

FYI

Roland Bartl

From: Roland Bartl
Sent: Monday, December 05, 2005 3:30 PM
To: Planning Board
Subject: FW: New Highway Design Manual

There has been discussion off and on about the use of pervious pavement. Below is a link to MassHighway's new draft design manual. At this time they are not adopting this technology for reasons stated in section 9.1 of the draft manual. I thought this might be of interest to you.

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-----Original Message-----

From: Bruce Stamski
Sent: Monday, December 05, 2005 9:48 AM
To: Roland Bartl
Subject: FW: New Highway Design Manual

From: Art Wu
Sent: Tuesday, November 29, 2005 10:27 PM
To: Sam Lawton
Cc: Transportation Advisory Committee
Subject: RE: New Highway Design Manual

Thanks Sam. I hope things are going well.

From: Samuel Lawton [mailto:slawton@camsys.com]
Sent: Tuesday, November 29, 2005 2:00 PM
To: Art Wu
Subject: New Highway Design Manual

Art –

The TAC may be interested in the following. The Manual is available through the link included in the message.

Public Works and Transportation News

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MassHighway holds forums on new highway design manual

In April 2003, Gov. Mitt Romney appointed the Highway Design Manual Task Force to assist in the rewrite of the current MassHighway Design Manual to enhance multi-modal considerations,

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incorporate the principles of context-sensitive design, and articulate a clearer project development process.

MassHighway's pre-publication draft of the new Project Development and Design Guidebook is n available at www.vhb.com/mhdGuide/mhd_GuideBook.asp.

MassHighway is sponsoring a series of meetings throughout the state to introduce the guidebook a describe the significant change it represents from the current standards and procedures described in Highway Design Manual.

The meetings include:

- Wednesday, Nov. 16, 9-11 a.m., Falmouth Holiday Inn
- Thursday, Nov. 17, 11 a.m.-1 p.m., Pittsfield Crowne Plaza
- Tuesday, Nov. 22, 1-3 p.m., Holyoke Holiday Inn
- Wednesday, Nov. 30, 1-3 p.m., Peabody Holiday Inn
- Thursday, Dec. 8, 1-3 p.m., Worcester Beechwood Inn
- Friday, Dec. 9, 10 a.m.-noon, Taunton Holiday Inn
- Wednesday, Dec. 14, 10 a.m.-noon, Boston Hyatt, Financial District

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- **Compare feasible alternatives** (new pavement, recycling, overlay, etc.) and select the most economically-sound method for construction;
- **Set specifications.** The pavement materials, construction methods, and finished project requirements must be both practical to attain and clearly defined. The designer must ensure that the plans, standard specifications, supplemental specifications, and special provisions clearly and unambiguously define the requirements.

This chapter on Pavement Design is based on the 1972 *AASHTO Interim Guide* as revised in 1981 and 1993. Additional information regarding pavement of bicycle facilities is provided in Chapter 11. Research has continued into the cost-effective design of highway pavements, resulting in the publication of the 1993 *AASHTO Guide for Design of Pavement Structures*. Features of this new design procedure include:

- Use of statistical reliability instead of the current factor of safety design;
- Use of resilient modulus tests for soil support (a dynamic test) vs. CBR (a static test); and
- Introduction of environmental factors to evaluate the effects of spring thaw and frost heave.

Additional research is ongoing into new concepts such as permeable pavements that have the potential to reduce runoff and undesirable environmental impacts. Some states, particularly in climate zones where snow and ice are not a concern, are using noise-reducing pavements based on a similar premise.

While these new design concepts appear promising, the foundation needed to adopt them is not in place at this time. This is primarily due to the potential safety implications associated with ice control since a surface layer of brine is essential to encouraging snow melt and avoiding ice formation. Until these new methods can be phased in, MassHighway will continue to design pavements based on a modification of the *Interim Guide*, which has provided satisfactory pavement structures since its introduction.

Other approaches, such as the use of colored aggregate in pavement to improve the visual consistency of the roadway with its