

Upper Elgin Road at Babocomari Creek



Why are alternatives being evaluated?

The Babocomari Creek Bridge has been determined eligible for the National Register of Historic Places. Because federal funding is involved, ADOT must evaluate alternatives that could avoid or minimize impacts to the historic bridge before a final project decision is made. The concepts shown here remain under evaluation, and public input will be considered along with engineering, safety, environmental, historic-preservation, cost, and regulatory factors.

Project Purpose and Need

Purpose:

The purpose of the project is to provide a bridge in fair condition or better which improves the operational functionality of the crossing and can accommodate legal loads including emergency vehicles, school buses, and commercial vehicles.

Need:

- ❖ The bridge is in poor condition
- ❖ The bridge is posted at 10 tons
- ❖ The bridge is single-lane
- ❖ Multiple accidents in the past 5 years



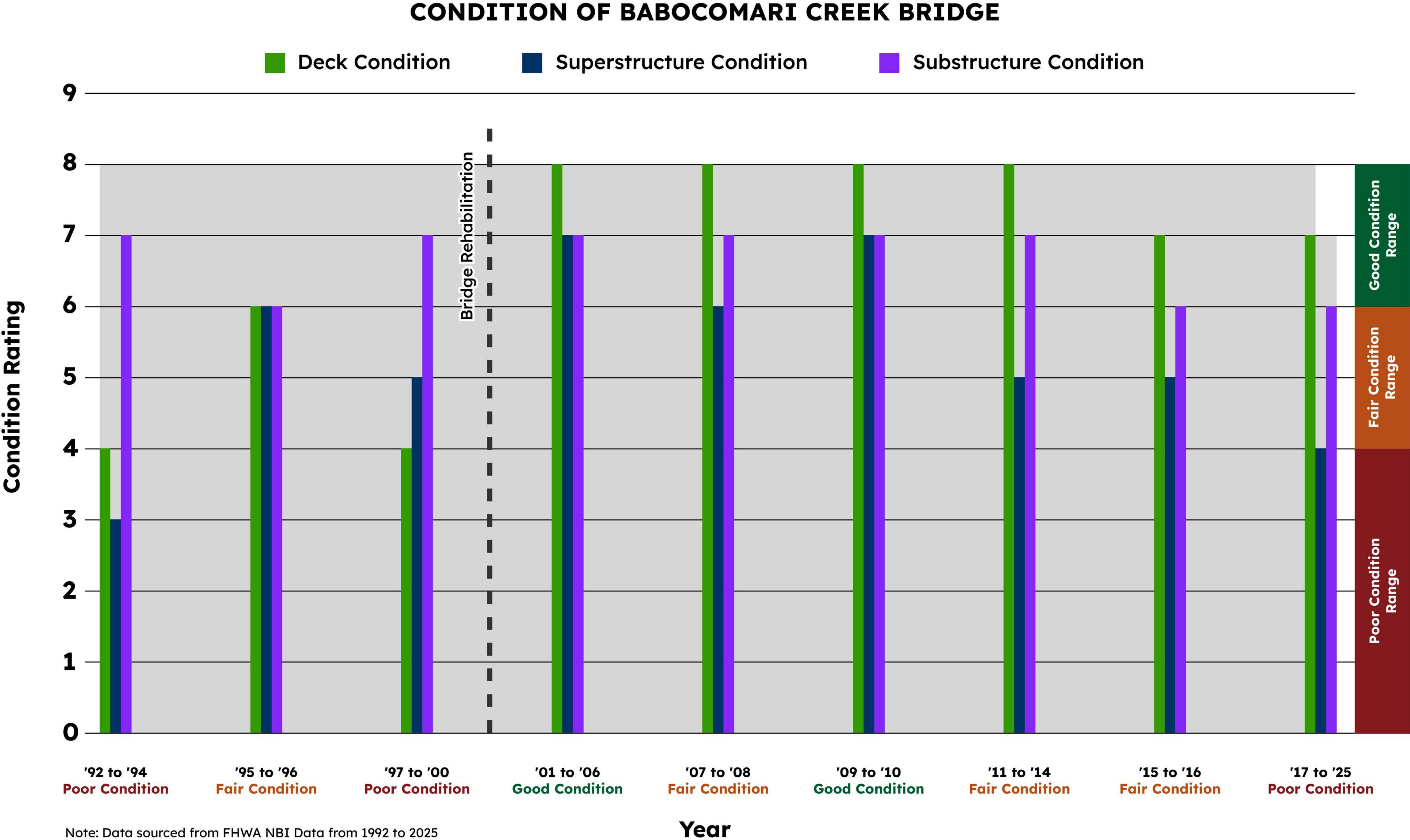
Historic Condition Rating of the Babocomari Creek Bridge

Condition Rating Scores:

