Bucks Bar Road Bridge Project

Public Informational Meeting

Wednesday, January 6, 2010

PRESENTED BY:

Matthew Smeltzer, P.E.
Deputy Director of Engineering, DOT

Supervisor Ray Nutting
El Dorado County, District 2

Dustin Harrington, P.E.
Associate Civil Engineer, DOT

Matthew Griggs, P.E.
Project Manager, Dokken Engineering

DOKKEN ENGINEERING

Public Meeting Agenda

- Welcome and Introduction – Matt Smeltzer
- Background and History – Supervisor Ray Nutting
- Feasibility Study Findings – Dustin Harrington
- Open Question & Discussion Period

- Staff Available to Answer Questions and Receive Public Input Following Presentation

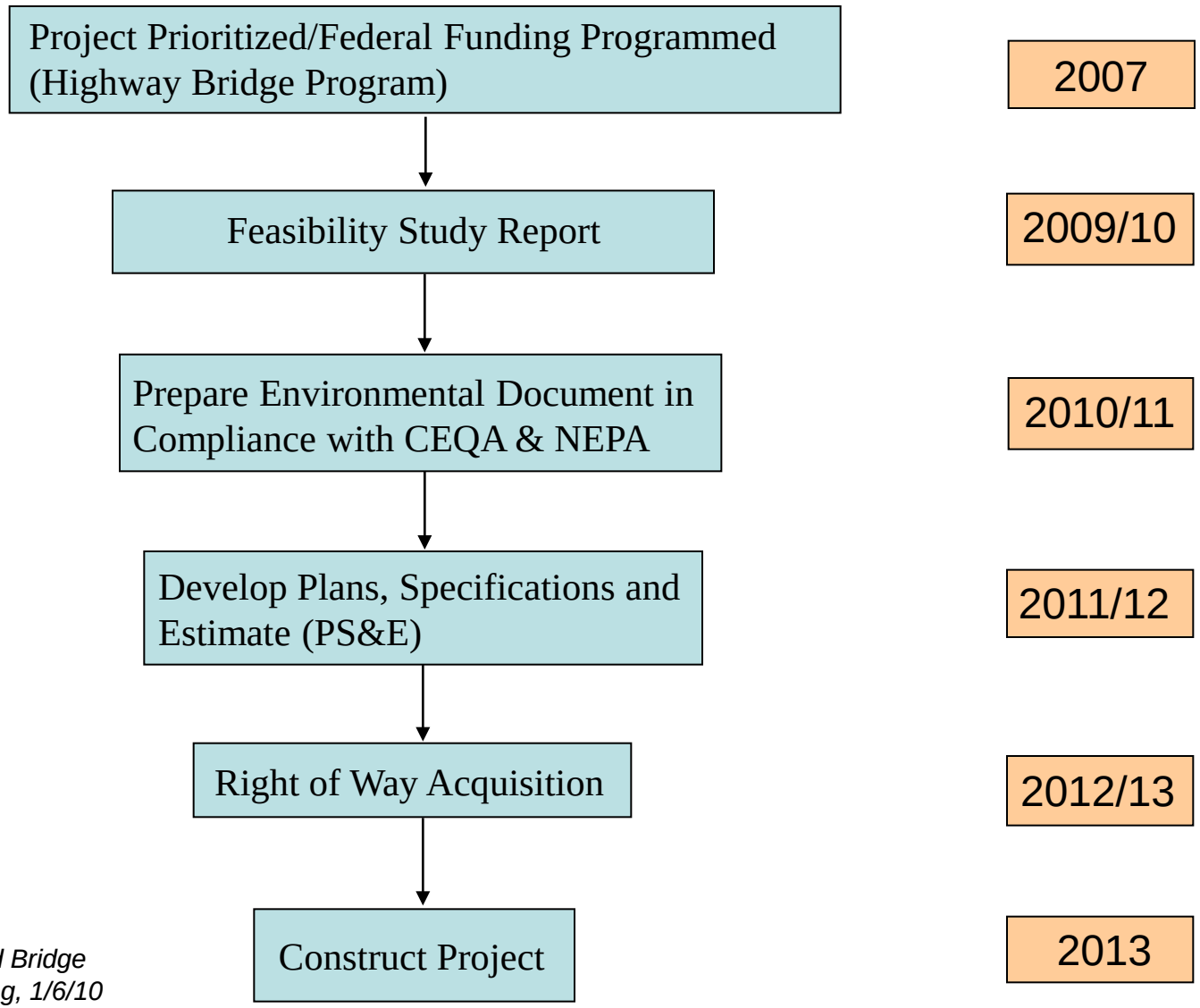
Bucks Bar Road Bridge

- Built in 1940
- Single-Span Concrete Arch Design
- 18.5-foot Width
- 4,200 Vehicles/Day

