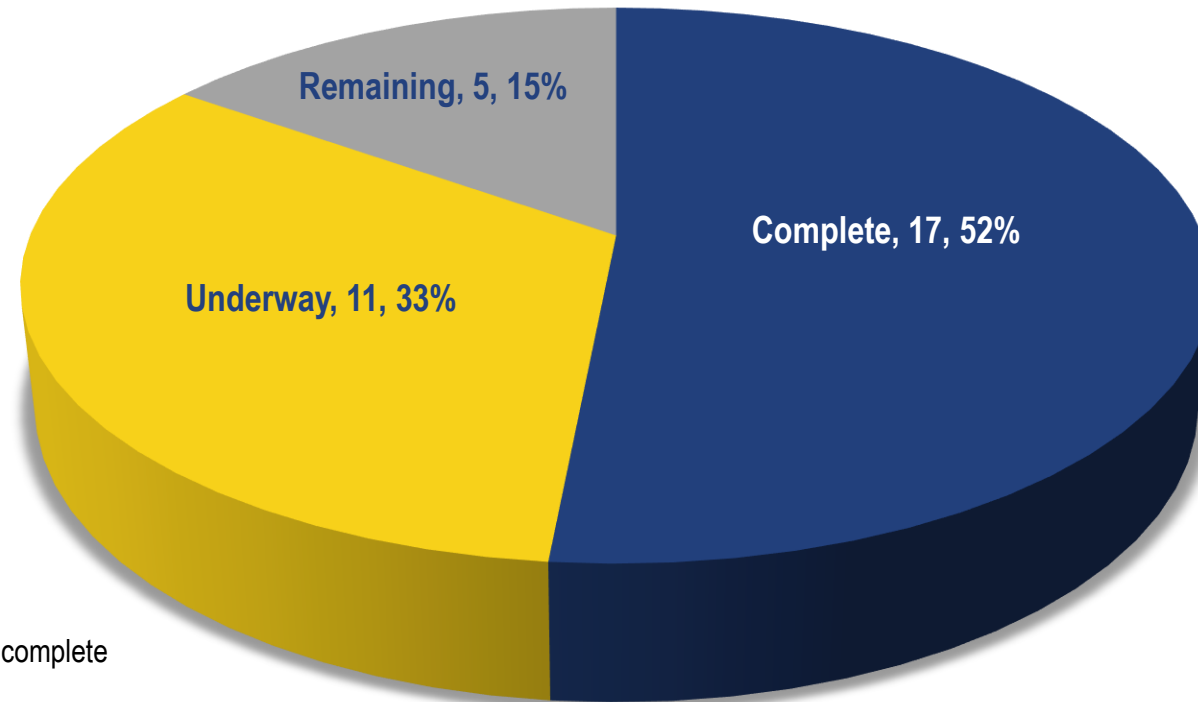
Tulare Street Underpass

Central Valley Update

Construction Package 1

- **Number of Structures in Progress**

- » Total Structures: 33
- » **A total of 2 structures (Central Avenue and Avenue 17) commenced construction since the March 2023 Construction Update.**
- » **By end of 2023, 1 additional structure (Avenue 9) will be completed for a total of 18 structures completed.**