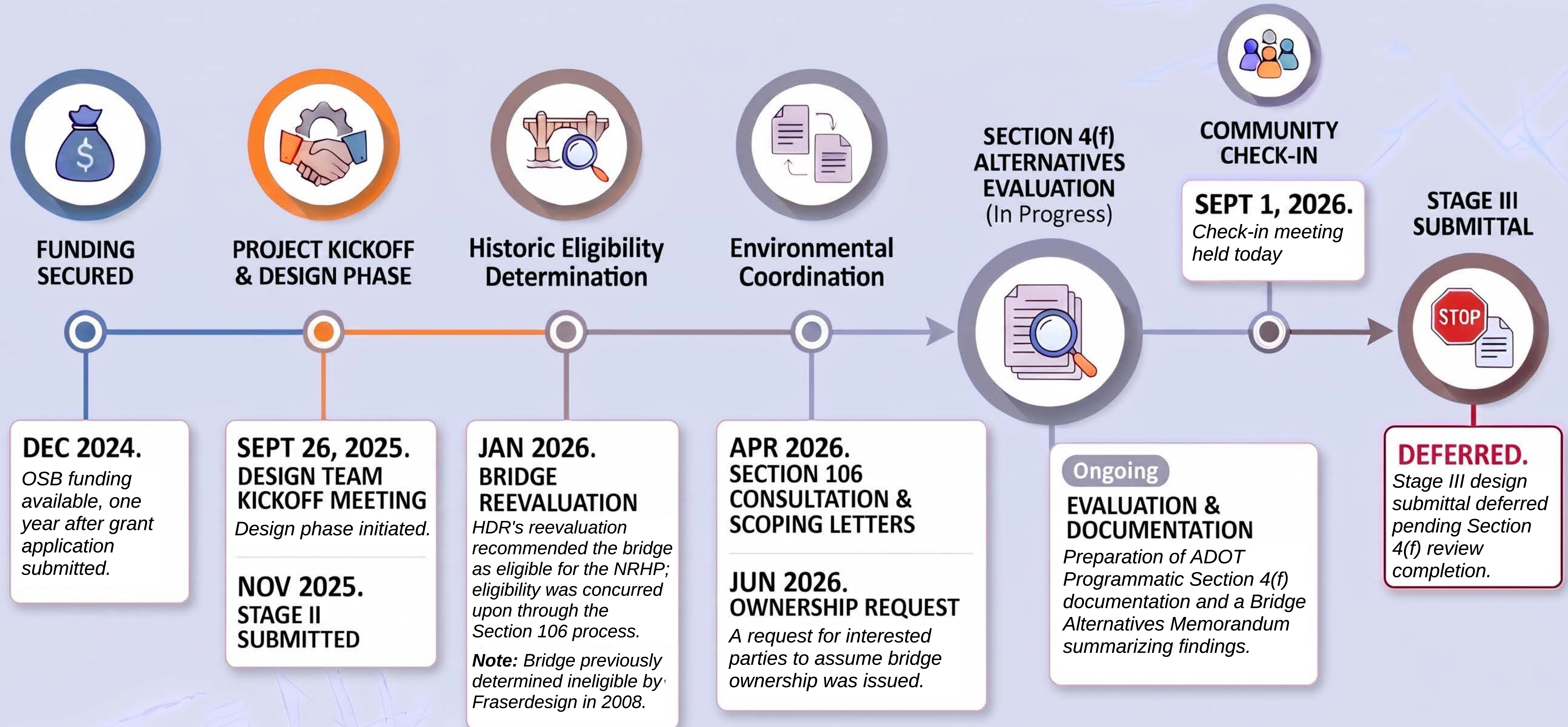
Standardized ratings assigned by nationally certified bridge inspectors during field inspections to evaluate the condition of a bridge's primary components, including the **Deck**, **Superstructure**, and **Substructure**. These ratings provide an indication of each component's current physical condition and help agencies monitor deterioration and prioritize maintenance, rehabilitation, or replacement needs.

Ratings are grouped as **Good** (7-9), **Fair** (5-6), and **Poor** (0-4) to help communicate overall bridge condition. The lowest condition rating for a component determines the condition classification.

The Babocomari Creek Bridge has been classified as being in **Poor** condition, with a superstructure condition rating of 4, since 2017.



PROJECT TIMELINE & KEY MILESTONES:



Current Replacement Design Concept

Description:

New two-lane truss bridge in place of and requiring removal of existing bridge

Alignment:

Road and bridge would be along same alignment and tie-in to Elgin Canelo Road

Impacts to Existing Bridge:

