EOC recognizes John Friend, Jon Reincke, and Calvin Roberts for their many years of service to the department and to the EOC. They are retiring from state service at the end of the month after serving a combined 87 years with the department.

- **John Friend** has been a member of EOC since December of 2002, and served with the department for 24 years, most recently as the Bureau Director, Bureau of Highway Delivery. John brought extensive field experience into his position, and is widely respected for his straightforward manner, integrity, and fairness. John helped develop and lead the Transportation Service Center concept, and was one of the first TSC Managers in the state.
- **Jon Reincke** has been a member of EOC since 1990, and has served the department for almost 39 years, most recently as the Engineer of Operations. Jon worked for many years in research and developed strong partnerships with the universities in Michigan, defining the current model of research contracting with the universities. He is nationally recognized for his efforts in research.
- **Calvin Roberts** has been a member of EOC since August of 1985, and has served the department for 25 years, most recently as the Engineer of Research and Best Practices. Calvin is known for his strategic thinking, and has developed many policies and programs that have helped the department achieve its strategic goals. In his current position, he led the transition of the research program to the new Office of Research and Best Practices.

Many thanks to all three for their significant contributions and dedication to the department.

**OLD BUSINESS**

1. **Approval of the October 7, 2010, Meeting Minutes – G. Johnson**

   The October 7, 2010, meeting minutes are approved as written.


   At the November 5, 2009, EOC meeting, the formation of a Life cycle Cost Analysis Technical Agenda task group was approved. The task group was charged with evaluating current practices and delivering recommendations to the EOC on a pre-defined set of sub-tasks of interest to MDOT. A team was assembled to work through the issues outlined in a November 5, 2009, memo signed by the
Chief Operations Officer and the Bureau of Highway Delivery Director. Bob Ranck and Steve Palmer were identified to lead the initiative.

Meetings with stakeholders, including the industry associations and the FHWA, were conducted and comments were received. The report, *Michigan Department of Transportation 2009-2010 Technical Agenda Report - Life Cycle Cost Analysis, Executive Summary, November 2010* was presented to the EOC with a recommendation for approval. Once approved, updates will be made to MDOT’s *Pavement Design and Selection Manual*.

**ACTION:** Approve the report with minor editorial revisions. Share the revised report with the industry associations involved.

**NEW BUSINESS**

1. **Fix Life Guidelines – B. Krom**

   The Fix Life Guidelines assign pavement fix lives for different pavement rehabilitations and reconstruction strategies and are used in the annual Call for Projects Process. The fix lives are used in statewide "Remaining Service Life" generation, which in turn is used to analyze various pavement investment strategies. The regions requested that the current fix lives be validated and updated, if necessary. An extensive analysis of pavement management and condition data was used to validate the actual fix life for the standard pavement fixes used statewide in the program. Approval of the updated fix life guidelines is requested.

   **ACTION:** EOC approves the revised fix life guidelines. The updated guidelines will be used beginning with the 2016 Call for Projects.

2. **Pavement Selections – B. Krom**

   a. **I-75 Rehabilitation: CS 09035, JN 106856**

      This item was originally on the agenda for the September 2010 EOC meeting and was tabled to a future meeting. The rehabilitation alternatives considered were a rubblized and hot mix asphalt (HMA) pavement (Alternative 1 – Equivalent Uniform Annual Cost [EUAC] $58,547/directional mile) and an unbonded jointed plain concrete pavement (Alternative 2 – EUAC $47,932/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:

      6.00" .................................................. Non-Reinforced Concrete Pavement, P1 Modified, w/12’ jt spacing (mainline & outside shoulder)
      1.00" ....................................................... HMA Separator Layer (mainline & outside shoulder)
      9.00" ............................................................ Repaired JRCP Existing Base and Subbase Underdrain System
      7.00" .............................................................. Total Thickness

      Present Value Initial Construction Cost ................................................................. $541,072/directional mile
      Present Value Initial User Cost ................................................................. $180,797/directional mile
b. **I-75 Reconstruction: CS 82191, JN 106969**

The reconstruction alternatives considered were a HMA pavement (Alternative 1 – EUAC $139,764/directional mile) and a jointed plain concrete pavement (Alternative 2 – EUAC $82,812/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:

12.00”........................ Jointed Plain Concrete Pavement, High Performance w/16’ jt spacing
(mainline & shoulders)
16.00”............................... Open Graded Drainage Course (mainline & shoulders)
Geotextile Separator
6.00”.....................................................Open-Graded Underdrain System
28.00”.....................................................Total Thickness

Present Value Initial Construction Cost................................................. $1,153,969/directional mile
Present Value Initial User Cost................................................................. $261,089/directional mile
Present Value Maintenance Cost .............................................................. $117,788/directional mile
Equivalent Uniform Annual Cost ............................................................... $82,812/directional mile

(Signed Copy on File at C&T)
Brenda J. O’Brien, Secretary
Engineering Operations Committee

BJO:kar

cc:  K. Steudle  D. Jackson  R. Jorgenson (FHWA)
     L. Mester  W. Tansil  R. Brenke (ACEC)
     EOC Members  D. Wresinski  G. Bukoski (MITA)
     Region Engineers  C. Libiran  D. DeGraaf (MCA)
     TSC Managers  R. J. Lippert, Jr.  D. Hollingsworth (MCA)
     Assoc. Region Engineers  T. L. Nelson  J. Becsey (APAM)
     P. Ajegba  T. Phillips  M. Newman (MAA)
     M. DeLong  K. Peters  J. Murner (MRPA)
     J. Ingle  B. Shreck  D. Parker