Structure completion is defined as all concrete work complete

Data Date: 10/31/2023

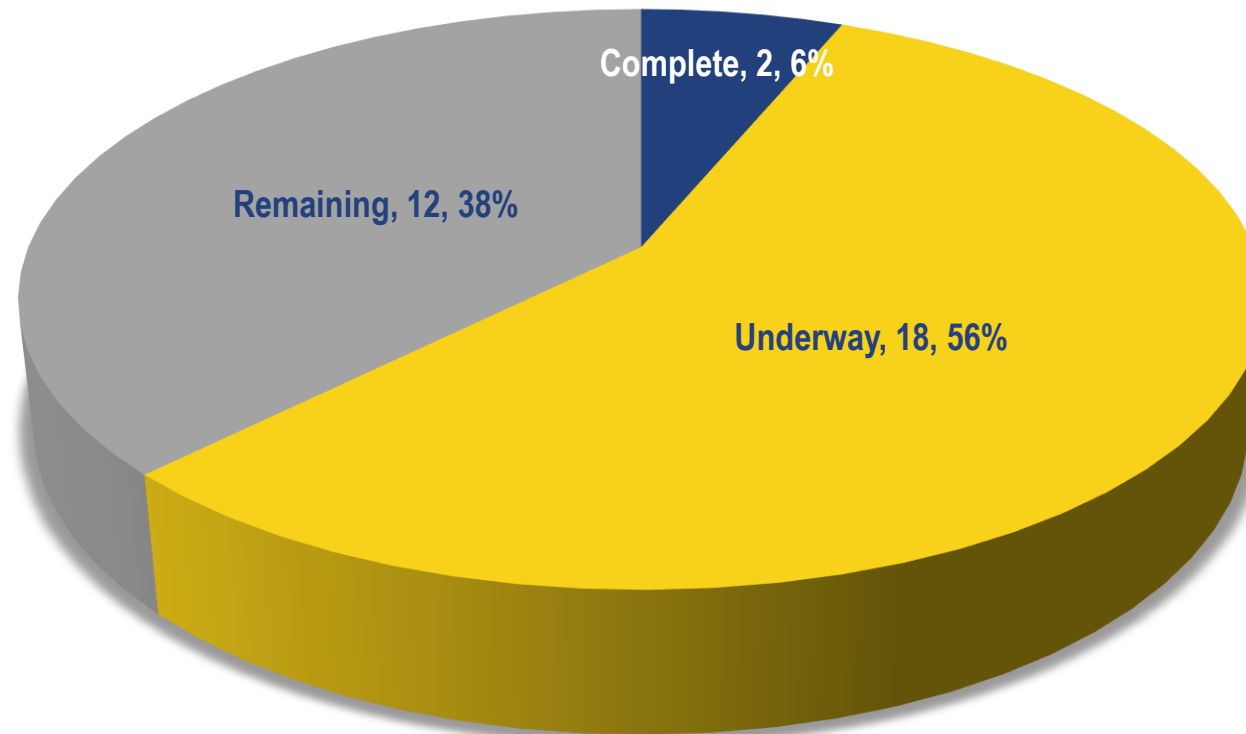
Central Valley Update

Construction Package 1

- **Miles of Guideway in Progress**

- » Guideway is the riding surface that will support and physically guide the high-speed train.

- Total Guideway Miles: 32



Guideway completion is defined as earthworks complete with rough grading.

Data Date: 10/31/2023

Central Valley Update

Construction Package 1

Primary Risks

1. Delays to AT&T Relocation and subsequent Stanislaus Bridge Demolition.
2. Delays with Union Pacific Railroad (UPRR) submittal approvals (i.e., crossing applications /work plans/design packages).
3. Delays to start of Herndon Construction due to outstanding design approvals from UPRR and City of Fresno.

Risk Mitigations Underway

1. The Authority management is working with AT&T and UPRR on a mutually-acceptable telecom relocation plan; may consider descoping recommendation document to remove the Stanislaus Bridge Demolition from the current contract.
2. Continuous improvement of submittal quality and executive engagement with UPRR to enhance relationships, outline project priorities, and completion schedule.
3. Focused meetings with the Authority, TPZP, UPRR and the City of Fresno to facilitate comment resolution to secure design approval.
4. The Authority is conducting monthly partnering meeting with TPZP to identify and manage issues that present schedule risk.

