



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

August 9, 2011

MEMO TO: Jay Bennett, Jonathan Bivens, Stuart Bourne, Ken Cates, Joe Coleman, Judith Corley-Lay, Ron Hancock, Berry Jenkins, Ben Lanier, Don Lee, David Moyar, Gerhard Pilcher, Ian Scott, Lamar Sylvester, Michael Taylor, Kevin Thomas, Brian Webb, and Dennis Wofford

FROM: R. A. Garris, PE
Contract Officer

SUBJECT: AGC/Roadway Subcommittee Meeting Minutes

The subject committee met on June 16, 2011 at 9:30 a.m. in the Riverwood Conference Room at the Century Center with the following in attendance:

Jay Bennett	Randy Garris	Natalie Roskam
Jonathan Bivens	David Harris	Ian Scott
Stuart Bourne	Joseph Ishak	Lamar Sylvester
Theresa Canales	Berry Jenkins	Michael Taylor
Ken Cates	Phillip Johnson	Kevin Thomas
Owen Cordle	Chris Peoples	Brian Webb

1. DISADVANTAGED BUSINESS ENTERPRISE UPDATE (ATTACHMENT #1)

Ms. Canales reviewed the upcoming changes to the Disadvantaged Business Enterprises program outlined in Attachment #1. The Department is updating the special provision. In the revised provision, Bidders are requested to submit all DBE participation at the time of bid. A good faith effort will still be required if the goal is not met. The apparent low bidder will only submit letters of intent for DBEs used to make the goal. The DBEs with letters of intent are the committed DBEs. The DBEs submitted at bid in excess of the goal will be reported as race neutral participation and help with the Uniform Report. If the Contractor has approval to replace a committed DBE, the Contractor may submit a new letter of intent for the DBEs reported at the time of bid in excess of the goal to replace the committed DBE. The Contractor will not be held to a higher standard than the goal.

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2. DIRECTORY OF TRANSPORTATION FIRMS

The Directory of Transportation Firms (<https://partner.ncdot.gov/VendorDirectory/default.html>) search function was discussed. Mr. Bivens noted that the work code categories are not listed on the search results on the screen. Currently, the firm name and number in the directory does not match the HiCams vendor number. The Contractual Services Unit is replacing this firm number with the HiCams number. A few firms listed on the directory do not appear in HiCams as prequalified causing issues in the field. The Engineer can contact the Contractual Service Unit to resolve the issue. Ms. Canales reviewed the Directory features and will continue to update the website based on feedback.

3. CONCRETE MIX DESIGN SUBMITTAL/APPROVAL (ATTACHMENTS #2-6)

Mr. Peoples reported that the reason for assigning the concrete mix design by the project is because sampling requirements are assigned by project. The inspector enters the sample test data by the job mix number for that project. HiCams contains thousands of mix designs, but each one is tied to a specific project. Mr. Cordle explained that the concrete producer submits a mix design to the Department, and it is entered in the database for that plant. Every mix design is identified as being unique. A Contractor can submit a Form 312R or 312U to submit a new mix design. Mr. Cordle explained the concrete numbering system which incorporates the concrete producers mix design number with a Department prefix and "E" suffix for English. The first one, two, or three numbers are the plant number(s). The first digit after the plant number indicates the class of concrete. The second digit indicates the air entrainment vibration status of the concrete. The third digit indicates pozzolan use. The Materials and Tests Unit and Construction Unit agreed to work together to address how inspectors handle concrete mix designs different from those approved for a specific project.

4. CONTRACT TIME FOR RESURFACING

Mr. Bivens asked for additional flexibility on resurfacing contracts. He requested that if one map has a restriction, the Department put a float, an ICT or limit that specific map to keep flexibility in the project and lower costs. Mr. Garris noted that some of these issues were discussed at CAPP and are being addressed.

5. ADVERTISEMENT AND BID PROCEDURES

Mr. Bivens pointed out that many of the Divisions are letting many small purchase orders instead of grouping work into a single contract. He expressed concern with consistency of advertising and availability of information for these purchase orders or smaller contracts. He would like to see a web template developed for all Divisions with consistent information.