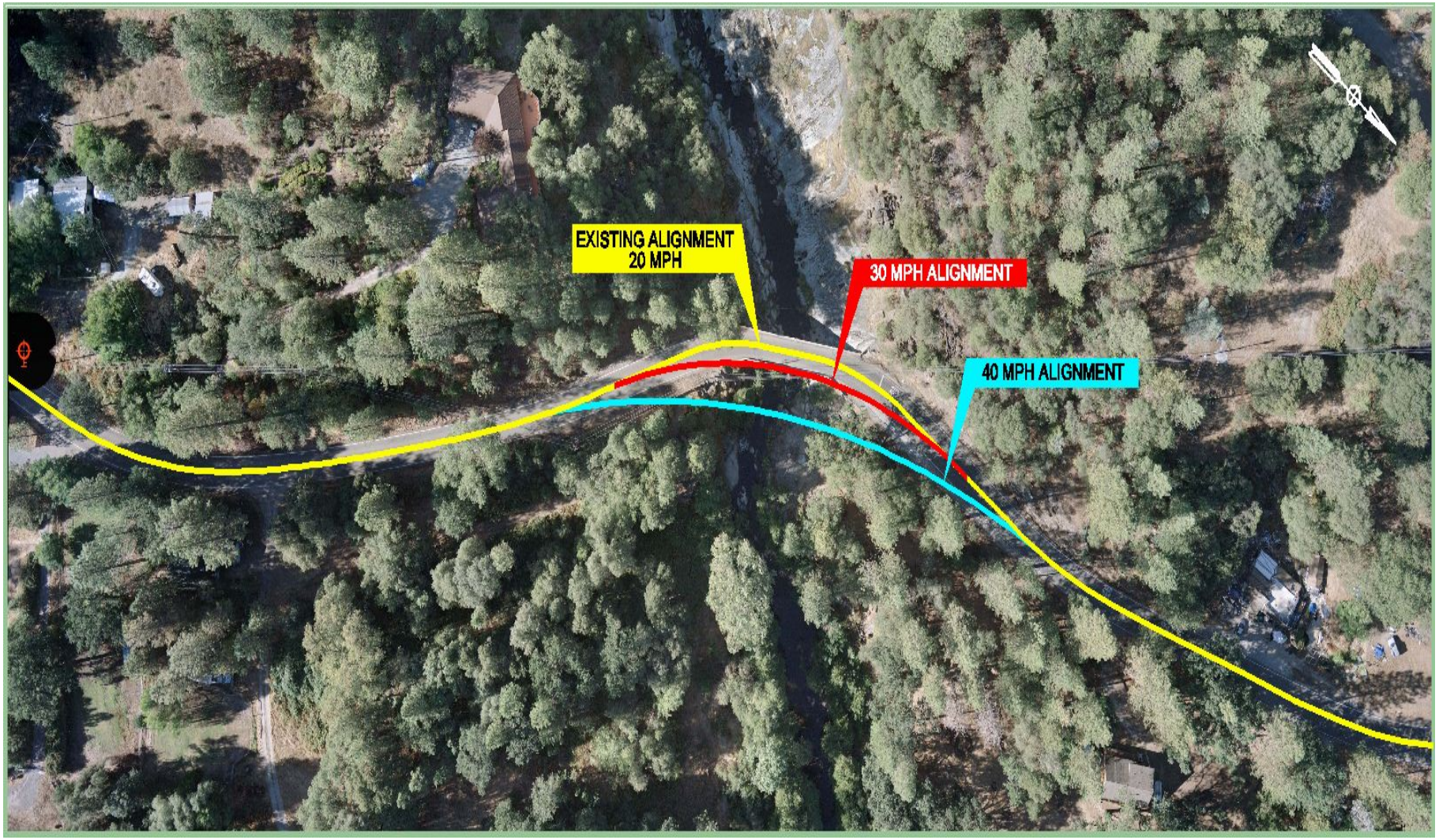
Bucks Bar Road Bridge

- Needs Widening
- Existing Hydraulics an Issue During 100-Year Storm Event
- Structural Integrity Concern During a Major Seismic Event

