

RUSSIAN RIVER BOH

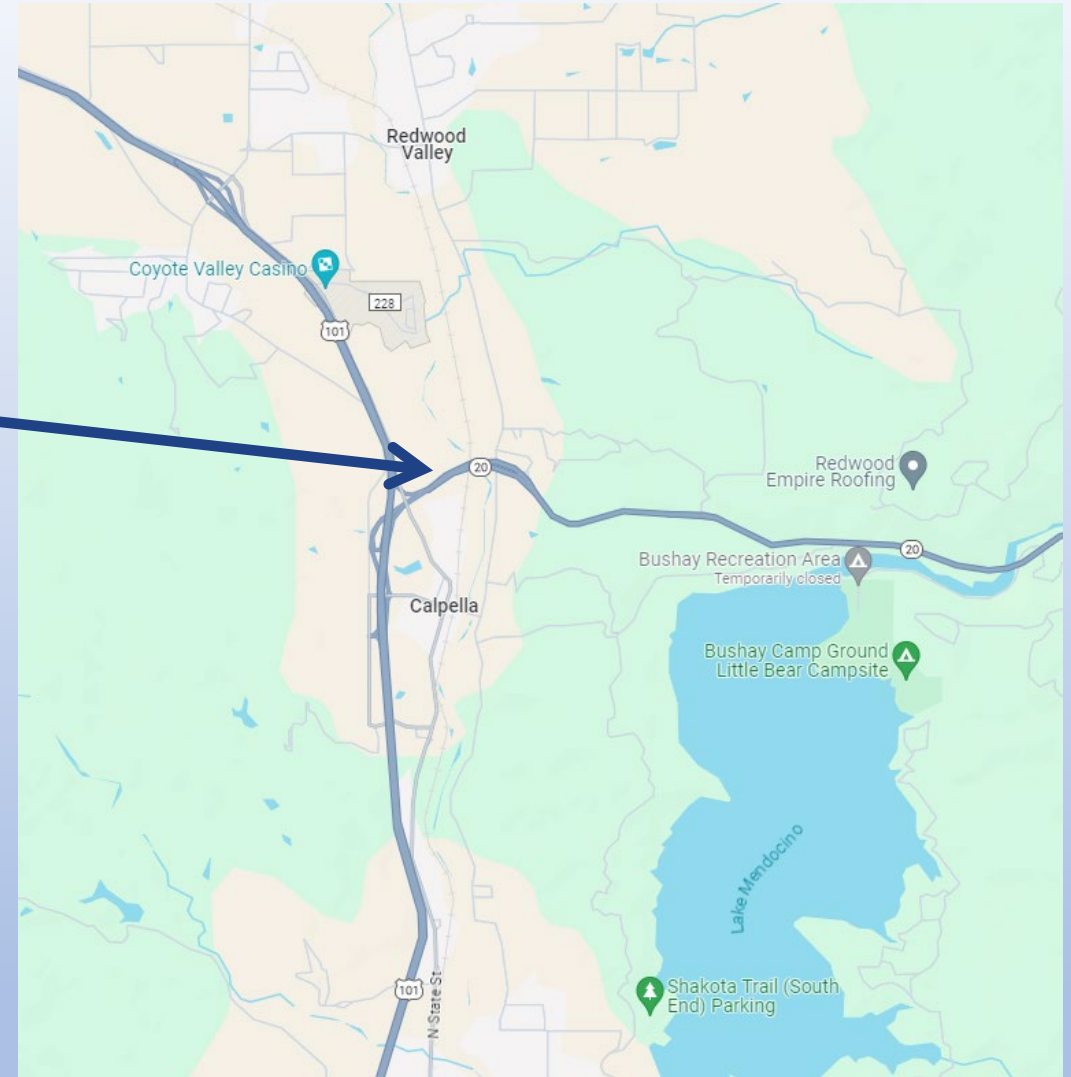
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Kari Forbes, SE – CT Bridge Construction Engineer
Chris Nelson – Myers Senior Project Manager



2024 California Bridge Contractors Liaison Meeting





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PROJECT INFORMATION

- New 860', 7 span CIP/PT Box Girder Bridge
- Replace aging existing structure and deficient deck
- Restore wildlife passage on East side of Russian River
- Demolition of existing Russian River BOH and Redwood Valley UC