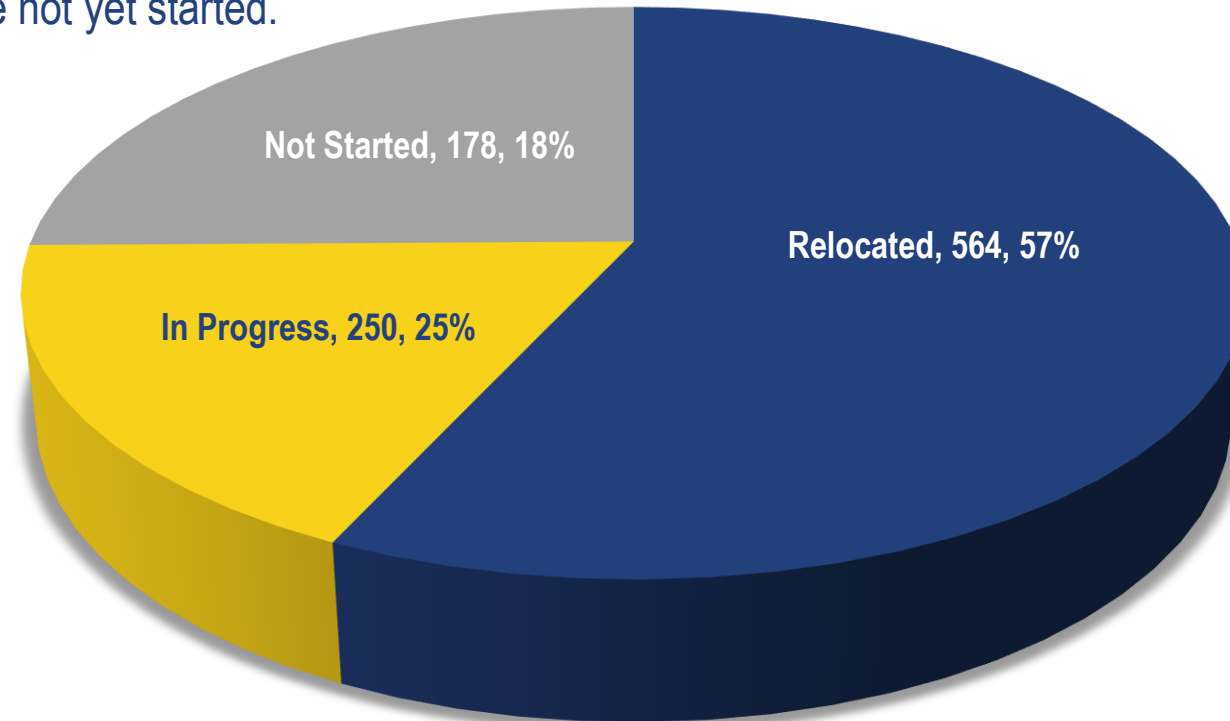
Central Valley Update

Construction Package 1

- **High-Level Utility Summary**

- » Total of **992** Utilities Required

- **564** have been relocated.
- **250** are in progress of being relocated.
- **178** are not yet started.



Data Date: 10/31/2023

Central Valley Update

Construction Package 1

Utility Relocation Summary by Utility Type

Utility Type	Status	Number	Percentage
Electric	Not Started	79	37%
	In Progress	18	8%
	Relocated	118	55%
	Total Electric Utilities	215	100%
Gas	Not Started	17	19%
	In Progress	30	33%
	Relocated	44	48%
	Total Gas Utilities	91	100%
Telecom	Not Started	33	8%
	In Progress	97	23%
	Relocated	285	69%
	Total Telecom Utilities	415	100%
Wet	Not Started	49	18%
	In Progress	105	39%
	Relocated	117	43%
	Total Wet Utilities	271	100%

Data Date: 10/31/2023



Construction Package 2-3



Central Valley Update

Construction Package 2-3



- Construction Package 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 26 grade separations in the counties of Fresno, Tulare and Kings, including viaducts, underpasses and overpasses.
- **Substantial completion in 2026.**

Central Valley Update

Construction Package 2-3

		CP 2-3
	Authority Approved Design Completed	100%
	Right-Of-Way Parcels Delivered to DB	98%
	Utility Relocation Complete/In-Progress	80%
	Structures Complete/In Progress	76%
	Miles of Guideway Complete/In Progress	75%
	Overall Contract	72%

