



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

January 5, 2011

MEMORANDUM

TO: Division Engineers

FROM: R. A. Hancock, P.E.
State Construction Engineer

Handwritten signature of R. A. Hancock in black ink.

SUBJECT: Expanded Use of Warm Mix Asphalt

As you are aware, Warm Mix Asphalt (WMA) is a major focus area for NCDOT, the Federal Highway Administration, and the asphalt industry due to its potential energy cost savings and environmental benefits. We have been using WMA since 2008 and have placed approximately 360,000 tons to date with various WMA technologies.

The asphalt project special provisions have been revised to expand the use of warm mix asphalt onto more routes throughout the state based on approved technologies. The new provision will be effective with the January 2011 letting.

The new provision will give contractors the option to use WMA based on a specific technology from the NCDOT approved list of WMA technologies. This list will also provide associated route restrictions and will be maintained on the Materials and Tests Unit's website at:

<http://www.ncdot.org/doh/operations/materials/pdf/wma.pdf>

Attached is the current list of approved WMA technologies.

In addition we have created a special provision that requires the use of WMA for situations where your staff would like to use WMA to provide a higher quality product. An example of this is when substantial crack sealing is included in the contract or performed in house ahead of the resurfacing and WMA is less likely to create bumps that often occur when Hot Mix Asphalt causes expansion of the crack sealing material.

The updated special provisions can be found on the Contract Office website and are listed as:

SP6 R02A – Allows WMA
SP6 R02B – Requires WMA

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
CONSTRUCTION UNIT
1543 MAIL SERVICE CENTER
RALEIGH NC 27699-1543

TELEPHONE: 919-733-2210
FAX: 919-733-8441
WEBSITE: WWW.NCDOT.ORG

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

Division Engineers

January 5, 2011

Page 2

We will continue to require pre-pave meetings and track the use of WMA. Please share this information with your staff and have them notify the State Pavement Construction Engineer, Mr. Nilesh Surti, on future WMA projects.

If you have any question, please feel free to contact Mr. Nilesh Surti at (919) 733-2210.

RAH/NS/mof

Attachment

cc: Mr. T. R. Gibson, P.E.
Mr. J. G. Nance, P.E.
Mr. C. A. Peoples, P.E.
Mr. R. A. Garris, P.E.
Mr. Steve DeWitt, P.E.
Mr. J. F. Sullivan, III, P.E.
Resident Engineers
Roadway Construction Engineers

**North Carolina Department of Transportation
Approved Products Listing**

APPROVED WARM MIX ASPHALT (WMA) TECHNOLOGIES

Prior to any approval, the WMA technology manufacturer must submit documentation from a minimum of three (3) successfully constructed projects using the WMA technology that includes the following:

- Product Name & Supplier;
- Contact Name & Telephone Number;
- WMA Technology Material Safety Data Sheet (MSDS);
- Documentation from each successfully constructed project, including: project type, project owner, location, tonnage placed, mix design used, field density and performance data.

After the initial review process, the WMA technology can be given the following approval statuses based on the construction and performance of NCDOT-approved job mix formulas (JMFs) using the technology:

WMA Manufacturer	WMA Technology	Current Approval Status
Astec Industries	Double Barrel Green	Limited
Gencor Industries	Ultrafoam GX	Limited
Maxam Equipment	AQUABlack WMA	Trial
MeadWestvaco	Evotherm 3G	Trial
Meeker Equipment	Aqua Foam WMA	Trial
PQ Corporation	Advera	Trial
Sasol Wax	Sasobit	Trial
Terex Roadbuilding	Terex WMA	Trial

1) Trial Approval – one or more NCDOT-let projects have been successfully constructed using the WMA technology and monitored through a minimum of one Winter season.

- WMA technologies with Trial status may be used on NC and Secondary Routes.

2) Limited Approval – a minimum of 75,000 tons of mix using the WMA technology have been successfully constructed on NCDOT-let projects.

- WMA technologies with Limited status may be used on US, NC, and Secondary Routes.

Contact **Todd Whittington** of the Materials & Tests Unit at (919) 329-4060 for any information and current approval status.