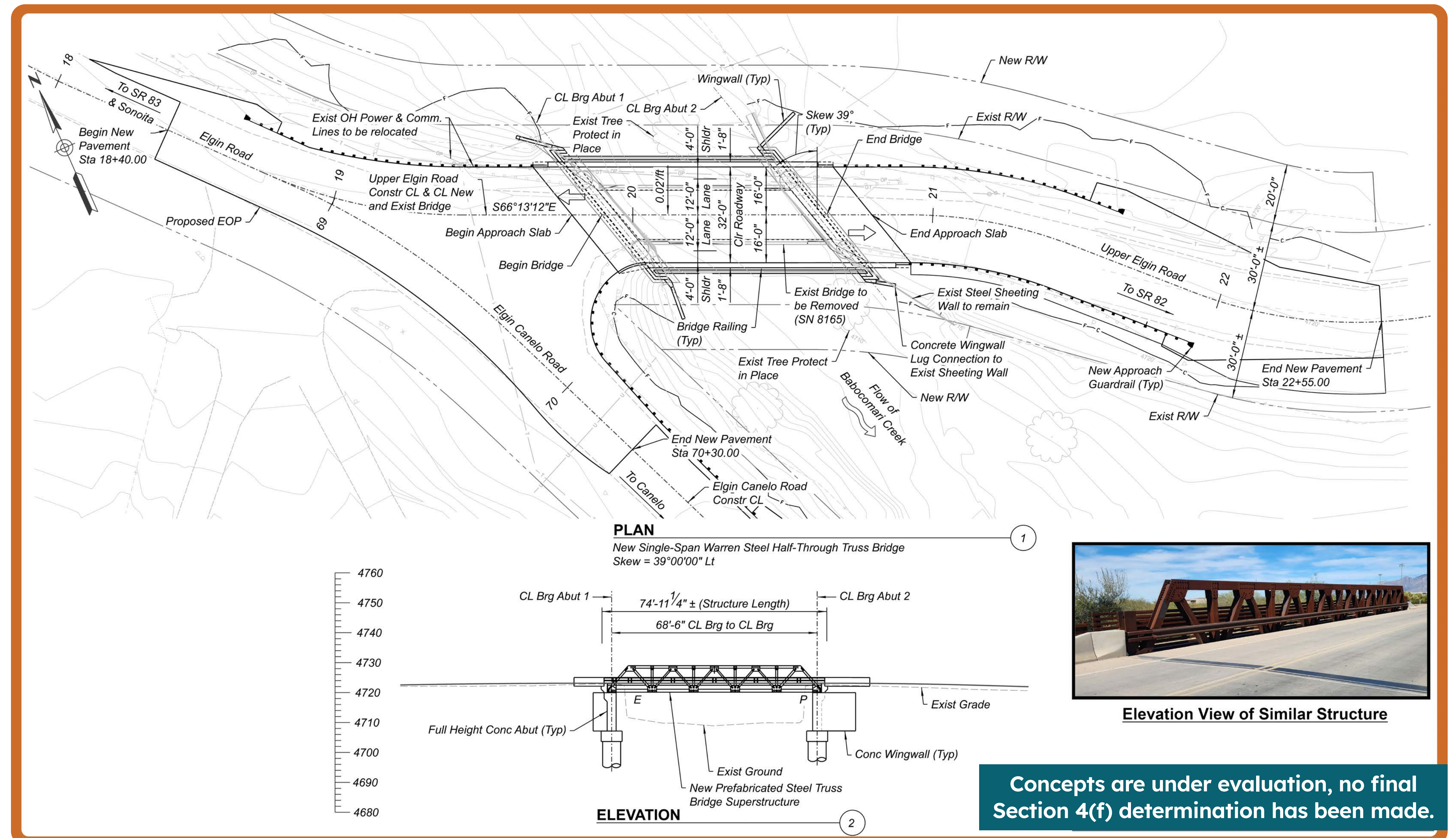
Existing bridge would be removed

Impacts to Trees:

- ❗ Mature cottonwood trees would be protected and avoided to the extent possible
- ❗ One mature cottonwood may require trimming or removal of one trunk

Detour:

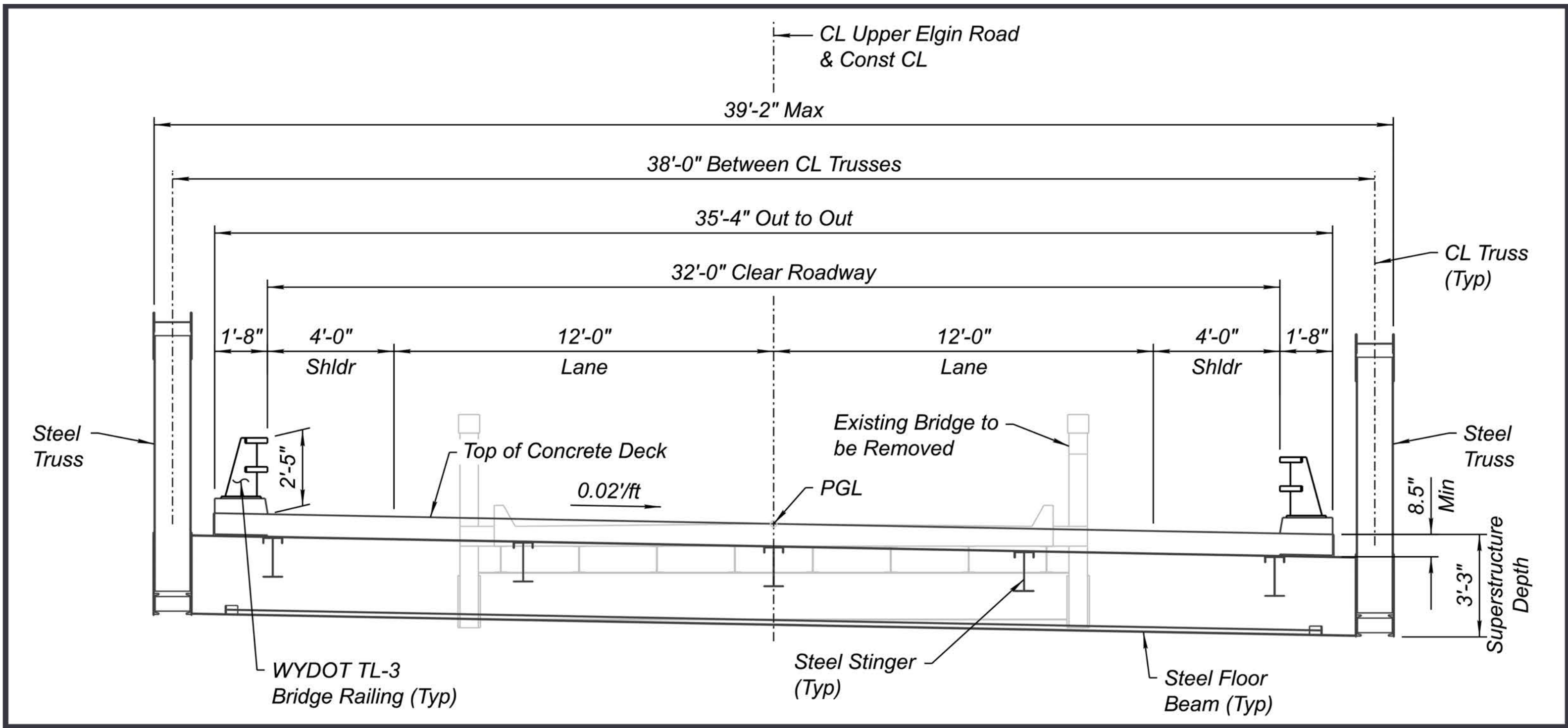
A temporary construction detour north of the existing bridge is being considered.