Estimated Project Schedule

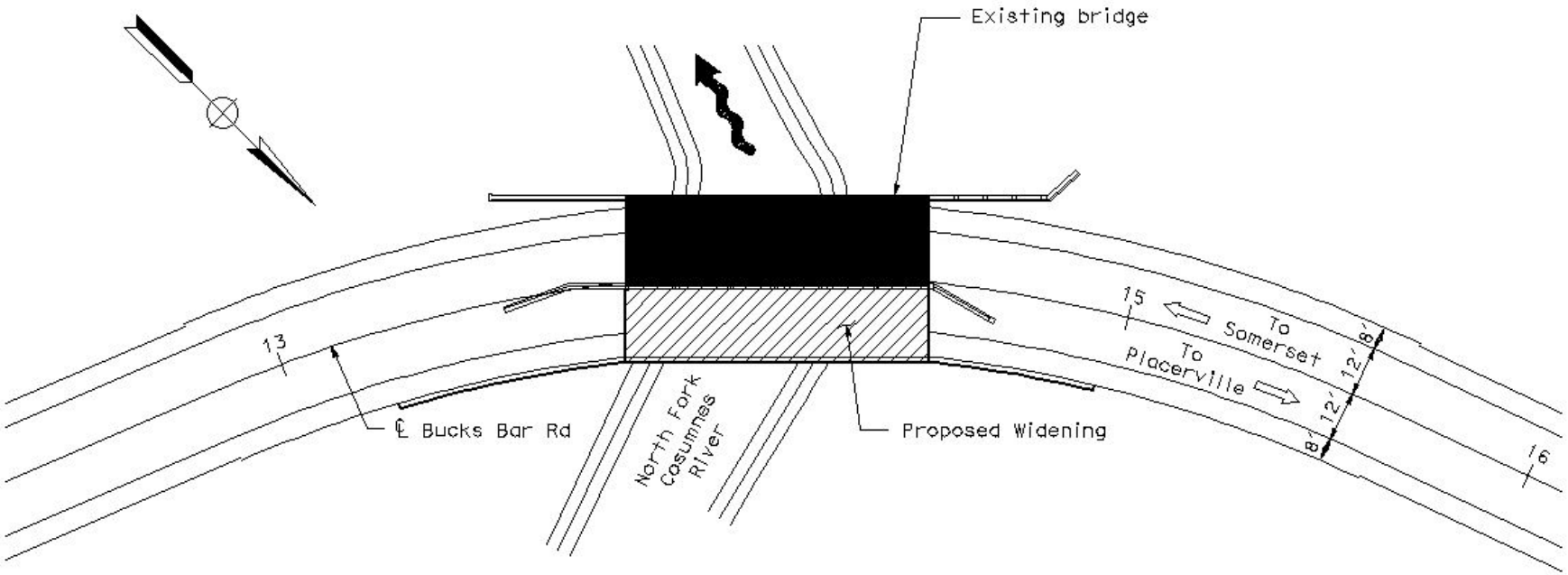


Alignment Alternatives Considered

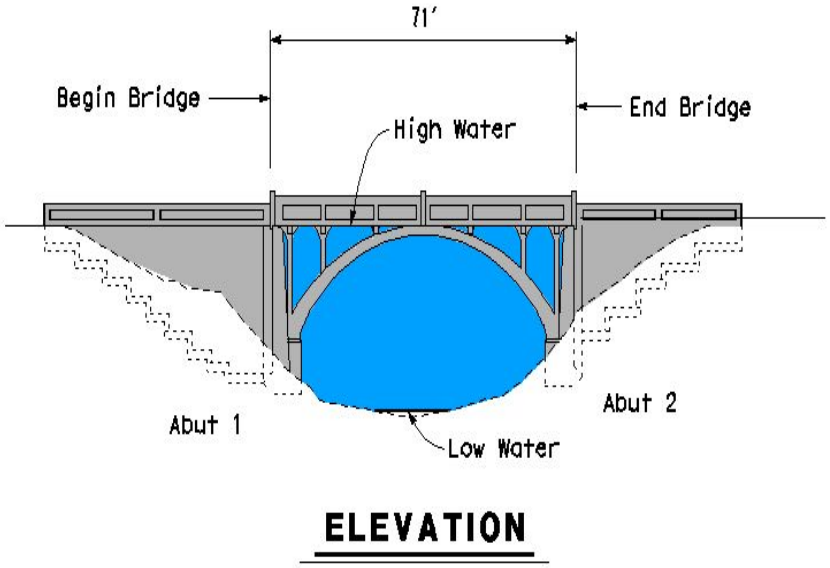