Mr. Garris reported that the Divisions are being trained to use electronic bidding this year. The Divisions can post their .ebs files. Contractors can do their estimate in the computer and submit a printout and disk. Contractors will not be able to submit through Bid Express except for Central Let projects. The electronic bidding does not allow more than one letting at a time. This necessitates a calendar to schedule the lettings. By 2012, the Department will be using the electronic system so all projects will be in HiCams.

6. INVITATION TO BID

Mr. Garris reminded the committee that the invitation to bid will be electronic. The Contractors will get an email alert that the invitation to bid has been posted. Mr. Taylor asked if it would be possible to use multiple email addresses for this alert. Electronic plans will be posted on the Project Letting website. The Department is beginning an extranet and sharepoint project. Contractors will need an NCID to access files.

7. CLEARING AND GRUBBING

Mr. Taylor commented on clearing and grubbing limits. Mr. Taylor asked that the Department clarify the clearing for utilities and basins for the method II or method III clearing and grubbing. Mr. Bivens suggested that one sheet be provided for clearing and grubbing subcontractors to provide instruction for all the clearing and grubbing in the project. Mr. Bennett commented that the Department is working to provide clearing on projects to avoid issues.

8. OTHER (ATTACHMENT #7)

Mr. Jenkins noted a forthcoming bill will require Contractors to use E-verify to qualify suppliers and subcontractors. DENR has submitted a modification for the stormwater permit with the EPA. If it is approved as submitted, the Department would be exempt from the turbidity requirement for the next five years. Mr. Jenkins requested that Contractors be diligent about quickly starting an early stand of vegetation. Mr. Harris reviewed the NCG01 permit erosion control measures needed for all projects on or after August 15. Mr. Johnson handed out draft copies of the *Manual for Construction Layout* and asked for feedback. Mr. Sylvester reviewed the Work Zone Traffic Control provision in Attachment #7, noting the work zone supervisor requirement will begin for July let projects. Concern was expressed for the “periodic review” by the work zone supervisors. The Department will review the provision.

The next meeting will be held on **Thursday, August 18**, at **9:30 am** in the **Riverwood Conference Room** at the **Century Center, Building B**.

CC: Victor Barbour, PE
Andy Gay, PE

Outline of Proposed DBE Special Provision

- Bidders shall submit all DBE participation that they anticipate to utilize during the contract at the time of bid.
- A Good Faith Effort will be required if the bidder does not submit sufficient DBE participation at the time of bid to meet the advertised goal.
- The apparent low bidder will submit Letters of Intent from DBEs sufficient to meet the advertised goal stated in the proposal.
- “Committed” DBEs refer to those DBEs who have a Letter of Intent.
- Replacement rules only apply to those DBE firms in which a Letter of Intent has been received. (They do not apply to additional firms listed at the time of bid.)
- The additional firms listed at the time of bid and who have no Letter of Intent will be counted toward race-neutral participation on the Uniform Report.
- If a committed DBE firm is removed from the project for good cause as determined in the Replacement Rules, a non-committed DBE can be used to fulfill the DBE commitment by submitting a Letter of Intent for that firm.
- A Good Faith Effort will be required for removing a committed DBE if there were no additional DBEs submitted at the time of bid to cover the same amount of work.
- No longer will the prime be held to a higher goal than the advertised goal

**North Carolina Department of Transportation, Division of Highways, Materials and Tests Unit
Statement of Concrete Mix Design and Source of Materials**

Contract No.	Concrete Producer
County	Plant Location & DOT No.
Resident Engr.	Contractor
Class of Concrete	Date
Mix Design No.	

Mix Design Proportions Based on SSD Mass of Aggregates

Material	Producer	Source	Qty. per Cu. Yd.
Cement, Type			lbs.
Pozzolan			lbs.
Fine Agg., + M			lbs.
Coarse Agg., + M			lbs.
Other Agg., + M			lbs.
Total Water			gals.
Air. Entr. Agent			oz.
Retarder			oz.
Water Reducer			oz.
Superplasticizer			oz.
Other			
Other			

Mix Properties and Specifications

Slump _____ in. _____ mm Mortar Content _____ cu. ft. _____ cu. meter
 Max. Water _____ gals. _____ L Air Content _____ %

Aggregate and Pozzolan Data

Material	Specific Gravity	% Absorption	Unit Mass	Fineness Modulus
Fine Agg. Type (2S or 2MS)			NA	
Coarse Agg., Size (No. 57, 67, or 78M)				NA
Other Agg., Type or Size				
Pozzolan		NA	NA	NA

Cast-in-place concrete shall conform to Section 1000, precast concrete to Section 1077, and prestressed concrete to Section 1078 of the applicable edition of the Standard Specifications for Roads and Structures plus all applicable Special Provisions.