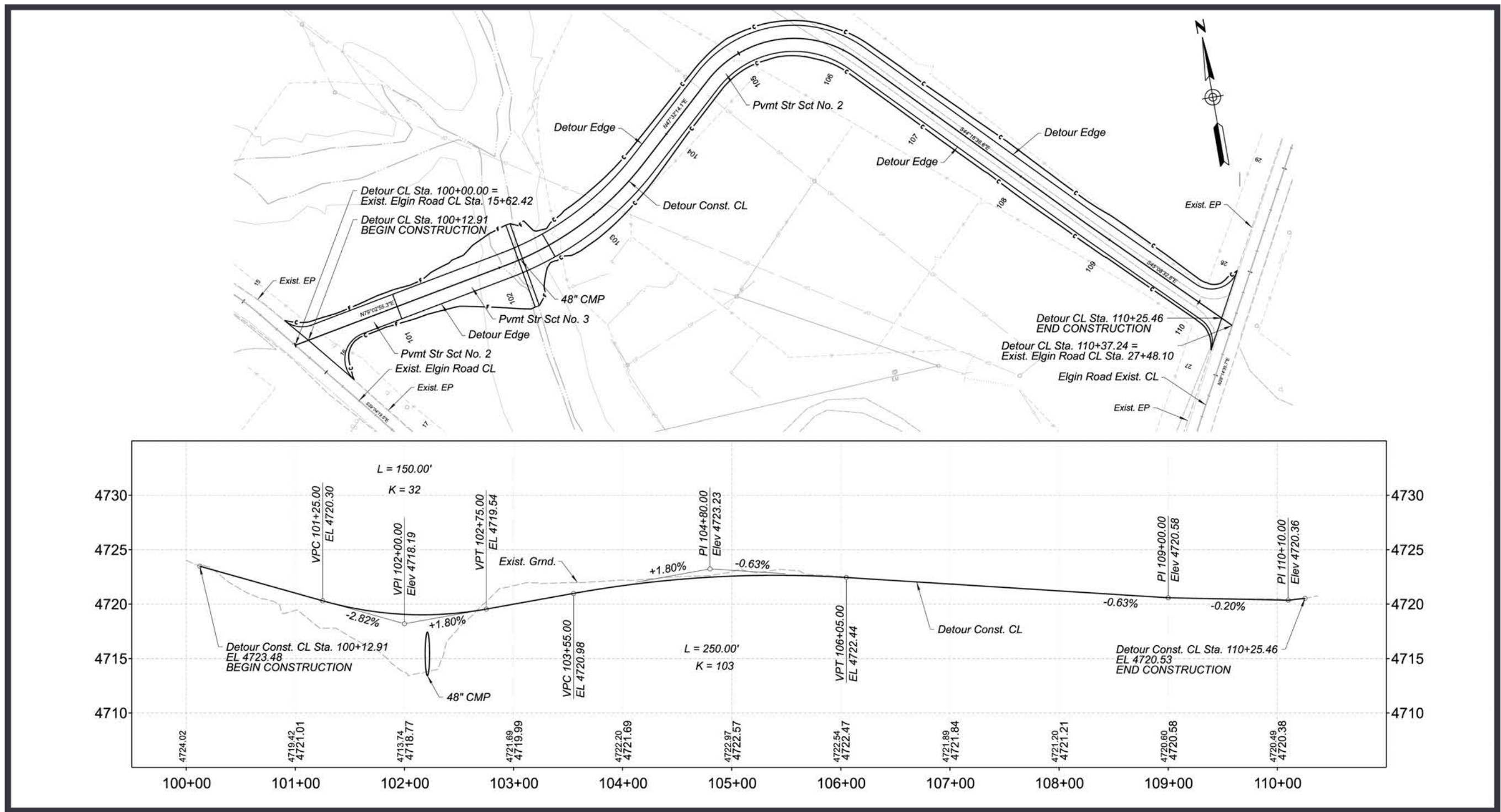
Current Replacement Design Concept

Project Consideration	Outcome
Retains Historic Bridge	No
Accommodates Legal Highway Loads	Yes
Two-Way Traffic Operation	Yes
Operational Functionality	High
Condition Rating of Fair or Higher	Yes
Potential Construction Detour	Yes
Tree Impacts	Yes
ROW Impacts	Yes
Preliminary Cost	Medium
Long-term Historic Bridge Maintenance	No

Bridge Typical Section



Construction Detour



Alternative 1 - Do Nothing

Description:

The bridge would not be replaced or rehabilitated.