Data Date: 10/31/2023



Conejo Avenue Viaduct

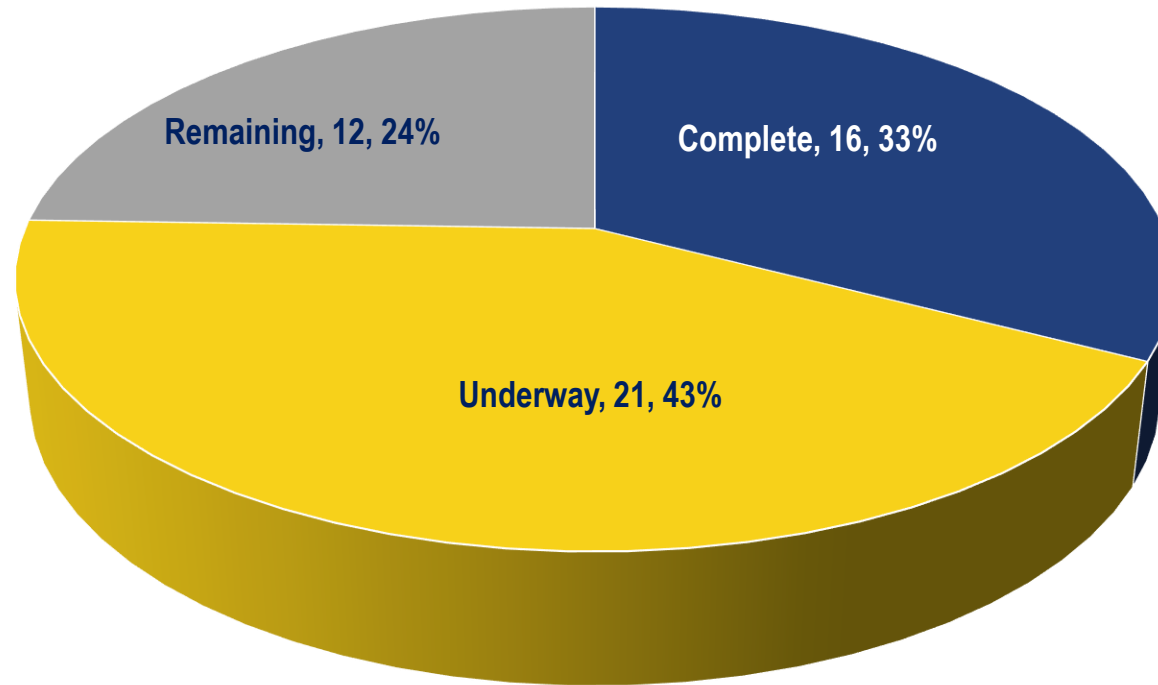
Central Valley Update

Construction Package 2-3

- **Number of Structures in Progress**

- » Total Structures: 49

- » **By end of 2023, 2 additional structures (Cole Slough and Lakeland Bridge) will begin construction.**



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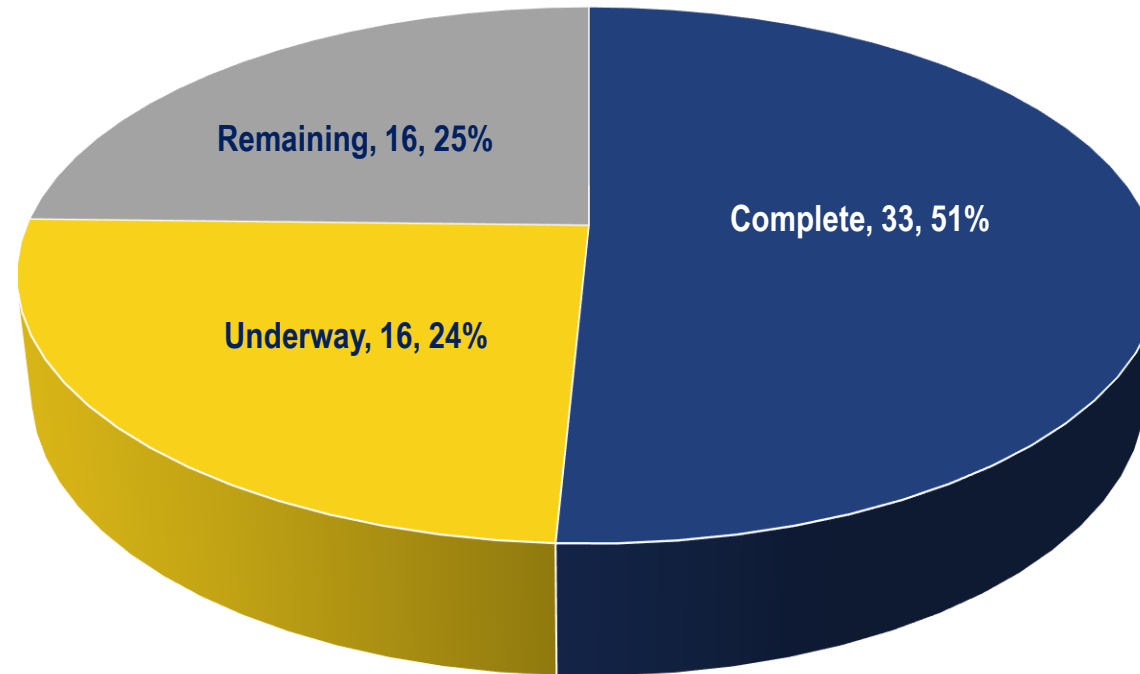
Central Valley Update

Construction Package 2-3

- Miles of Guideway in Progress

- » Guideway is the riding surface that will support and physically guide the high-speed train.