- Bid Opening Date: January 19, 2022
- Approval Date: June 9, 2022
 - Delayed approval due to lowest bidder being disqualified
- 19% DBE Goal
- A + B Contract = \$26M + 530 days @ \$13,500/day = \$33.1M



PROJECT SEQUENCING

- Breaking Ground
- Foundations and Columns



PROJECT SEQUENCING

- Falsework



PROJECT SEQUENCING

- Superstructure
 - Frame 1 Stem and Soffit
 - Frame 1 Deck
 - Frame 2 Stem and Soffit
 - Frame 2 Deck



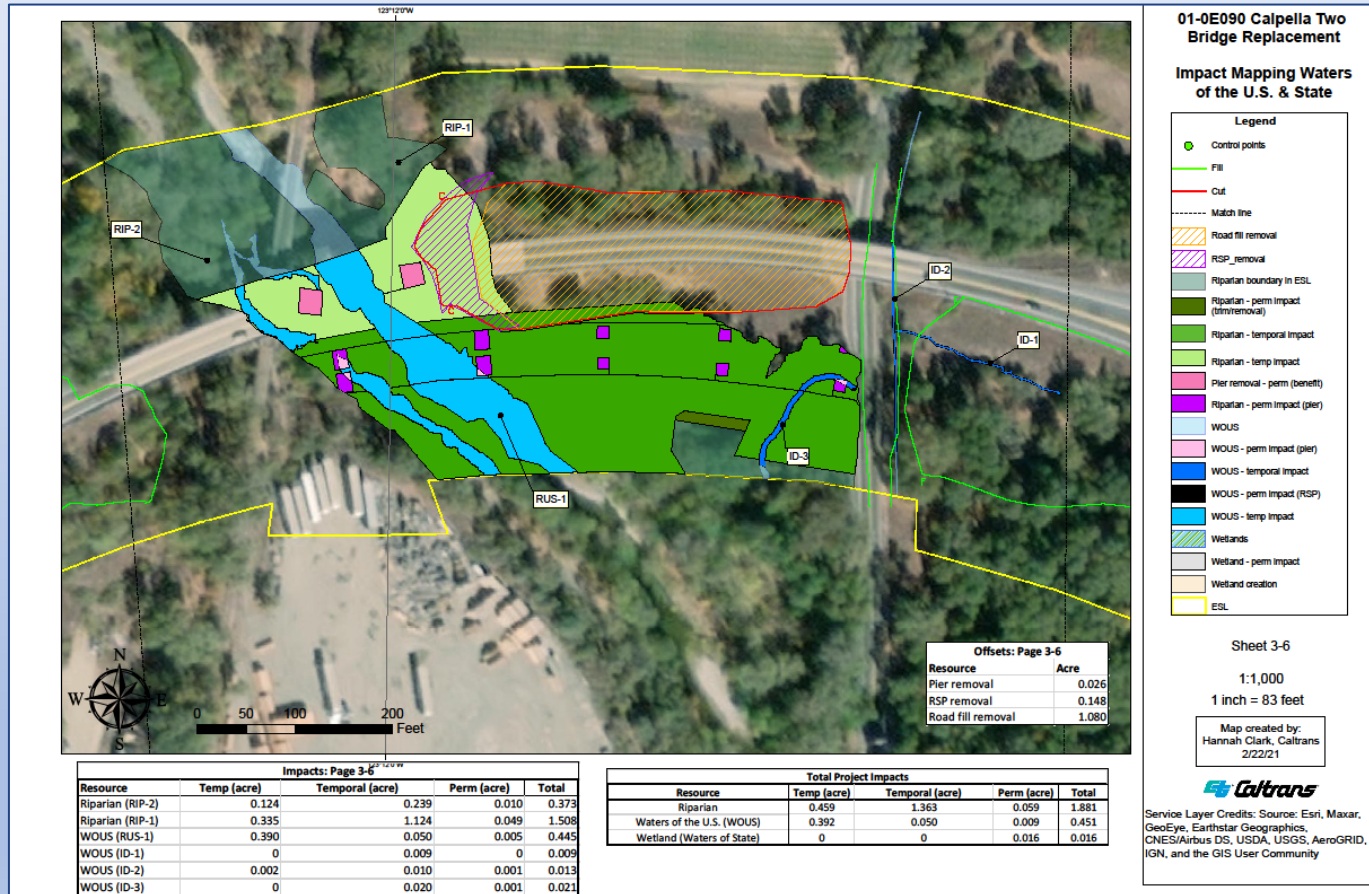
PROJECT SEQUENCING

- Approach Slabs
- Barrier Rail
- Existing Structure Demolition



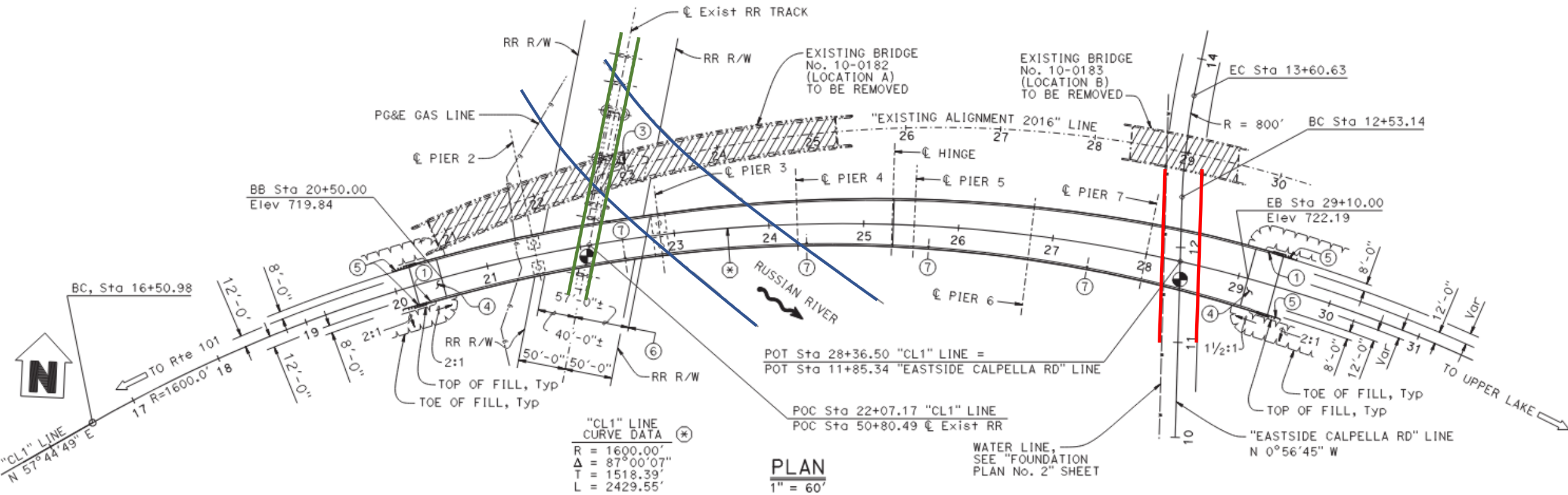
CHALLENGES

- Russian River channel work permitted June 15 – October 15
- Project approval date pushed the start of construction to August 3, 2022