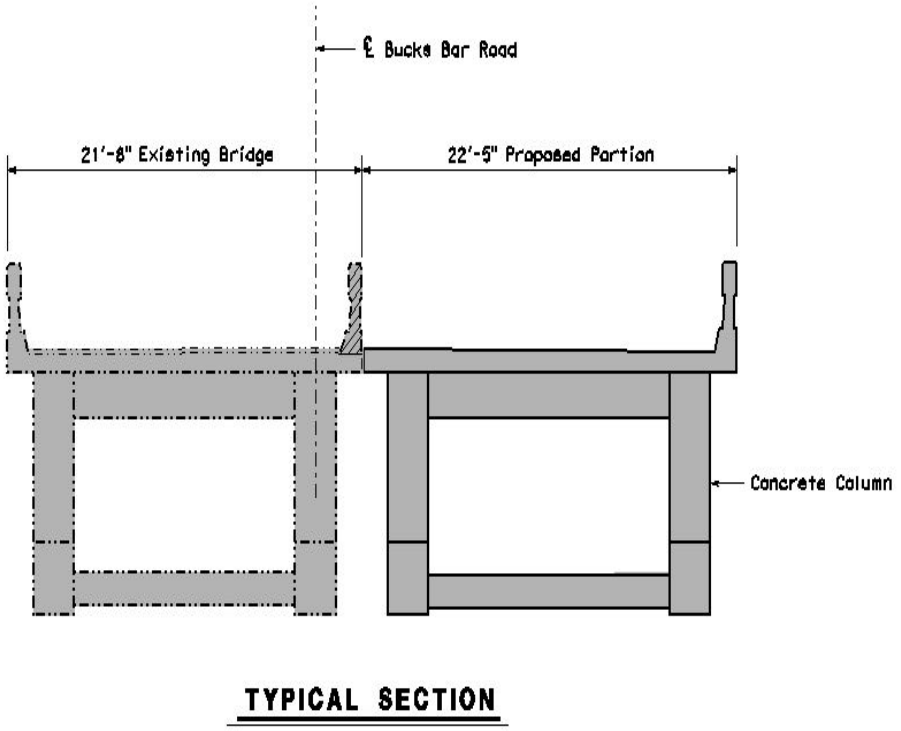
Proposed Bridge Configuration

- Existing Bridge is Rectangular
- Proposed Alignments are Curved
- Provide 2 Lanes with Shoulders