Maintenance:

- ❖ Routine maintenance cannot address severe corrosion and section loss affecting fracture-critical gusset plates located within the bridge bearing pockets
- ❖ Routine maintenance may slow the progression of deterioration, but would not adequately address the poor condition
- ❖ Bridge condition would continue to worsen

Safety:

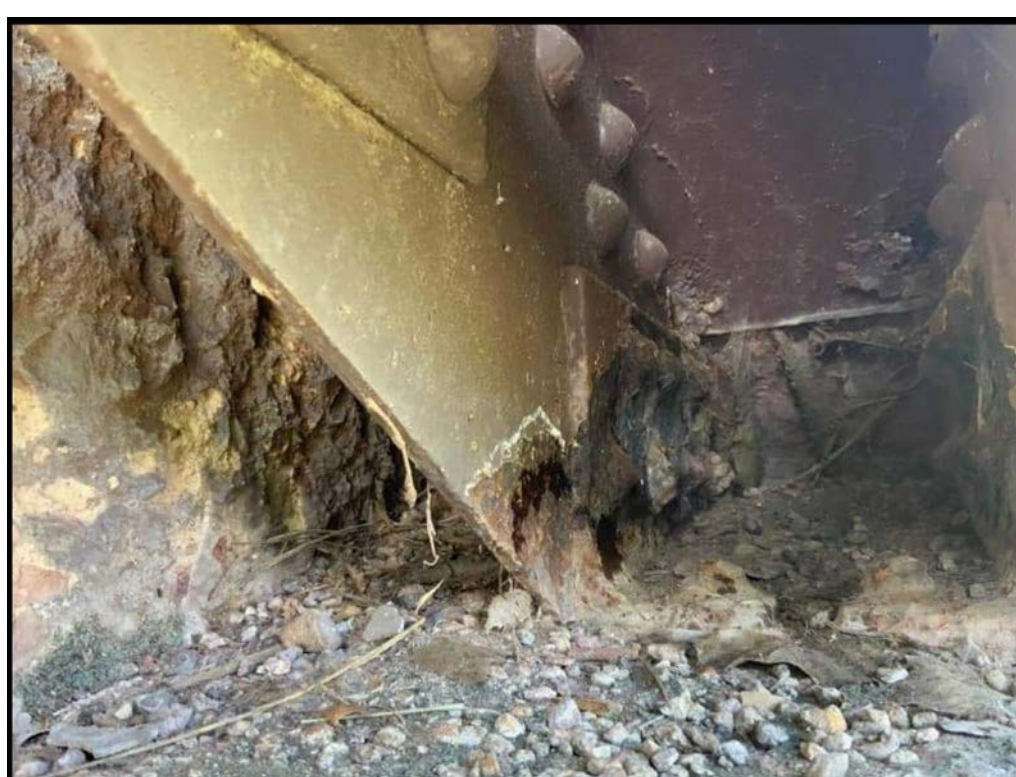
- ❖ Deficiencies related to load posting, structure limitations and single-lane operation would not be addressed
- ❖ Load posting would remain at 10 tons, below Arizona’s legal load limit of 40 tons
- ❖ With further deterioration, additional load restrictions or closures may become necessary to maintain public safety

Funding:

Current funds would be forfeited



Corrosion and severe section loss at bridge bearing pockets



Corrosion and severe section loss at bridge bearing pockets



Concepts are under evaluation, no final Section 4(f) determination has been made.

Project Consideration	Outcome
Retains Historic Bridge	Yes
Accommodates Legal Highway Loads	No
Two-Way Traffic Operation	No
Operational Functionality	Low
Condition Rating of Fair or Higher	No
Potential Construction Detour	No
Tree Impacts	No
ROW Impacts	No
Preliminary Cost	None
Long-term Historic Bridge Maintenance	No

Alternative 2 - Bridge Realignment

Description:

New two-lane concrete bridge south of the existing bridge

Alignment:

Upper Elgin Road would be realigned to the south

Impacts to Existing Bridge:

Existing bridge to remain in place, assuming another party would take over ownership and maintenance

Impacts to Trees:

Several mature cottonwoods would be removed

Detour:

Detour would not be needed

Funding:

