PUBLIC MEETING
for
PROPOSED SH 48 IMPROVEMENTS
BRIDGE REPLACEMENT OVER THE CIMARRON RIVER
Division 8 Information

- Division 8 Engineer: Randle White
- Total Road Miles: 1,664
- Total Interstate Miles: 40
- Total Bridges: 1,118
- Counties Serviced: 11
Meeting Materials
Purpose of Meeting

• To inform the public of ODOT’s plan to replace the existing deteriorated bridge that carries SH 48 over the Cimarron River

• Receive comments from the public in regard to the proposed bridge replacement project that can be included in the project development process.
Purpose of Project

• Improve the safety and functionality of the SH 48 crossing over the Cimarron River
Existing Conditions

• 2 lane highway built in 1961
  o US Army Corps of Engineers project to relocate SH 48
  o Currently has 12' lanes and 8' shoulders with 6' from lane to guardrail
  o Substandard guardrail

• 1961 Project included existing bridge
  o 28' clear roadway
    • (curb to curb)
  o 6 Spans, 743' long
  o Structurally Deficient
    • Inadequate to carry legal loads, whether caused by obsolete design standards, structural deterioration or waterway inadequacy.
Existing Conditions
Traffic Volume

- Current Traffic Volume (2014)
  - 2,500 vehicles per day
  - 10% Trucks

- Future Traffic Volume (2034)
  - 3,600 vehicles per day
  - 10% trucks
Project Scope

• Replace the existing 52 year-old bridge that carries SH 48 over the Cimarron River with a new bridge, 16’ wider than the existing bridge.
  o Bridge will consist of two 12’ wide driving lanes and two 10’ wide shoulders, 44’ clear roadway
  o Bridge length similar to the existing bridge length

• Widen the approach roadway north and south of the bridge to consist of two 12’ wide driving lanes and two 10’ wide shoulders.
  o Begin approximately 2,000’ south of the bridge and end approximately 550’ north of the bridge
  o Guardrail on the approach roadways will be replaced.
Project Constraints

• Keystone Wildlife Management Area
• US Army Corps of Engineers property adjacent to both sides of the roadway
• Flood Storage area for Keystone Lake & Wetlands on both sides of project
  o Wetland Mitigation likely required
  o Flood Pool Mitigation possible
• Potential Threatened & Endangered Species Habitat Impact
  o American Burying Beetle (ABB)
  o Whooping Crane
  o Piping Plover
  o Red Knot
Bridge Replacement
Preferred Option

• Reconstruct on Existing Alignment with road closed
  o Provide alternate route during construction
  o Results in the least construction cost and impacts to environmentally sensitive areas but with higher impact to road users.
  o Available Detour Route on SH 51 and US 64 is 26 miles long from south end of bridge to north end of bridge.
  o Anticipate a project duration of approximately 180 calendar days

• Utilize a performance incentive to speed construction

• Scheduled letting is February 2017
Bridge Replacement
Options Considered

• Reconstruct on Existing Alignment & maintain traffic during construction
  o Requires construction of a temporary bridge to maintain traffic
  o Increased construction costs and impacts to the environmentally sensitive areas adjacent to the highway
Bridge Replacement
Options Considered

- Reconstruction on slight offset alignment
  - Shift centerline of roadway and bridge approximately 26’
  - Increased impacts to the environmentally sensitive areas adjacent to the highway
  - Additional costs incurred:
    - Foundation construction to support phased bridge
    - Right of way acquisition and rock excavation at the north end of the structure to tie existing roadway to the offset bridge
    - Embankment construction at the south end of the bridge to tie existing roadway to the offset bridge
    - Mitigation required due to environmental impacts
Bridge Replacement
Options Considered

• Accelerated Bridge Construction
  o Build bridge beams and deck parallel to the existing bridge, then slide into place
  o Increased impacts to the environmentally sensitive areas adjacent to the highway to access site & construct bridge in initial location
  o A challenging site for this bridge construction methodology
  o Additional costs incurred:
    • Foundation & pier construction to support the new bridge superstructure in initial location
    • Construction costs of moving the new bridge superstructure into final location
    • Construction of new permanent bridge foundation & piers under the existing bridge while in use
    • Mitigation required due to environmental impacts
Next Steps

• Receive comments from the public
• Proceed with preliminary design
• Right-of-way acquisition & utility relocation scheduled for 2015
• Finalize the design
• Construction in 2017
  o $7,663,800 in the ODOT 8 Year Construction Plan for right-of-way acquisition, utility relocation, and construction
Comments

• Preferred road closure timeframe?
• Please provide comments
  o now in open forum
  o in writing on the forms provided
  o by email to:
    • environment@odot.org
  o comments due by January 15, 2015
Questions

Thank you for your attendance tonight