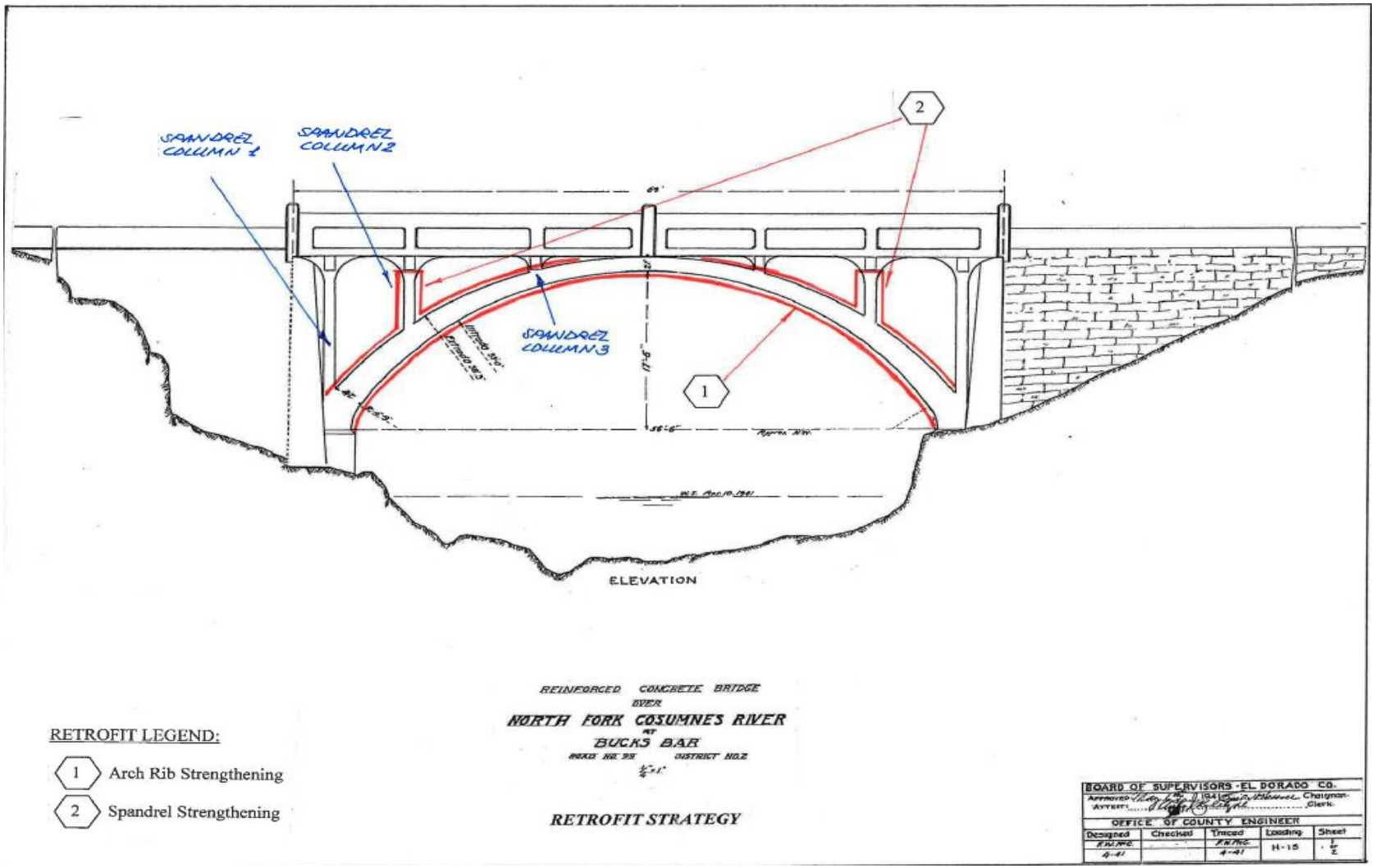
Bridge Widening Alternative



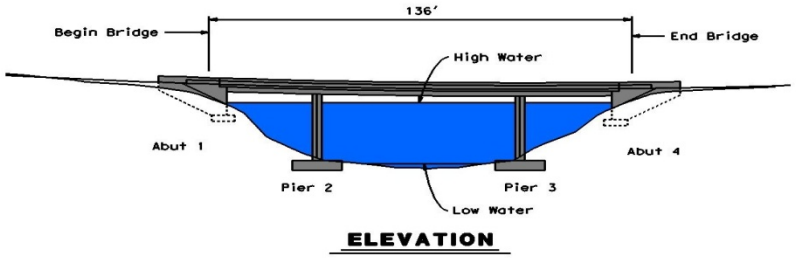


- Hydraulic Flow Becomes Further Constricted
- Major Maintenance Likely Necessary after Seismic Event
- Existing Structure Is Sound, But not to Current Code

