NTPEP RPM Committee Conference Call

September 29, 2016

Chair: Rick Douds
Vice Chair: Brad Young, Ohio DOT
Present:
  Vince Glick, AASHTO
  Ryan Fragapane, AASHTO
  Jan Kemp, GDOT
  George Lian, GDOT
  James Swisher, Va DOT
  Ted Jeffrey Whitmore, W Va DOT
  Jerry Britt, Ennis Flint
  Paul Gentry, Fla DOT

Brad Young is finishing the two year evaluation on 2014-01-003 Ray-o-Lite Casting - Hallen H1010 Lens - 5004H.

Trinity Highway Products submitted two plastic over metal casting snow plowable markers last year. So far the castings are do a decent job of protecting the lens. They weigh just over 2 lbs as opposed to a metal frame, weighing just over 5 lbs.

There are no non-plowable PRMs currently under evaluation. In the last two years, all four submittals have been withdrawn due to poor performance.

Ennis Flint has some new submittals. The yellow/yellow lenses will be installed October 26, 2016 on low traffic roads (less than 38,000 ADT) near Barnesville, Ga. The white/red lens will be installed on October 25, 2016 on I-75 North near Tifton, Ga.

There are 10 RPMs to be tested: six are non-plowable and four are plowable. Jerry Britt stated that Ennis Flint is retesting a preapproved pavement marker due to State DOT requirements in their specifications. Ennis Flint, Apex, and RayOLite have submitted markers. Rare Earth Sciences have a RPM with a luminescent strip covered with a clear lens that meets MUTCD requirements for size and height. Mr. Douds will have pictures at the next NTPEP meeting.

Since we cannot have a webinar more than two years in a row, the next will be a meeting so the RPM committee will be presenting at the NTPEP annual meeting next year in Boston. Another survey may be distributed before the next meeting.
Retest Cycle

During our last webinar Johnny Miller (Texas) stated that he favors both lab and field re-testing of markers. A survey was conducted and sixteen states favor both lab and field re-testing of pavement markers. Nine state DOTs replied that they favor lab testing only.

It is up to the State to request complete retesting. Retesting is recommended every five years. If one state requires complete lab and field testing then the manufacturer will have their marker submitted for lab and field evaluation if they want to remain on that State DOT’s qualified product list.

If a state observes significant problems, they should go ahead and retest without waiting until the prescribed testing time.

Brad Young stated that he favors lab testing only.

If the Committee feels lab testing is OK, make a recommendation and see if we can steer the States that way. Put this on the agenda for the annual meeting.

Some companies have poor quality assurance programs as evidenced by the number of products withdrawn from the test deck.

Are there any properties that will show up in the field but not in the lab? It is hard to predict how a product will perform in the field based on a lab test. If there are no changes to an PRM, lab testing may be the only testing needed. Some companies produce good products and some not so good. Testing and field evaluation is the only way to find the answer. We cannot dictate what procedures each state requires.

Rick Douds will distribute the results of the survey.

Are most RPMs manufactured in the company’s foundry or in another? Ennis-Flint has in-house specs. The foundry has to be qualified in order to make the casting. Ohio reported no significant issues with casting. Pennsylvania reported some castings failed during lab testing. Virginia reported that they have quite a few failures after every winter.

The statement could be changed to state that we reduce the number of samples field evaluated when retesting a pavement marker.

It was noted that markers set on top of the road may experience problems with tensile strength and breakage.

Lab testing does not always predict the results of field testing. Observation is the best test of compressive strength.

I-75 has a lot of truck traffic, so the RPMs take a beating. RPMs are for all roads and should be testing under trying conditions. If they hold up on an Interstate, they will hold up on a State Route or County road.
Handling Experimental Type Products

Where is the best place to test experimental products? What conditions do they require? Will there be a problem with them endangering people and property, such as becoming projectile? They should be handled as a new product and not be put on a test deck. Some products may damage the roadway. Others may be too expensive to test extensively. Ex: Internally laminated LED RPMs cost $12.00 per unit and could cost as much as $50.00 per unit if the housing is changed to aluminum.

The Committee will discuss this issue. A paragraph may be put in the Scope of Work. Add to work plan. Use may be left up to each State.

Has anyone put internally illuminated RPMs on a test deck? How do you test the equivalent of retroreflectivity? Do we have sufficient working in the work plan? Two hundred markers would be necessary for testing, which makes it cost-prohibitive. It is not practical to field test them on an Interstate or State Route. They may need to be tested at crosswalks, etc. Manufacturer may have to decide whether or not it is worth the cost of testing. Have other states used them? A survey regarding lab and field testing of illuminated PRMs may be distributed.

NTPEP may have information and may be interested in procedures and results. The manufacturers will have information on test protocol.

Recent manufacturer sent in samples and requested elimination of compressive strength test. We did not eliminate this test. Manufacturer was informed that we cannot pick and choose which tests to run from the scope of work. The tests are ran to provide state DOTs with test results for their decision making process when selecting a pavement marker. NTPEP members expect all aspects of a product to be tested unless the manufacturer can show why a particular test is not viable.

The best test of an RPM is how well they show delineation at night when it is raining. There has not been a lot of change in the industry.

The meeting adjourned.