- Total Guideway Miles: 65



Data Date: 10/31/2023

Central Valley Update

Construction Package 2-3

Primary Risks

1. Potential delays with right-of-way (ROW) Acquisition and Land Conveyance for critical utility relocations (electric transmission and irrigation).
2. Delays with Third-Party design reviews/approvals, negotiation of work windows (irrigation season, transmission black-out periods, railway moratoriums), and negotiation of maintenance agreements.
3. Delays with Nebraska/CP Monmouth construction and interface with Vie-del impact project critical path.
4. Delays in obtaining an agreement from DFJV on the Revised Baseline Schedule.

Risk Mitigations Underway

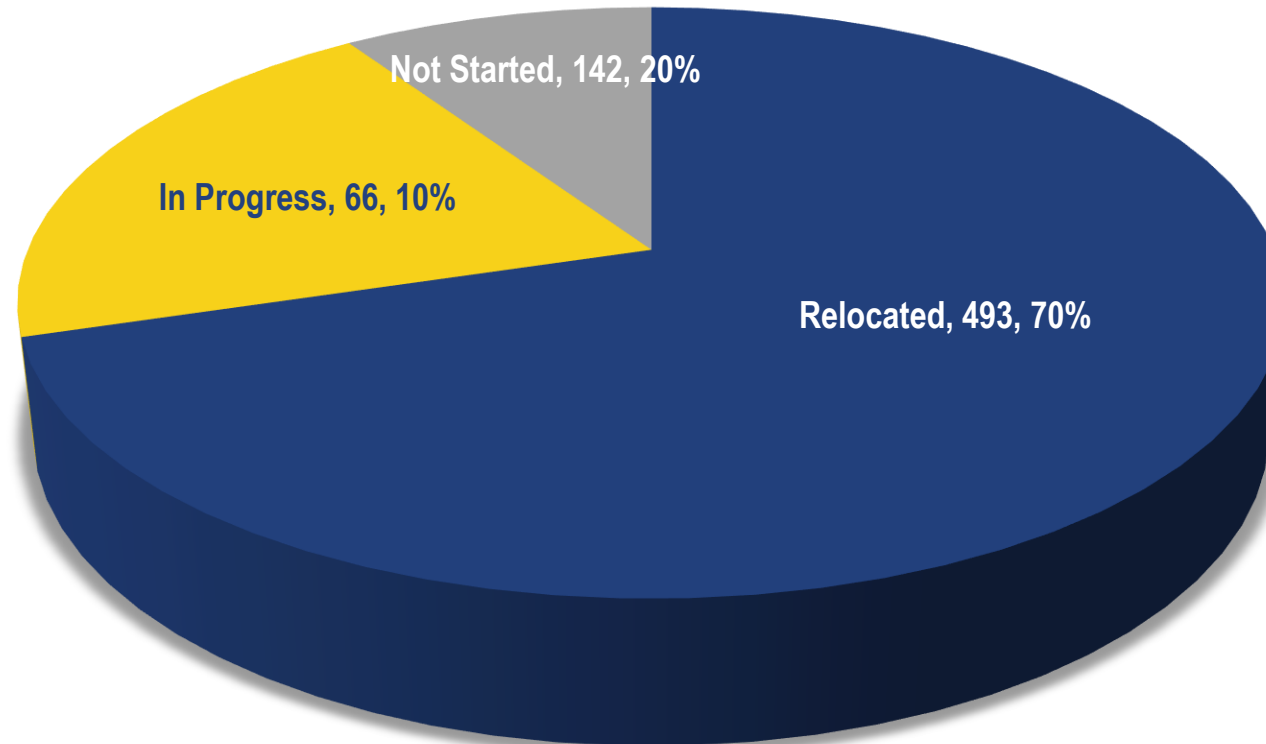
1. Working to finalize ROW for utility relocations.
Status Update: Actively pursuing the remaining acquisitions impacting utility relocations. 98% of parcels have been delivered to the Design-Builder.
2. Established Third-Party Task Force for more focused effort to negotiate resolutions.
3. Working closely with Vie-del Winery, BNSF, and County of Fresno to identify and resolve any long lead items that could impact construction.
4. Proactively collaborating with DFJV to come to an agreement on the Revised Baseline Schedule.
5. The Authority is conducting monthly partnering meetings with DFJV to resolve issues and hold schedule.

Central Valley Update

Construction Package 2-3

- **High-Level Utility Summary**

- » Total of **701** utilities required
 - **493** have been relocated.
 - **66** are in progress of being relocated.
 - **142** are not yet started.



