2006 â?? Depot Street Bridge

Description

Meta Fields

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Project Location :

Depot Street over the Rogue River in the city of Rogue River in Jackson County, southern Oregon

Mobility Impact Time : ABC: 5 days ; Conventional: 3 years
Impact Category : Tier 3 (within 2 weeks)
Dimensions : 306-ft-long and 76-ft-wide main span concrete tied arch bridge and one 104-ft-long prestressed concrete girder side span; 6,000-ton horizontal skid of 306-ft-long main span
Average Daily Traffic At Time Of Construction : 8700
Traffic Management : Traffic management alternative, if constructed conventionally: extended use of 5-mile detour
Existing Bridge Description : The existing 5-span through-truss bridge was 433.83 ft long and 26 ft wide with concrete spread footing substructure. It had two 12-ft-wide traffic lanes and two 1-ft-wide shoulders. Built in 1956, the bridge was structurally deficient and functionally obsolete and required replacement.
Replacement Or New Bridge : The replacement bridge has three 12-ft-wide traffic lanes and two 5-ft-wide shoulders. It consists of the concrete tied arch main span, a precast prestressed concrete I-girder span, and a cast-in-place slab approach span. The cast-in-place concrete abutments and pier are supported on pile foundations. The tied arch design was selected because its shallow structural depth was higher than the typical flood levels at that location and also required less grade difference to connect with intersecting roadways.
Construction Method : The contractor built the tied arch span on temporary supports approximately 25 ft from the existing bridge and built the new abutments and pier under the existing bridge while maintaining traffic. The traffic was then temporarily re-routed onto the new bridge. The existing bridge was demolished and the substructure for the new bridge was finished. Traffic was then detoured and the new bridge was closed. Twelve hydraulic jacks on steel plates were placed under the bridge. The jacks were connected to one pressure system for even pressure in all jacks. The jacks lifted the bridge, the temporary blocking was removed, and a hydraulic skid system was installed. The skid system had a stainless steel bottom and sat on Teflon pads coated with a special lubricant. The jacks were released onto the skid system and the bridge was skidded laterally to its final location. No overlay was applied.The 3-year construction project required only one 5-day closure of the bridge.
Contacts : Bruce V. Johnson, P.E. State Bridge Engineer Oregon Department of Transportation bruce.v.johnson@odot.state.or.us 503-986-3344
Costs : The low bid was $9.2 million for the project; $6.7 million was the bridge portion, which averages $288 per square foot of main span.
Funding Source : Federal and State
Contract Plans : 1
Other Related Url : 1
Foundations & Walls : CIP substructure under traffic
Year Abc Built : 2006
State : OR
Owner : State
Location : Urban
Spans : Two-span
Beam Material : Concrete
Max Span Length Ft : 306
Total Bridge Length Ft : 410
Construction Equipment : Lateral Slide
State Id # : OR 19273
Nbi # : 19273
Latitude : 42.4311104
Longitude : -100
Decision Making Tools : State process

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