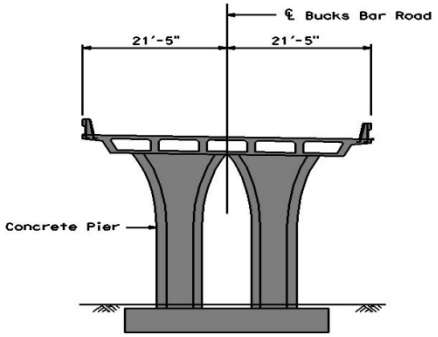
Retrofit of Existing Bridge



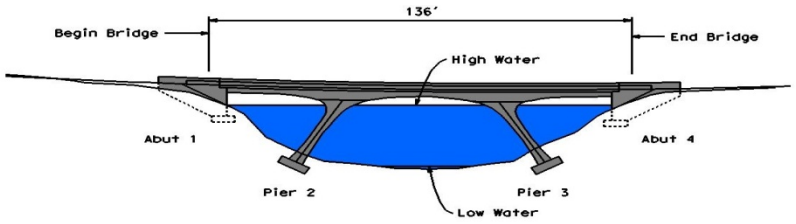
Bridge Replacement Alternatives



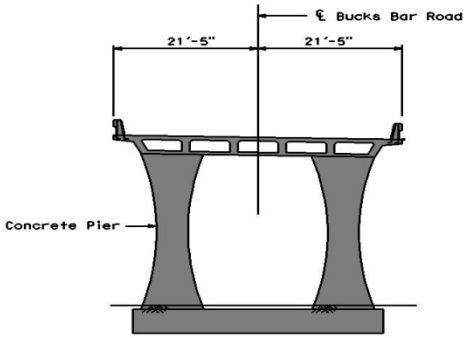
ELEVATION



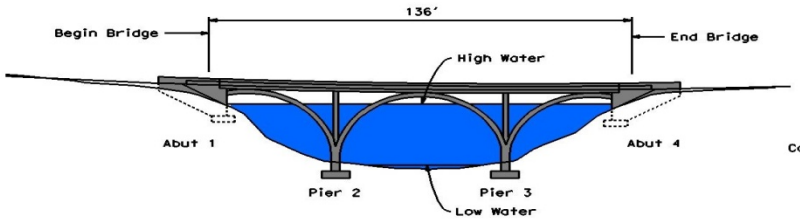
TYPICAL SECTION



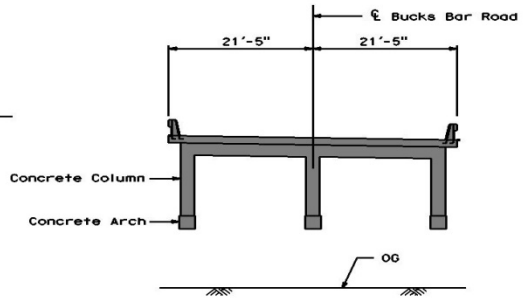
ELEVATION



TYPICAL SECTION



ELEVATION

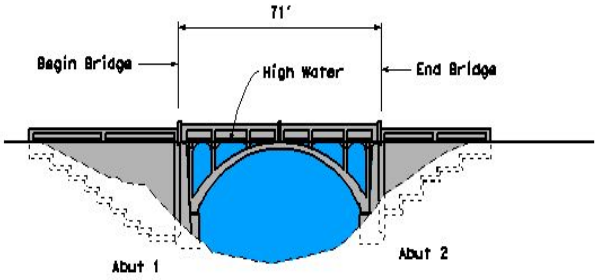


TYPICAL SECTION

Environmental Work Plan

- Biological Studies
- Historical Properties Study Report
- Hazardous Materials Study
- Archaeological Study
- Conclusion: All Alternatives Have Similar Environmental Impacts