Data Date: 10/31/2023

Central Valley Update

Construction Package 2-3

Utility Relocation Summary by Utility Type

Utility	Status	Number	Percentage
Electric	Not Started	102	27%
	In Progress	30	8%
	Relocated	252	65%
	Total Electric Utilities	384	100%
Gas	Not Started	10	37%
	In Progress	0	0%
	Relocated	17	63%
	Total Gas Utilities	27	100%
Telecom	Not Started	3	1%
	In Progress	27	12%
	Relocated	203	87%
	Total Telecom Utilities	233	100%
Wet	Not Started	27	47%
	In Progress	9	16%
	Relocated	21	37%
	Total Wet Utilities	57	100%

Data Date: 10/31/2023



Strategic Initiatives



Initiatives

- CP 1 Executive Partnering Meetings initiated to advance the resolution of critical items.
- CP 2-3 Executive Partnering Meetings initiated to advance the resolution of critical items.
- Reorganized third-parties under the leadership of the Director of Real Property and increased resources to advance third-party utility relocation efforts.
- Implemented paradigm shift in construction quality control and inspection.



Enhancing Construction Quality



Quality Program Paradigm Shift

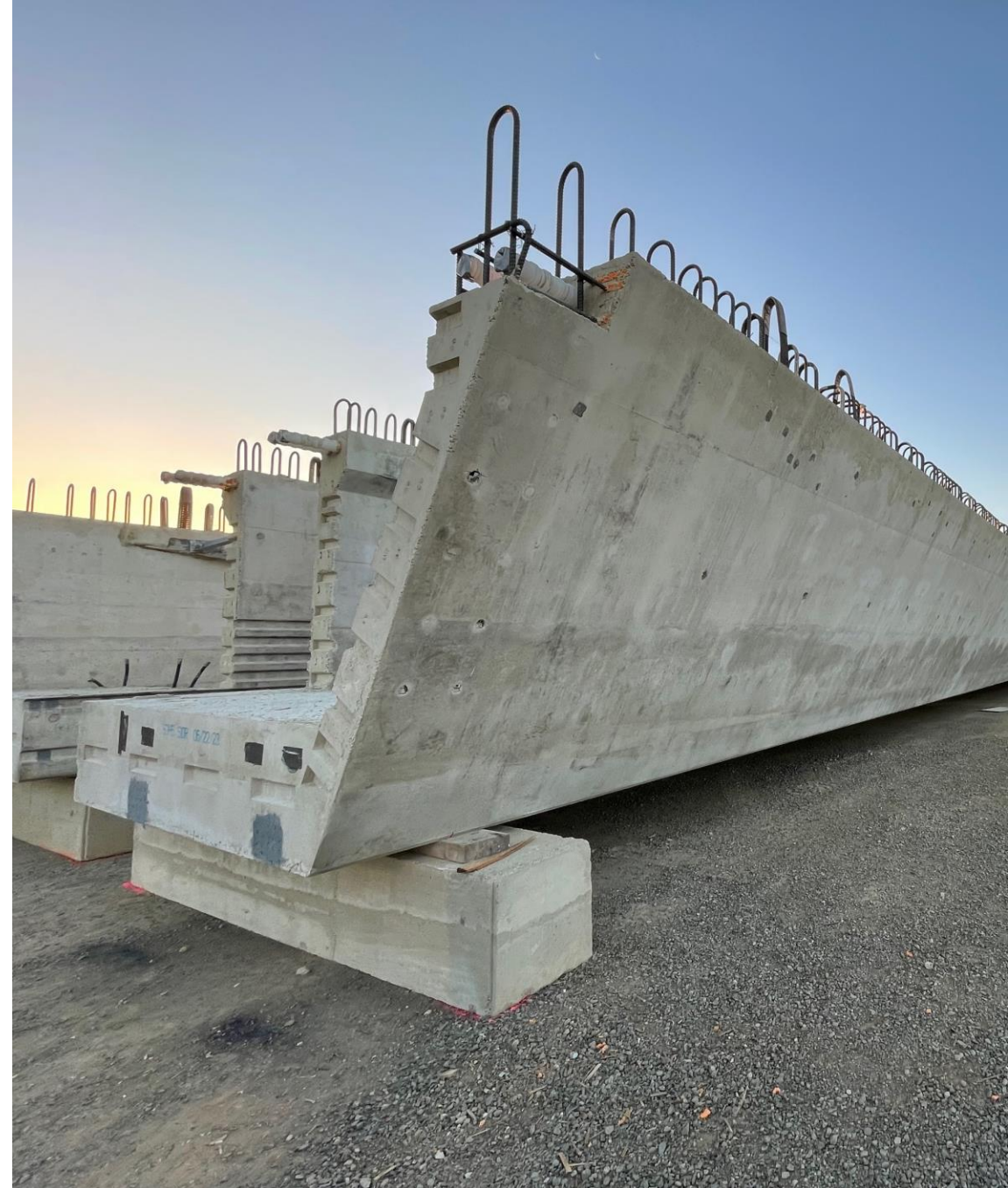
- Following an independent review of the quality assurance and quality control processes, the CEO and COO implemented a paradigm shift for increased owner inspection and supervision.
 - » The Authority approved, implemented and rolled out the quality program paradigm shift.
- Paradigm Shift
 - » Implemented changes that positively impact the quality of the program “with an eye to the future”.
 - » Ensured objective/independent evidence is documented and organized.
 - » Conducted training of staff and construction management team to expand quality control oversight of Contractor work.
 - » Work with Contractor to identify any constructability issues and collaborate on path forward to advance work and maintain high construction quality.