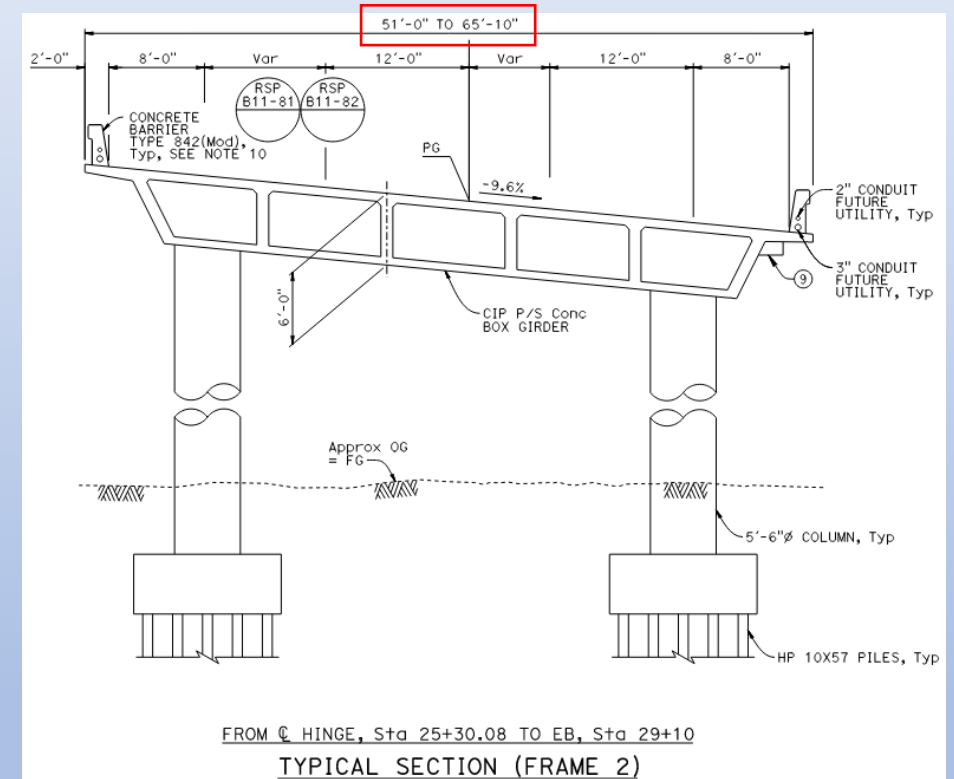
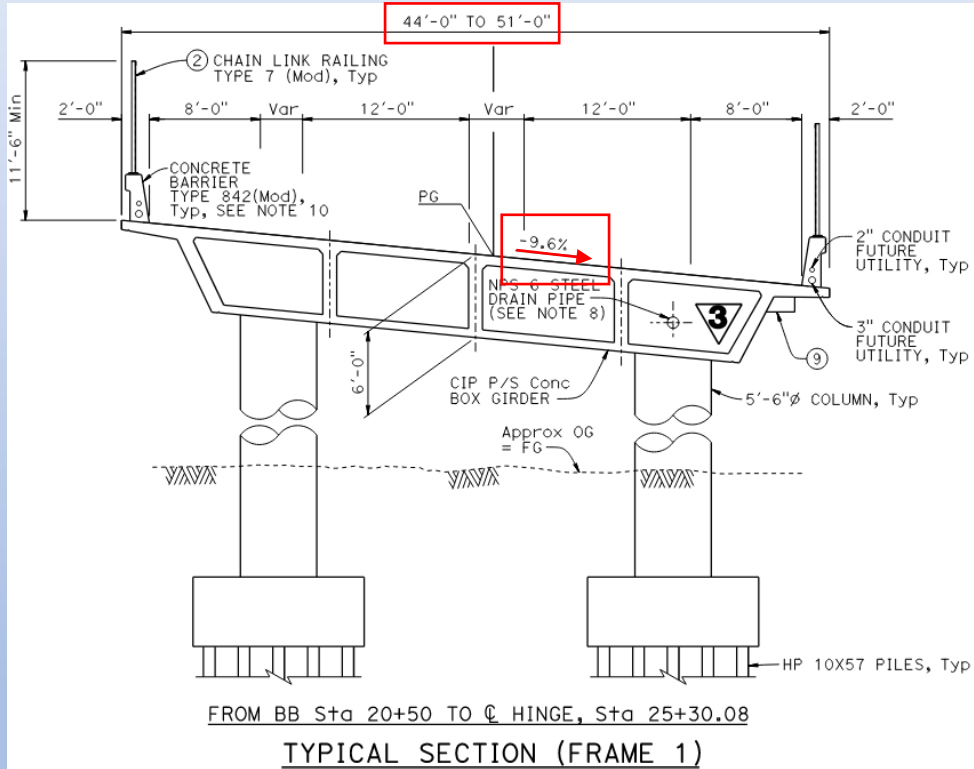
CHALLENGES

