MASS INTERCHANGE

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ON THE ROAD AGAIN

Welcome Dan Montagna, Program Coordinator, Baystate Roads Program. He hit the ground running and has juggled the various tasks assigned to him with speed and efficiency. Introduce yourself at the next workshop – he is anxious to learn all about your town.

"Hello everyone! I have been asked to give a little background information so that you may learn more about "the new guy" at Baystate Roads. I graduated from Westfield State College, here in Massachusetts, with a B.S. in Geography and Regional Planning. After working for several years in the planning field at the Pioneer Valley Planning Commission, where I continued to hone my skills in data analysis, planning, technical writing, web development, and video production, I decided to expand my knowledge and skills in new fields. This decision allowed me to work for several years in the private sector, but I am very much looking forward to once again working with municipalities which are full of really fantastic people! The prospect of joining the Baystate Roads Program team and continuing to build on the solid foundation that it has established is extremely exciting.

Oh, and if you ever get a few moments to speak with me personally, ask me about how I learned the science of physics on the single loop waterslide at Action Park."

REMINDER FROM DAN

It is especially helpful for our staff to receive registrations online as opposed to a FAX or hard copy in the mail.

www.baystateroads.org

BENEFITS FYI:

1. Instant confirmation is provided.
2. Postage, paper, and ink are reduced.
3. Names are spelled correctly for the database.
4. There are no delays in receiving registrations.
5. Available courses and space are displayed.
6. All class descriptions and info are available.

NEW

FLAGGING CLASSES

Baystate Roads has launched a new series of flagger training classes to be held in fifteen locations throughout the Commonwealth. The numerous sites provide easy access to these two-day workshops offered at a nominal cost of $20. Class size is limited to twenty with a maximum of two attendees from each town unless additional spaces open. Check out details on our website and join us at one of these convenient sites:

September 9-10	**Leominster**
September 15-16	**Woburn**
October 6 & 8	**Hyannis**
Oct.ober 14 & 15	**Great Barrington**
October 20 & 22	**Springfield**
November 4-5	**Sturbridge**
November 17 & 19	**Dedham**
December 1-2	**Plymouth**

Two new leaders have been approved by MassHighway to provide this certification. The first aid segment is taught by Patricia Stagno who has 25 years' experience in the technical, safety, health, medical and utility fields. Ms. Stagno is a radiology technician who has worked in many Boston area hospitals and the U.S. Navy. Flagger certification is led by Catherine Schoenenberger, President and Principal of Stay Safe Traffic Products, Inc. She is a strong advocate of safety awareness and education.

The first day includes first aid training and a test. A card valid for three years is issued after completion (CPR is not included). The second day covers flagging operations and demonstrations. Certifications are valid for two years and require current first aid authorization upon initial flagger certification. It is important to pass a refresher course covering the principles of work zone safety and flagging operations within one month prior to the expiration of a flagger certification in order to be recertified for two more years.

Catherine Schoenenberger provides instruction in North Adams to prospective flaggers

More details as well as currently approved trainers (if you can't make one of our classes) can be found at: www.eot.state.ma.us

BUILD A BETTER WORKSHOP

Here's the chance to become a "local hero" in your community. Baystate Roads is partnering with new quality instructors from all over New England to provide a menu of training topics. Initial offerings include: **hoisting, welding, trenching, and heavy equipment operations.** This will allow individual towns and cities to request special training based on their immediate needs and for specific instructors to come to them. As this new resource develops further, more customized workshops will be offered. A complete list of topics can be found at: **www.baystateroads.org**

Baystate Roads will coordinate with the instructors and provide directions to the training site and payment for their services. It's a piece of cake!

- **You pick the topic**
- **Baystate sends the instructor to you**
- **Baystate pays the trainer**

HERE'S WHAT TO DO

For most workshops, five to fifteen participants will be required. Don't have 5-15 people? Invite neighboring towns to join this event -- it is your opportunity to make new friends.

Identify one of the choices mentioned above or suggest another training topic.

Locate a facility at which a class can be held for the final number of employees. Town halls, public libraries, DPW yards or garages are usually free of charge.

