



Matt Mead
Governor

Wyoming Department of Transportation

"Providing a safe, high quality, and efficient transportation system"

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Cheyenne, Wyoming 82009-3340



John F. Cox
Director

February 26, 2015

MEMORANDUM

TO: Permanent File

FROM: Andrea T. Allen, P.E., Project Development Engineer *ATA*

SUBJECT: Final Value Engineering Report
N104066 & N104083
Hoback Jct - Jackson
Jackson South Section

This project was the subject of a value engineering study conducted by Bernie Dull of Solutions Engineering along with a WYDOT team and Laycee Kolkman of HDR during December of 2014.

The purpose of this project is to resolve roadway deficiencies, safely and efficiently accommodate future traffic volumes, and improve system linkage. This roadway section will need to be adjusted to correct steep roadway grades, control local access points, add passing and turning lanes, adjust substandard roadway alignments, correct pavement and bridge deficiencies, improve traffic safety, reduce geologic hazard potential, and accommodate non-motorized transportation modes. The project will accommodate wildlife mitigation throughout.

After review by the department's decision makers and the FHWA, five of the eight proposals were accepted and one of them was partially accepted. The total cost savings of the recommendations was \$16,726,600. WYDOT accepted \$3,721,600 in value engineering recommendations.

The first recommendation, P01-002 recommends removing the two way left turn throughout the project and constructing left turn pockets at approaches when possible. After review by WYDOT Traffic, it was determined that the access spacing was too dense and this change is not possible due to the left turn pockets conflicting with each other. The design team concurred. This recommendation was **not accepted**.

P01-014 recommends eliminating the two-way left turn lane from structures when possible. (130+00, 305+00, 321+00 Structures, 207+00 & 383+00 Wildlife Crossings). The design team determined this option could only be implemented at 305+00 and needed to be investigated further. This recommendation was **partially accepted**.

The next proposal, P01-019, recommended adjusting the limits of the five lane section to eliminate the need for the fifth lane over the southern bridge at Station 130+00±. This proposal was **accepted**.

Proposal P01-037 recommended eliminating the five lane section by using an alternating passing lane concept. The design team determined that this proposal did not meet the purpose and need for the project. This recommendation was **not accepted**.

The next three proposals deal with the surfacing materials. P01-007 recommends performing full depth reclamation (FDR) without asphalt emulsion. P01-028 recommends reducing shared use path

surfacing design thicknesses. P01-040 recommends using 15% recycled asphalt pavement (RAP) in the hot plant mix. Both P01-007 and P01-040 cannot be implemented because if we do P01-007 there will not be any millings to incorporate into P01-040. P01-007 would result in an increase in the profile grade line by 5 inches because there would be no milling. This would cause an increase to wetland impacts that could not be justified. P01-007 was **not accepted** as a result. If we transitioned in and out of those areas between a stabilized and unstabilized FDR, all cost savings would be lost due to the complexity of the transitions in and out of those sections and the added construction costs. Therefore the team chose to **accept** P01-040 and incorporate 15% recycled asphalt pavement into the hot plant mix. P01-028 applies to the shared use path that will cost well over the \$650,000 WYDOT is contributing to the county. The cost savings would only benefit the county and the recommendation will be shared with them and left for them to determine.

The next recommendation was P01-006 which recommends reducing the clear zone from 26 feet to 22 feet throughout the project by flattening the surfacing tapers from 1:5 to 1:6. The recommendation was **accepted**.

The final recommendation was P01-025 which recommends reducing the width of the center turn lane from 12' to 11'. The design team **accepted** this proposal after verifying with FHWA that a public meeting would not be required in regard to the Record of Decision.

There were ten other suggestions made that the design team will discuss and take into consideration during the remainder of the design of this project.

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