

OLD BUSINESS

1. Approval of the July 1, 2010, Meeting Minutes – G. Johnson

   The July 1, 2010, meeting minutes are approved as written.

NEW BUSINESS

1. Pavement Selections – B. Krom

   a. M-39 Reconstruction: CS 63171 & 82193, JN 76902

   The reconstruction alternatives considered were a hot mix asphalt (HMA) pavement (Alternative 1 - Equivalent Uniform Annual Cost [EUAC] $528,343/directional mile) and a jointed plain concrete pavement (Alternative 2 - EUAC $405,368/directional mile). A life cycle cost analysis was performed and Alternative 2 was approved based on having the lowest EUAC. The pavement design and cost analysis are as follows:

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.50&quot;</td>
<td>Non-Reinforced Concrete Pavement, P1 Modified, w/14’ jt spacing (mainline &amp; outside shoulder)</td>
</tr>
<tr>
<td>16.00&quot;</td>
<td>Open Graded Drainage Course (mainline &amp; outside shoulder)</td>
</tr>
<tr>
<td>6.00&quot; dia.</td>
<td>Open-Graded Underdrain System Geotextile Separator Layer</td>
</tr>
<tr>
<td>26.5”</td>
<td>Total Thickness</td>
</tr>
</tbody>
</table>

   Present Value Initial Construction Cost.......................... $952,894/directional mile
   Present Value Initial User Cost........................................ $6,432,710/directional mile
   Present Value Maintenance Cost ........................................ $117,788/directional mile
   Equivalent Uniform Annual Cost ...................................... $405,368/directional mile
b. I-75 Rehabilitation: CS 09035, JN 106856

This item is tabled.

c. US-2 Rehabilitation: CS 49022, JN 87543

The reconstruction alternatives considered were a HMA pavement (Alternative 1 – EUAC $35,430/mile) and a jointed plain concrete pavement (Alternative 2 – EUAC $40,566/mile). A life cycle cost analysis was performed and Alternative 1 was approved based on having the lowest EUAC. The pavement design and cost analysis are as follows:

1.5".......................................................... HMA, 5E3, Top Course (mainline)
2"............................................................ HMA, 4E3, Leveling Course (mainline)
3"............................................................ HMA, 3E3, Base Course (mainline)
1.5"........................................................ HMA Low Volume Superpave (LVSP), Top Course (shoulders)
2".......................................................... HMA, LVSP, Leveling Course (shoulders)
3"............................................................ HMA, LVSP, Base Course (shoulders)
14"......................................................... Open Graded Drainage Course (mainline & shoulders)
6" dia.............................................................. Underdrain System
20.5"................................................................... Total Thickness

Present Value Initial Construction Cost.............................................. $618,049/mile
Present Value Initial User Cost.......................................................... $10,494/mile
Present Value Maintenance Cost....................................................... $93,618/mile
Equivalent Uniform Annual Cost...................................................... $35,430/mile

d. M-89 Reconstruction: CS 03023 & 03024, JN 90028

The reconstruction alternatives considered were a HMA pavement (Alternative 1 – EUAC $53,265/mile) and a jointed plain concrete pavement (Alternative 2 – EUAC $71,580/mile). A life cycle cost analysis was performed and Alternative 1 was approved based on having the lowest EUAC. The pavement design and cost analysis are as follows:

1.5".......................................................... HMA, 5E10, Top Course
2"........................................................... HMA, 4E3, Leveling Course
3"............................................................ HMA, 3E3, Base Course
6".......................................................... Aggregate Base
18".......................................................... Sand Subbase
6" dia.............................................................. Underdrain System
30.5"................................................................... Total Section Thickness

Present Value Initial Construction Cost.............................................. $701,785/mile
Present Value Initial User Cost.......................................................... $228,126/mile
Present Value Maintenance Cost....................................................... $155,792/mile
Equivalent Uniform Annual Cost...................................................... $53,265/mile

EOC approved this project at the June 3, 2010, meeting as an Alternate Pavement Bidding project. At the July 1, 2010 EOC meeting, an alternate pavement design for HMA pavement was approved for use statewide. The alternate design allows for a 10 in. sand subbase instead of an 18 in. sand subbase where conditions warrant and when agreed to by the region soils/pavement engineer. This project has suitable conditions for the alternate HMA design with a 10 in. sand subbase. Approval is requested for the following pavement designs:

**Pavement Design 1: Reconstruct With Hot Mix Asphalt Pavement**

1.50”………………………………………….. HMA, 5E10, Top Course (mainline & inside shoulder)  
3.00”………………………………………….. HMA, 3E10, Leveling Course (mainline & inside shoulder)  
6.25”………………………………………….. HMA, 3E10, Base Course (mainline)  
3.00”………………………………………….. HMA, 3E10, Base Course (inside shoulder)  
1.50”………………………………………….. HMA, 5E03, Top Course (outside shoulder)  
3.00”………………………………………….. HMA, 3E03, Leveling Course (outside shoulder)  
3.00”………………………………………….. HMA, 3E03, Base Course (outside shoulder)  
6.00”………………………………………….. Open Graded Drainage Course (mainline)  
9.25”………………………………………….. Open Graded Drainage Course (shoulders)  
10.00”………………………………………….. Sand Subbase

**Pavement Design 2: Reconstruct With Jointed Plain Concrete Pavement**

9.00”…………………………….. Non-Reinforced Conc Pavt, P1 Modified, w/14’ jt spacing (mainline)  
9.00” taper to 6.00”……….. Non-Reinforced Conc Pavt, P1 Modified w/14 pdt spacing (shoulders)  
6.00”………………………………………….. Open Graded Drainage Course (mainline)  
6.00” taper to 9.00”………………………….. Open Graded Drainage Course (shoulders)  
10.00”………………………………………….. Sand Subbase

**ACTION:** EOC approved the pavement designs.

Brenda J. O'Brien, Secretary  
Engineering Operations Committee