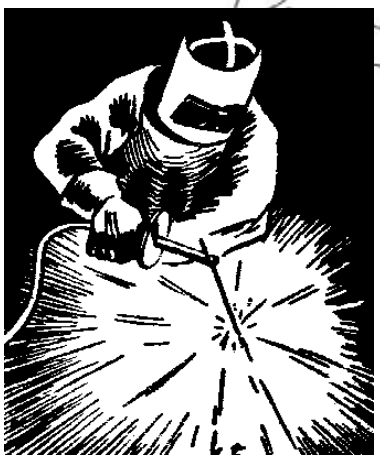
Sign up at least five attendees for each class.

Provide a continental breakfast for registrants and instructors. Coffee and donuts are OK.

Courses can be either half-day or full-day depending upon the workshop, number of attendees and/or needs.

Provide Baystate Roads with comments and constructive feedback after the event.

Contact Dan Montagna, Program Coordinator, with details, dates, and questions at: **413-545-5403 or www.baystate.org**



STRATEGY FOR IMPROVING THE GEOMETRY OF PEDESTRIAN AND BICYCLE FACILITIES AT SIGNALIZED INTERSECTIONS

"Lest this be you" -- Safety education in Ames, Iowa, 1950. Courtesy Ames Historial Society

Approaching major intersections with right-only turns often calls for additional striping close to the intersection.

WHERE TO USE

Signalized intersections with high frequencies of pedestrian and/or bicycle crashes and on routes serving schools or other generators of pedestrian and bicycle traffic. Information on pedestrian travel at traffic signals can be found in Chapter 6--Intersection Design of the 2006 *Massachusetts Project Development and Design Guidebook*.

DETAILS

The mix of travel modes at intersections, along with the possibility of vehicle-to-vehicle conflicts, can create safety and operational concerns for non-motorists. Geometric or physical improvements that can be made to an intersection to increase pedestrian safety include the provision of the following:

- Continuous sidewalks
- Signed and marked crosswalks
- Sidewalk set-backs
- Median refuge areas
- Pedestrian overpasses
- Intersection lighting
- Physical barriers to restrict pedestrian crossing maneuvers at higher-risk locations
- Relocaton of transit stops from the near side of the intersection, and
- Other traffic calming applications to reduce vehicle speeds or traffic volumes on intersection approaches.

Some of the problems facing bicyclists at intersections include high-traffic volumes and speeds and the lack of space for bikes. Possible improvement projects include the following:

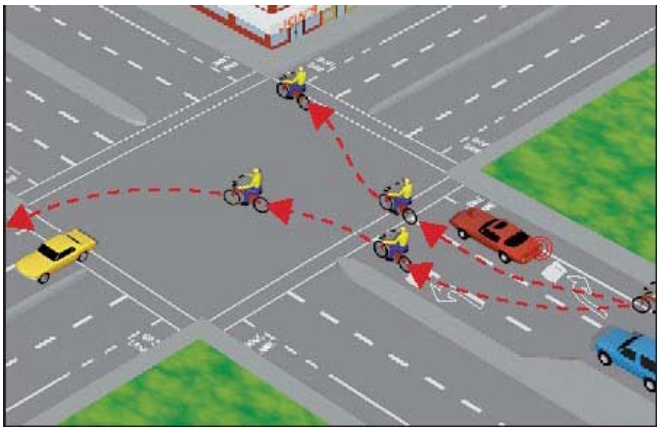
- Widening outside through lanes (or adding bike lanes)
- Providing median refuge areas
- Providing independent crossing structures
- Upgrading storm drain grates with bicycle-safe designs, and
- Implementing lighting.

KEY TO SUCCESS

A key to successful pedestrian and bicycle facilities is careful planning. The network of facilities should be well connected to meet the needs of the community. Landscaped medians should not obstruct visibility between pedestrians and bicyclists and approaching motorists or include objects representing a collision hazard to vehicles that may run onto the median.

ISSUES

Agencies must overcome decades of street and road construction projects that may have routinely ignored



Intersections with special lanes

the needs of pedestrians and bicyclists. Pro-pedestrian and bicyclist policies and construction programs need to be implemented to correct this problem. Refuge islands may conflict with the need to provide open pavement for right-turning traffic with large turning paths. A right-turn slip lane can accommodate vehicles with large turning paths but should discourage high-speed vehicle turns and improve the right-turning motorist's view of other users.