Construction Quality

- New organizational structure.
 - » Established clear roles and responsibilities to establish a more cohesive Authority/Contractor construction team.
- New construction quality model.
 - » Enhanced owner inspection and supervision.
- Proper approval and documentation of as-built work by the Engineer-of-Record.
 - » Authority inspectors prepare a Daily Inspection Report with a coding structure that is linked to the Technical Criteria Requirements.
- Preventing issues from compounding.
 - » Proactive approach to avoid needing to repair or replace nonconforming work.

Field Success Story

- CP 2-3 Tub Girders
 - » The Authority rescinded approval of concrete mix design due to quality concerns.
 - » PCM hired dedicated source inspector.
 - » Worked collaboratively with the DFJV to update the mix design and placement plan.
 - » Paradigm shift in quality expedited the resolution of this issue and supports better products moving forward.





Milestone Achievements



Central Valley Update

Milestone Achievements

- **Advanced Construction in 2023**
 - » Completed or opened to traffic a total of **10 Structures** in the Central Valley.
 - » Relocated a total of **202 Utilities** for Construction Packages 1-4.
 - » Advanced construction activity by **100% more in 2023** compared to 2021.*

**Comparison is based on expenditures reported in 2021 versus 2023.*



Davis Avenue Overcrossing

Central Valley Update

Milestone Achievements

- **Advanced Construction in 2023**
 - » Achieved a new weekly record of **1,612 construction workers** for CP 1-4.
 - » Maintained an excellent safety record, with an **Accident Severity Rate of 1.3** versus the California civil construction average rate of 2.8.



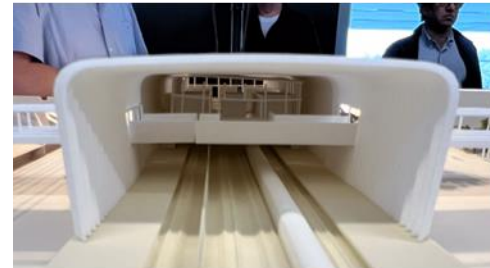


Central Valley Station Design Update



Station Design Update

- Station design contract executed in March 2023 and awarded to Foster & Partners & Arup Joint Venture.
- Preliminary design has commenced for the four Central Valley stations.
- Concept designs were submitted in November 2023 and the Board of Director is expected to be briefed in February 2024.
- Schematic design submission expected in late summer 2024.
- Coordination and outreach with local stakeholders is ongoing.
- Fresno Historic Depot seismic retrofit design has commenced, with an expected completion date of December 2024.





Environmental Updates



Environmental Updates

- Prepared environmental agency approvals for advancing Central Valley construction.
- Completed the Merced Station Relocation Environmental Reexamination.
- Contract for Environmental and Preliminary Engineering Services for the Central Valley Heavy Maintenance Facility was executed in November 2023 and awarded to STV Incorporated.
- Distributed the Palmdale to Burbank Administrative Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for Cooperating Agency Review, with expected completion of Final EIR/EIS in early 2024
- Developed Supplemental Alternatives Analysis (SAA) for the Los Angeles to Anaheim Project Section.

Questions?



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