- The new bridge spans over a county road, a river and a railroad



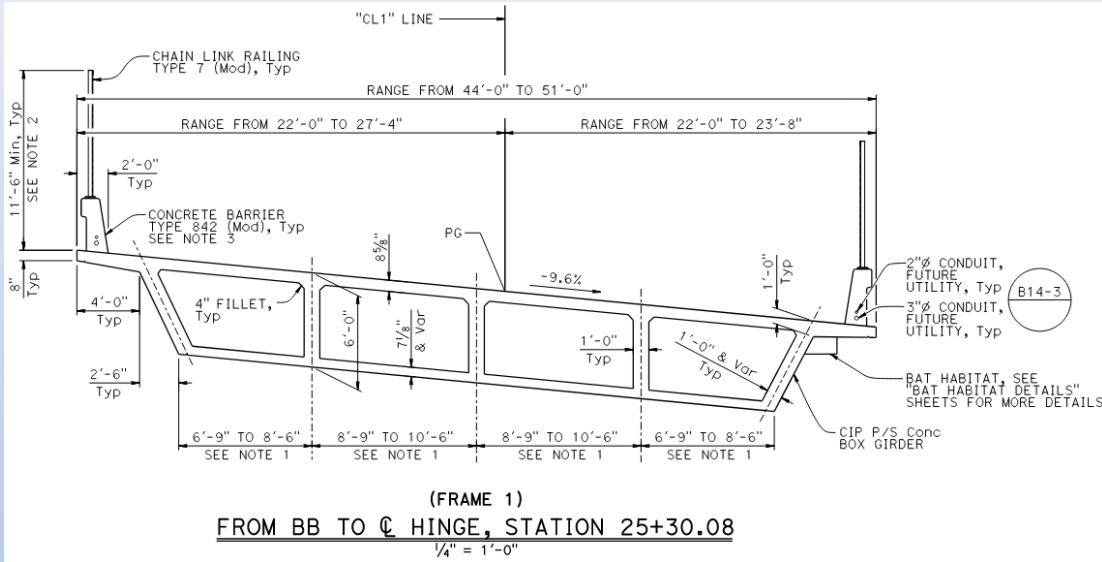
CHALLENGES

- 9.6% superelevation
- Bridge width varies from 44' at the West to 65'-10" at the East