TIME FRAME: SHORT

Many treatments addressing pedestrian and bicyclist improvements can be implemented in relatively short time frames.

COSTS: LOW

Costs will vary depending on the treatment implemented. Many are low cost in nature. Others, such as overpasses and lane widening, will cost significantly more.

EFFECTIVENESS: TRIED AND PROVEN

The presence of sidewalks on both sides of the street has proven to significantly reduce the "walking along roadway" pedestrian crash risk compared to locations where no sidewalks/walkways exist. Reductions of 50% to 90% of these types of pedestrian crashes have occurred. The Federal Highway Administration found that a raised median (or raised crossing island) was associated with a significantly lower pedestrian crash rate at multilane crossing locations, with both marked (46% reduction) and unmarked (39% reduction) crosswalks.

First dedicated bicycle/pedestrian signal in San Francisco installed in 2008 on popular Panhandle multi-use recreational path

In contrast, painted (not raised) medians and center two-way left-turn lanes did not offer significant safety benefits to pedestrians on multi-lane roads, compared to no median at all. A Danish study concluded that providing bicycle lanes can reduce bicycle crashes by 36%.

COMPATABILITY

These strategies are generally compatible with other signalized intersection safety strategies.

RESOURCES

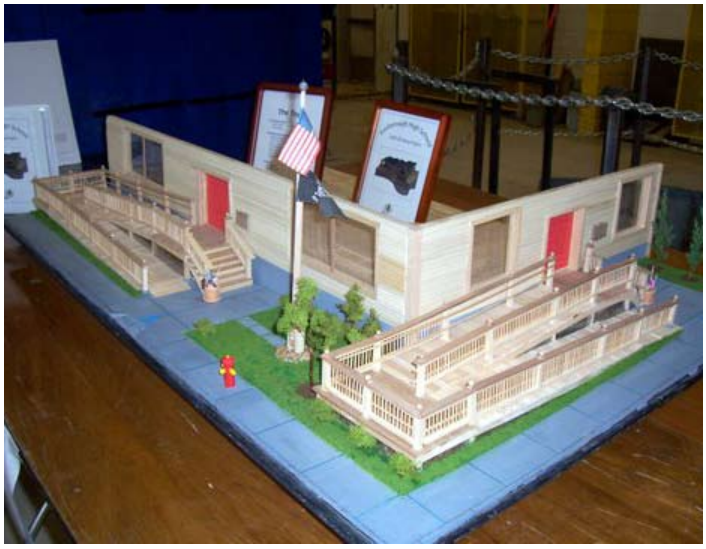
Intersection Safety Strategies, FHWA-SA-08-008, Federal Highway Administration, Washington, DC, July 2008. (The strategy for improving safety at signalized intersections is categorized in this quick reference publication as Strategy B3: Improve Geometry of Pedestrian and Bicycle Facilities.)

Massachusetts Project Development and Design Guidebook, MassHighway, Boston, MA 2006.

Tech Transfer, Technology Transfer Program, University of California Berkeley, Richmond, CA 2009.

The Seventh Annual Massachusetts Construction Career Days (CCD) were held at the New England Laborers Training Academy (NELTA) in Hopkinton on May 5-7, 2009. This event has grown each year and was expanded to three days this year to accommodate more high schools. Over 1,600 students and 250 chaperones arrived ready to learn about exciting opportunities in the transportation and engineering fields. They were able to test their operation skills on large equipment and their engineering aptitudes at work stations. Students were also able to win money for their schools through the competitive engineering contest sponsored by the Boston Society of Civil Engineers.

New this year were two activities. A pilot Surveying Event was held on site to test the students' skills. In addition, a Signature Project prepared prior to attendance challenged students to plan, design and construct a handicapped access ramp to a fixed structure. These constructions were transported to the event for judging. Foxboro High School won with the very detailed model shown below.



An awards ceremony was held on June 19 at NELTA where the winners received prizes and recognition.

The Massachusetts CCD was created to help address the shortage of young, qualified workers in the industry, Many volunteers, teachers, vendors, and professional organizations contributed time and expertise to make this another successful event. Plans are already under way for 2010; please join us next year.

RECOVERY AND REINVESTMENT

The Franklin Regional Transit Center in Greenfield will centralize access to local and intracity bus service.