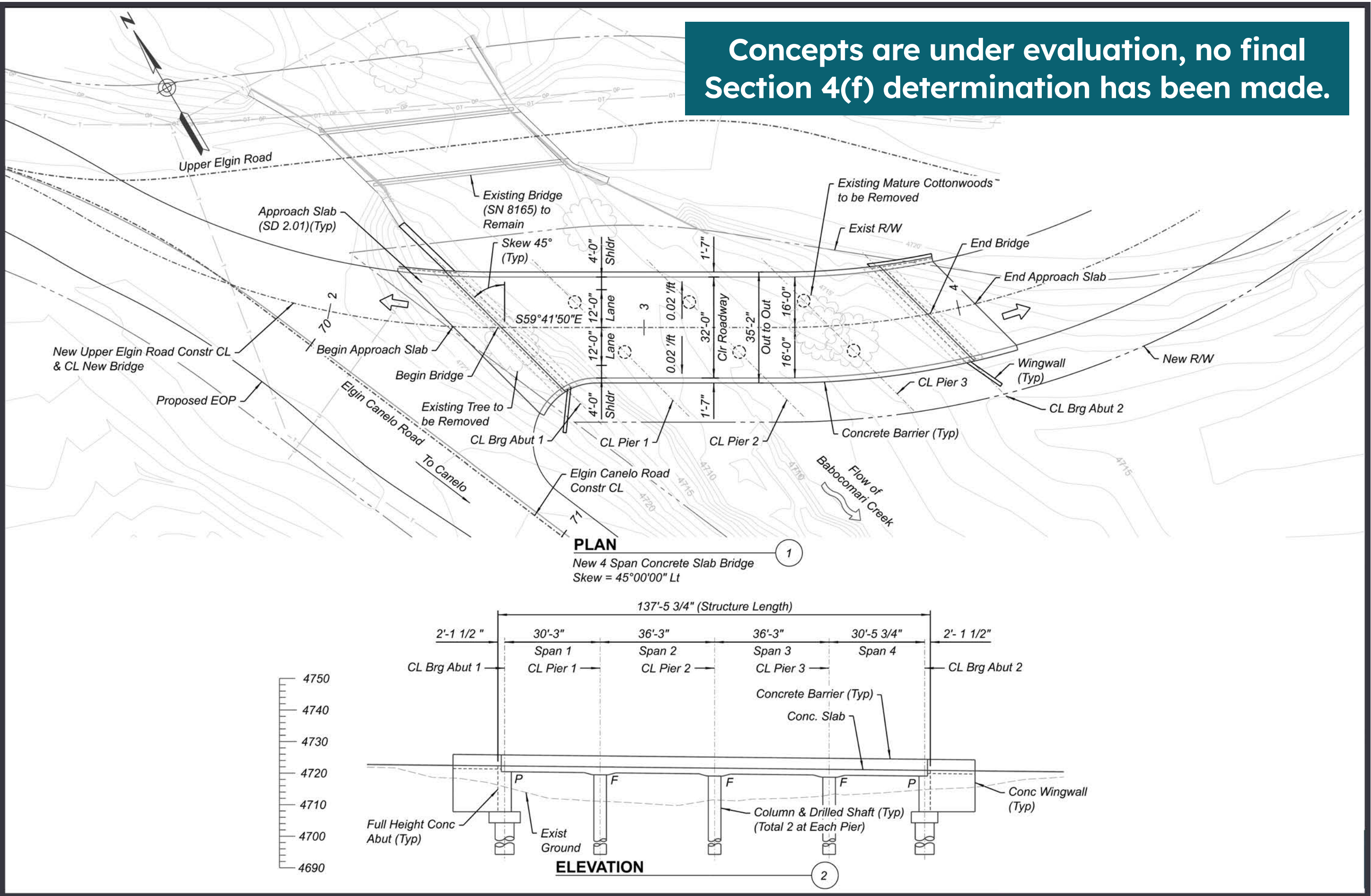
Additional funding would be necessary



Underside view of similar structure



Elevation view of similar structure



Project Consideration	Outcome
Retains Historic Bridge	Yes
Accommodates Legal Highway Loads	Yes
Two-Way Traffic Operation	Yes
Operational Functionality	High
Condition Rating of Fair or Higher	Yes
Potential Construction Detour	No
Tree Impacts	Yes
ROW Impacts	Yes
Preliminary Cost	High
Long-term Historic Bridge Maintenance	Yes

Alternative 3 - Bridge Rehabilitation

Description:

- ❗ Existing bridge would remain in its current location and be rehabilitated to address structural deficiencies and load restrictions.
- ❗ Rehabilitation would include construction of a new 36-inch thick reinforced concrete slab spanning the crossing.
- ❗ All applicable legal highway loads would be supported.

Operational Functionality:

Bridge would remain a 16'-4" single-lane crossing requiring opposing vehicles to yield, providing low operation functionality.

Impacts to Existing Bridge:

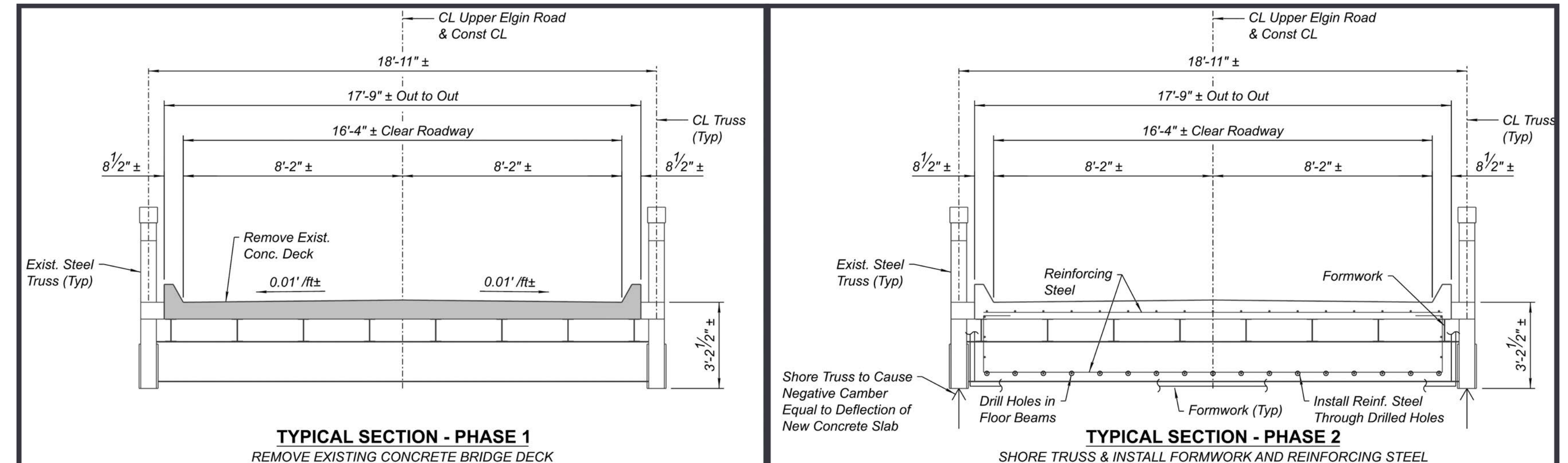
Further evaluation would be needed to determine whether the rehabilitation preserves the bridge's historic engineering characteristics.

Detour:

A temporary construction detour north of the existing bridge is being considered

Funding:

Additional funding would not be necessary, but permission to use the funds for rehabilitation may be required