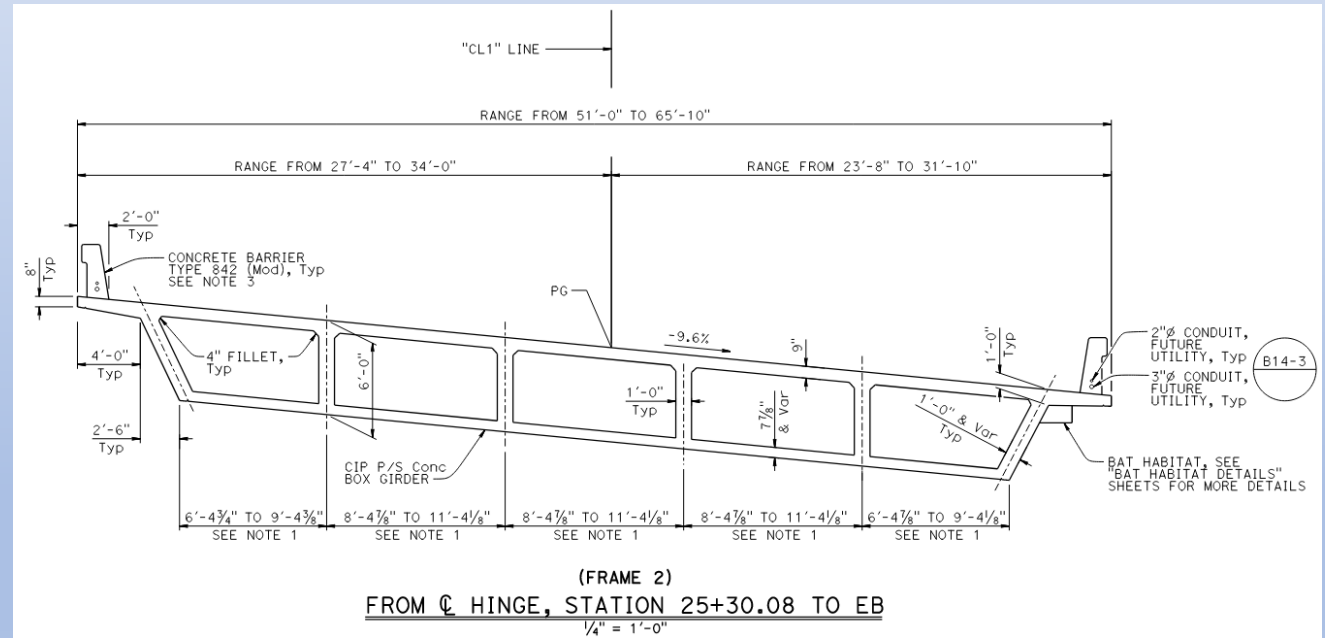


CHALLENGES

- Frame 1 → 5 girders



- Frame 2 → 6 girders



CHALLENGES

- Congested hinge required switching from two end to one end stressing



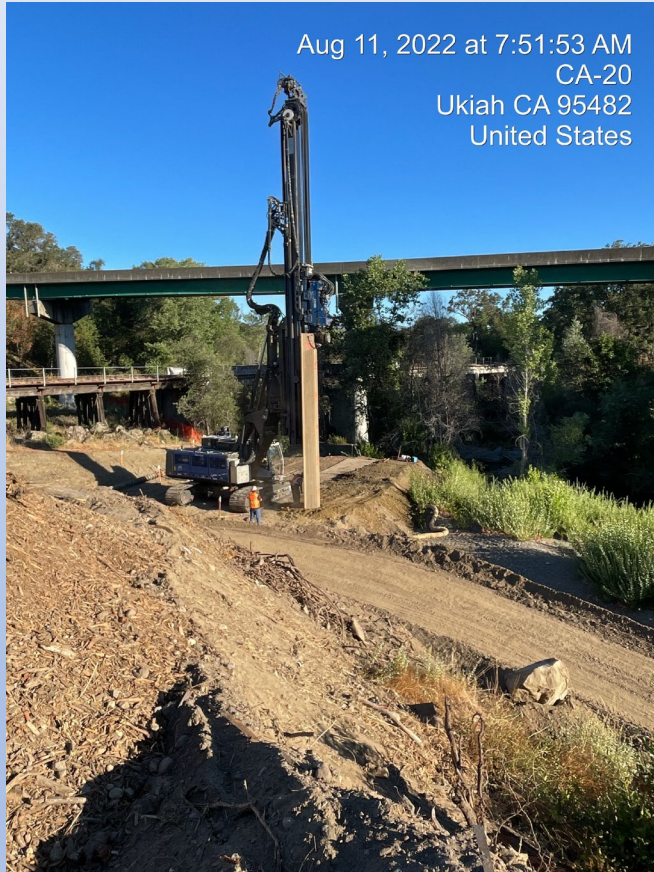
CHALLENGES

- Driven piles at the abutments were spliced due to soft driving conditions doubling the length of the original design



CHALLENGES

- Piers 3 & 4 are in the river channel requiring cofferdams, dewatering and seal course
- In channel work window of 6/15 – 10/15



CHALLENGES

- Falsework bents on piles in and adjacent to the river to mitigate risk
- Fiber optic line conflict with falsework bent piles



CHALLENGES

- Flash flooding of the river during the winter months



PARTNERING

- Kickoff Partnering Meeting → July 20, 2022
- 3-month Goals:
 - Build the Abutment 8 fill to start settlement period (critical path)
 - Falsework submittal authorized – 60-day review due to railroad involvement
 - Completion of work in the river channel
 - Outreach to agencies for river channel window extensions
 - Agree on staging modifications



ABUTMENT 8 FILL

- Fill completed and settlement period started on September 9, 2022



FALSEWORK REVIEW/AUTHORIZATION

- Falsework required review by the railroad extending the review period to 60 days
- Project team worked together to provide authorization of areas away from the RR prior to the completion of the RR review