Massachusetts has exceeded the $153.2 million commitment under the federal deadline of June 30 for the "use-it-or-lose-it" funds provided in the American Recovery and Reinvestment Act (ARRA). Governor Deval Patrick was delighted to announce that the Commonwealth received the authority to spend a total of $437.9 million on transportation projects that included the $153.2 million for shovel-ready projects advertised for bid by the end of June.

Ground was broken for the first stimulus project in Greenfield, MA, where an innovative Franklin Regional Transit Center will minimize energy use while providing jobs and serving as an important transportation hub for the county. Governor Patrick praised this "net zero" project as a perfect example of how the use of stimulus funds will create new jobs while supporting multiple objectives.

Federal recovery transportation projects were chosen from the State Transportation Improvement Plan (STIP). A collaborative public review process involved state, regional and local officials. For more information and a description of selected projects, go to:

www.mass.gov/recovery OR
www.mass.gov/youmovemassachusetts.gov

ROAD ENGINEERING AND CONSTRUCTION PRACTICES FOR COLD REGIONS

Got cold feet when trying to construct roads in cold regions? Feel the heat with FHWA's new interactive training software: Road Engineering and Construction Practices for Cold Regions (FHWA-WFL/TD-07--001). This two disk set was created as part of FHWA's commitment to providing convenient continuing education to personnel, including field employees who sometimes find it difficult to attend seminars.

More than 300 figures and photos supplement this multi-media production of 275 slides of textual information. There are also several slideshows, internet resource links, downloadable software, and 175 complete reference documents included. The information presented on these disks focuses on the three main climate differences that effect the construction of roads in cold regions. First, these roads are susceptible to distortion and faulting as a result of repeated frost heaving and thaw weakening. Second, traffic loading coupled with cold environments can cause the roads to crack. Third, roads are also subjected to increased tire traffic loads, which reduce the integrity of the road by increasing the potential of water susceptibility and raveling.

This technology is available from:
FHWA.dot.gov

BAYSTATE ROADS SCHOLARS

Congratulations to the newest Baystate Roads Scholar on his fine achievement. Keep saving those certificates and you, too, could be listed here.

Christopher Cronin, Andover DPW

Please provide T-shirt size, your address and your supervisor's name, title, and address when notifying Baystate Roads Program of your status. Our workshop database will confirm your attendance. Notify BRP by FAX: 413-545-6471 or email: baystateroads@hotmail.com

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The Baystate Roads Program, which publishes Mass Interchange each quarter, is a Technology Transfer (T2) Center created under the Federal Highway Administration's (FHWA) Local Technical Assistance Program (LTAP). This newsletter is prepared in cooperation with The Excecutive Office of Transportation (EOT) and the United States Department of Transportation Federal Highway Administration. FHWA is joined by EOT, UMass Transportation Center at the University of Massachusetts/Amherst, and local public works departments in an effort to share and apply the best in transportation technologies. In addition to publishing Mass Interchange, the Baystate Roads Program facilitates information exchange by conducting workshops, providing reports and publications and videotapes on request, and offering one-to-one technical assistance on specific roadway issues. Because the program relies on input from many sources, inquiries, articles and ideas are encouraged.

LTAP Local Technical Assistance Program

To contact the Baystate Roads Program call (413) 545-2604 or FAX 413-545-6471

EOT
Massachusetts Executive Office of Transportation and Public Works
Federal Highway Administration
UMass Transportation Center

GREENTIPS from The Union of Concerned Scientists

in this issue

Taking your car to the local car wash instead of washing it at home might seem like a guilty pleasure, but from an environmental perspective it is often the better choice. When you wash your car in the driveway or street, contaminants such as grease and brake dust (as well as the detergent itself) flow into storm sewers, which discharge directly into our waterways. Commercial car washes, however, are required to drain their water into sanitary sewers (which direct sewage to treatment facilities) or to filter and reuse it on-site.

Water efficiency is also a benefit of many commercial car washes. An analysis by the Maryland Department of Environment found that car washes use approximately 50-75 gallons of water per car (assuming water is not recycled); using the self-service bay consumes only 15 gallons. A typical garden hose with an average flow rate of seven gallons per minute, would exceed a car wash's water consumption after two minutes compared with the self-service bay or seven minutes compared with the automated wash if the hose were left running.