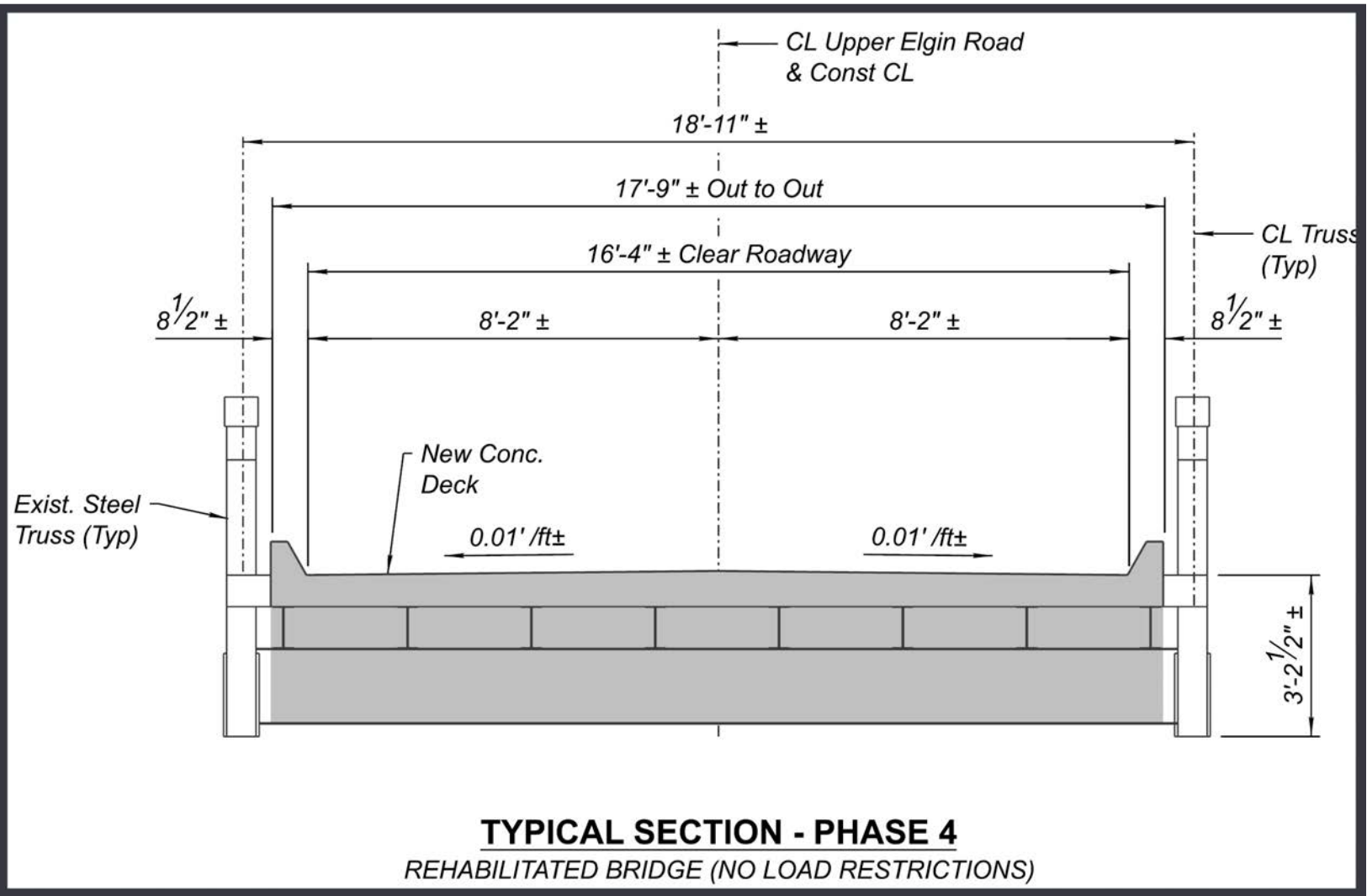
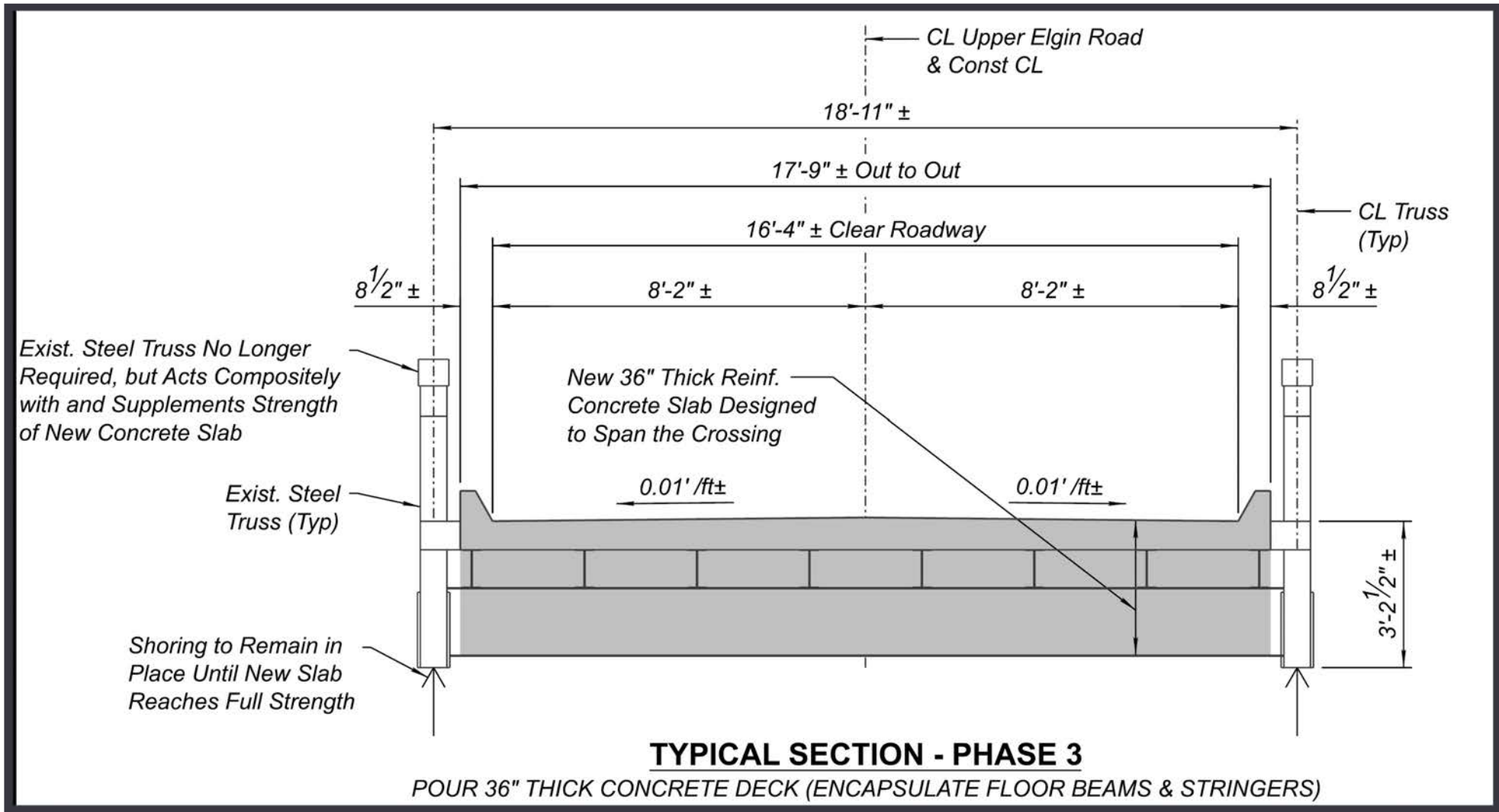
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Existing Bridge

Alternative 3 - Bridge Rehabilitation

Project Consideration	Outcome
Retains Historic Bridge	Yes (Modified)
Accommodates Legal Highway Loads	Yes
Two-Way Traffic Operation	No
Operational Functionality	Low
Condition Rating of Fair or Higher	Yes
Potential Construction Detour	Yes
Tree Impacts	No
ROW Impacts	No
Preliminary Cost	Low
Long-term Historic Bridge Maintenance	Yes



Concepts are under evaluation, no final Section 4(f) determination has been made.



Rendering of Proposed Rehabilitation

Environmental Resource Reports and Coordination

- Scoping Letters
- Biological Evaluation
- Bridge Reevaluation
- Cultural Resources Survey and Report
- Section 106 Consultation
- Hazardous Materials Report
- Clean Water Act Memorandum
- Section 4(f) Evaluation and Alternatives Analysis