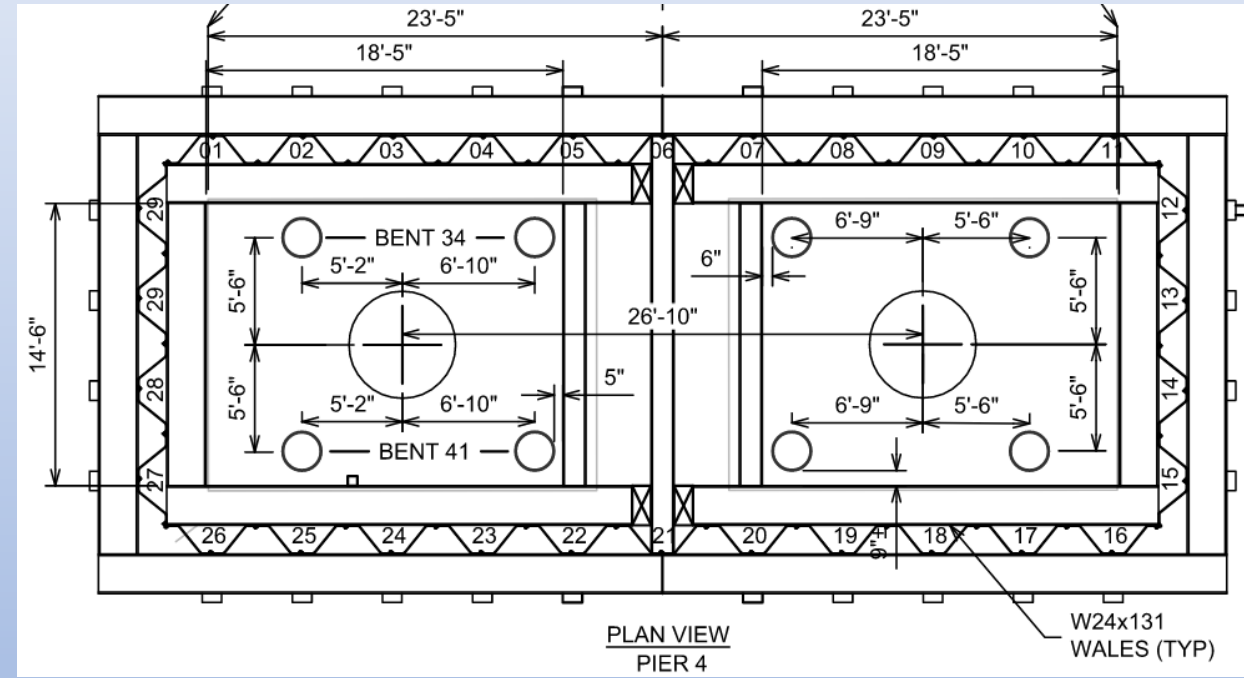
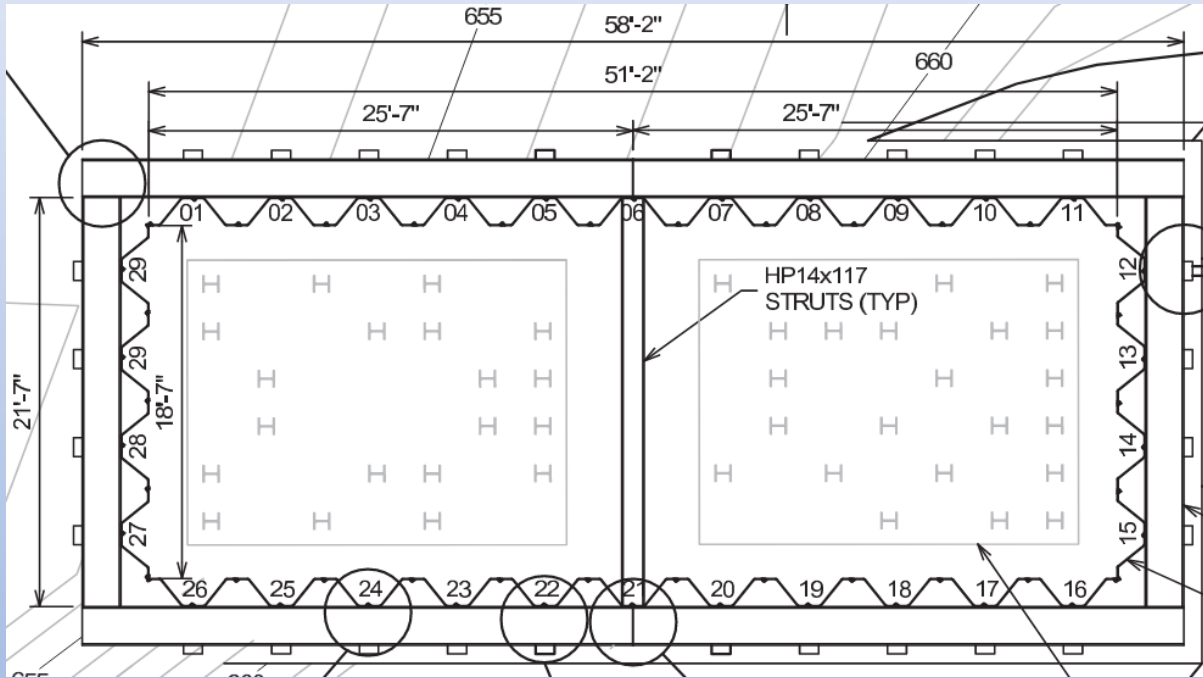
WORK WITHIN THE RIVER CHANNEL