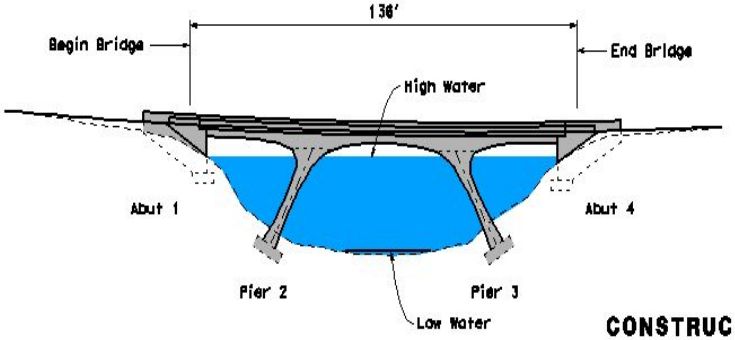
Cost Comparison of Alternatives



CONSTRUCTION COST:
$1.75 MILLION

ALTERNATIVE 1 - WIDEN

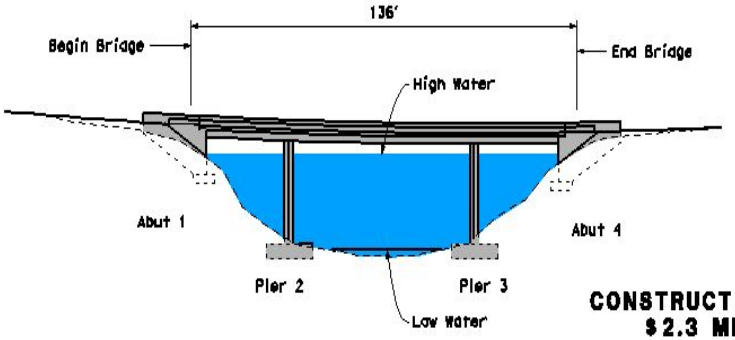
50 YEAR FIX



CONSTRUCTION COST:
$2.6 MILLION

ALTERNATIVE 3 - REPLACE

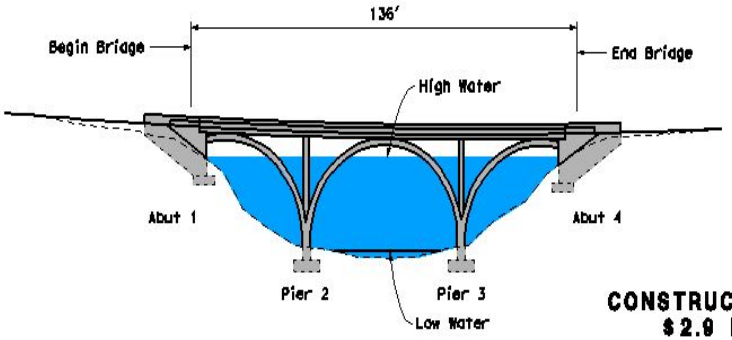
100 YEAR FIX



CONSTRUCTION COST:
$2.3 MILLION

ALTERNATIVE 2 - REPLACE

100 YEAR FIX



CONSTRUCTION COST:
$2.9 MILLION

ALTERNATIVE 4 - REPLACE

100 YEAR FIX

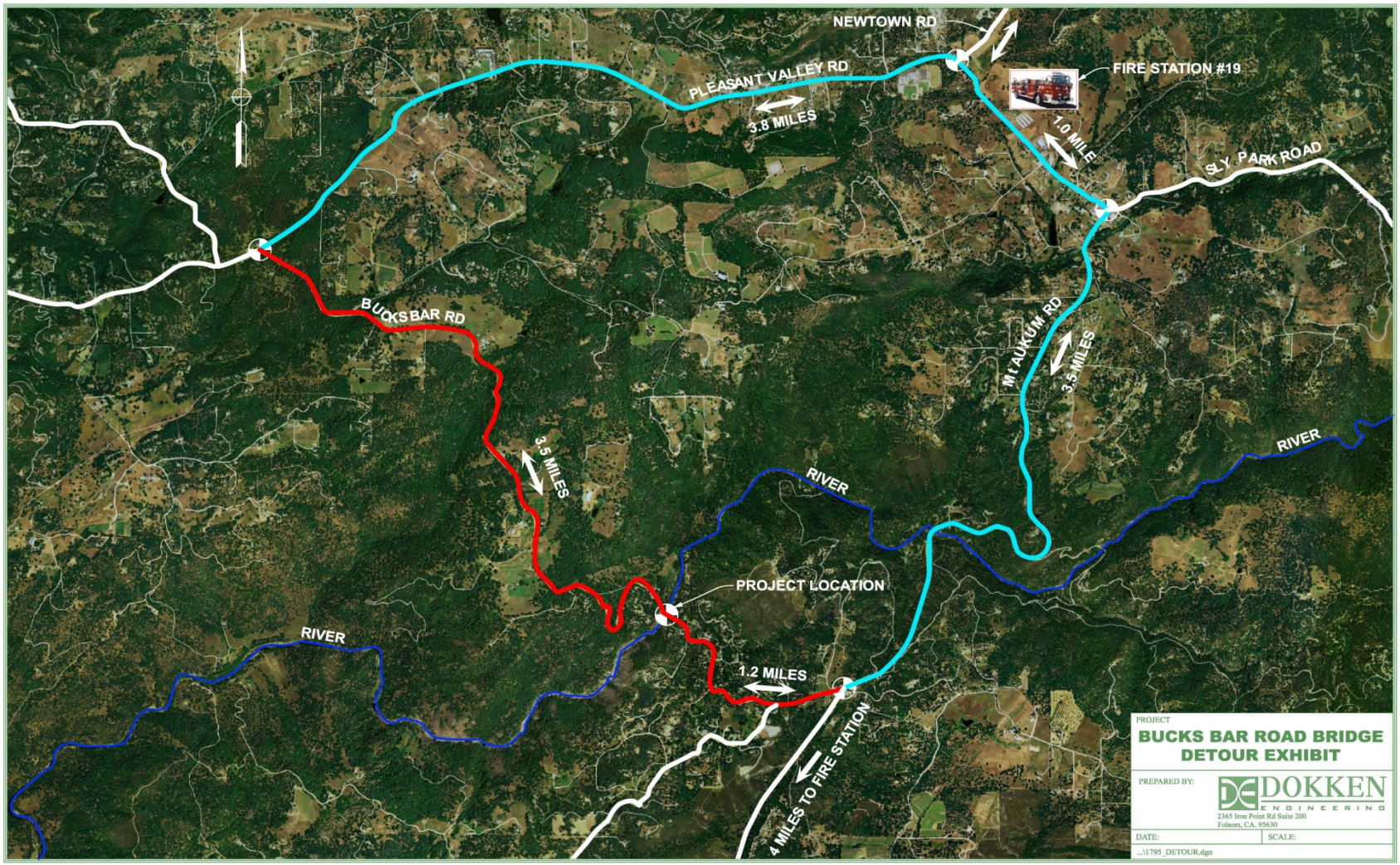
Alternatives Comparison Summary

CONSIDERATION	WIDENING AND REHABILITATION	REPLACEMENT
Hydraulics	River flow is restricted at the existing bridge.	Meets all criteria and eliminates constriction point in the canyon. Lowers water surface elevation upstream and restores natural river behavior.
Aesthetics	Existing arch configuration is preserved and widened.	A variety of aesthetic options are presented.
Maintenance	Essential to continue periodic maintenance. Likelihood of major maintenance in response to major seismic event.	Reduced periodic maintenance.
Cost	Lower initial cost.	Lower life cycle cost.

Constructability Issues

- Construction Staging Always a Challenge
- Minimize Impacts to Local Businesses
- Minimize Impacts to Local Traffic
- Maintain Local Tourism During Summer
- We Need Your Input on this Topic

Potential Detour



Detour Considerations

Widen or Replace Bridge

<u>Continuous Closure with Detour</u>

- 1 Season Construction

<u>One-Way Traffic Control with Temporary Closures</u>

- 2 Seasons Construction
- Traffic Delays
- Estimated 30% Higher Construction Costs

End of Presentation

Questions?
Concerns?

Contact Information

Dustin Harrington

Department of Transportation

Phone: (916) 358-3680

Email: dustin.harrington@edcgov.us

Comment Cards are Available

THANK YOU FOR ATTENDING!!!