- August 19, 2022: Project team decided to proceed with both Piers 3 & 4 this season



AGENCY OUTREACH

- Environmental team coordinated multiple site visits with all agencies during construction
- Cofferdam flooding contingency plan for permit extensions



AGENCY OUTREACH

- Received extensions of the permits to remain in the channel until 11/11/2022
- Final cofferdam sheets removed on Nov 9th
- No agency violations



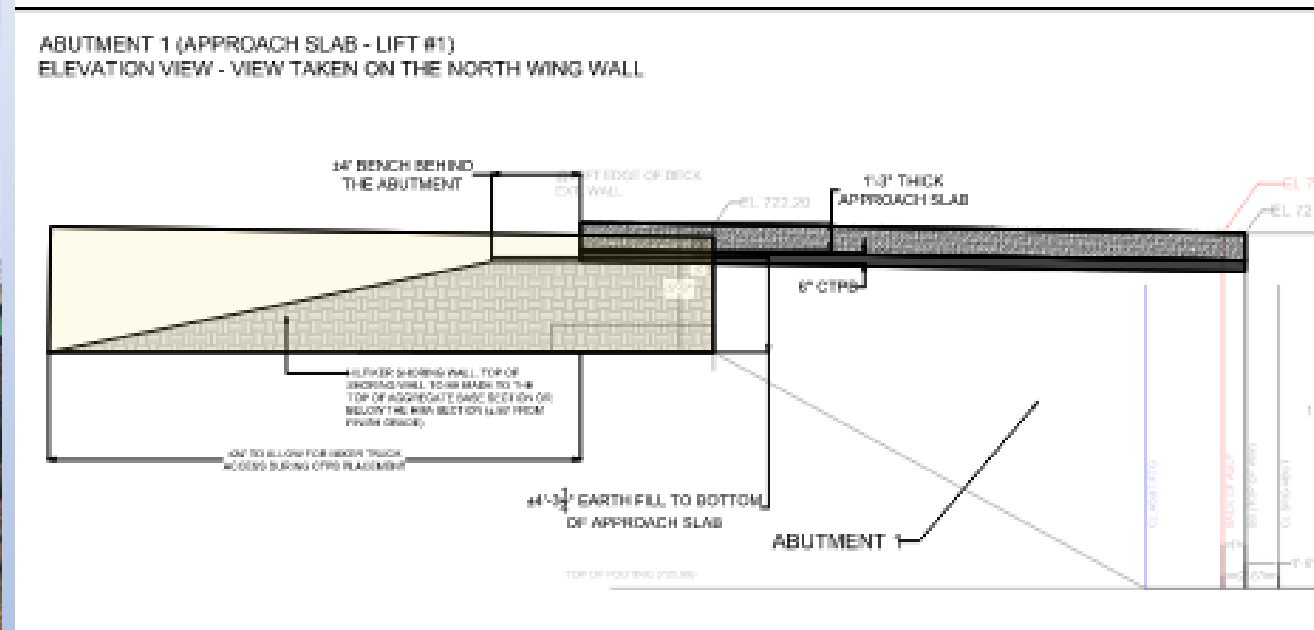
STAGING MODIFICATIONS

- Started with Bent 3 and Bent 4 Construction to prevent going into another season



STAGING MODIFICATIONS

- Partial Abut 1 Fill to match the existing roadway and facilitate abutment & approach work



SCHEDULE

- EB traffic on the bridge – November 11, 2023
- WB traffic on the bridge – May 24, 2024
(anticipated date)
- Removal of existing structures and fill – start June 2024
- Project Completion – December 2024



QUANTITIES

- Total Structural Concrete – 3952 CY
 - Deck Concrete – 1284 CY
 - Stem and Soffit – 1905 CY
 - Abutments – 1284 CY
- Structural Rebar
 - 1.2 million pounds
- Total Length of Driven Pile
 - 13,100 LF



QUESTIONS??