Special Use Criteria: Is mix design governed by Special Provision/Plan Note? Yes No
 If Yes submit copy of Special Provision or Plan Note with this Form.

Signature and title of person who designed mix _____

NCDOT Mix Design Certification No. _____ Or PE stamp or No. _____

Contractor Signature _____ Resident Engineer Signature _____

**North Carolina Department of Transportation, Division of Highways
Materials and Tests Unit**

Portland Cement Concrete Mix Design Request Form

Contract Number _____ Project Number _____
County _____ Resident Engineer _____
Contractor _____ Concrete Producer _____
Plant Location _____ Concrete Producer's E-mail _____

DOT-Assigned Plant Number _____ (Use a separate form for each plant number. For requests from more than one plant, indicate a main plant and a back-up plant.)

List concrete producer's mix number as filed with the Department's concrete mix design database. (Include only classes of concrete specified in the contract.)

Class A _____ Class AA _____

Class B _____ Class B-
curb & gutter
machine _____

Class AA-
barrier _____
rail _____
machine _____

Flowable fill _____

Drilled shaft _____ Other
(include
class) _____

Prestressed concrete _____

Is any mix design governed by Special Provision/Plan Note? Yes ___ No ___

If yes, indicate with an asterisk (*) beside mix number above and submit copy of Special Provision or Plan Note with this Form.

Contractor's Signature _____

Resident Engineer's Signature _____

Concrete Mix Design Codes

Class of Concrete

- 1 = Class A
- 2 = Class AA
- 3 = Class AAA
- B = Class B
- C = shotcrete
- D = drilled shaft
- E = regular precast
- F = flowable fill
- G = grout
- H = high early strength patch mix
- L = latex modified concrete
- M = Class B curb & gutter machine
- P = regular prestress
- R = Class AA slip-form barrier rail
- S = Class S
- T = pavement
- ~~Y = self consolidating prestress~~
- ~~Z = self consolidating precast~~

Air Entrainment and Vibration Status

- V = vibrated and air entrained
- N = non-vibrated and air entrained
- X = vibrated and non-air entrained
- Y = non-vibrated and non-air entrained

Pozzolan

- O = no pozzolan
- F = Class F fly ash
- C = Class C fly ash
- G = ground granulated blast furnace slag
- U = silica fume

Concrete Mix Design Submittals (See NCDOT Std. Specs, Sect. 1000-4 & 1000-5.)

Database Submittal: Involves concrete producer and Physical Testing Lab only.

1. Concrete producer submits mix design on Form 312U directly to Physical Testing Lab. Design must include producer's mix design number (not to exceed nine places). Each mix number must be unique within a stated concrete plant. Latest revision of Form 312U (dated 10-08) requires signature and title of person who designed mix and his NCDOT Certification number or PE stamp or PE number.

2. Physical Testing Engineer enters mix in HiCams database via Concrete Mix Design screen. Database entry means that mix complies with DOT specifications unless otherwise noted. By itself, it does not constitute acceptance for a contract.

3. Concrete producers frequently change materials and quantities in their mixes. Each change requires a new mix design number and resubmittal for the database.

Submittal for a Contract, Project, Work Order, Maintenance Job or Any Other Work Under DOT Jurisdiction: Involves contractor, DOT engineer (resident, traffic, maintenance or other) and Physical Testing Engineer.

1. Contractor completes, signs and submits mix design request Form 312R to DOT engineer in charge of job. (Form 312R allows contractor to request multiple mix designs on a single sheet per plant by listing the producer's mix design number for each desired mix. Its use presumes that the mixes are in the HiCams database. If any mix is governed by a Special Provision or a Plan Note – i.e., a project-specific specification outside the scope of the Standard Specifications – a copy of the Provision or Note should be attached.

2. DOT engineer forwards Form 312R to Physical Testing Lab.

3. Physical Testing Engineer assigns requested mixes to contract in HiCams via the Concrete Mix Contract Assignment screen. If job is not part of HiCams, Physical Testing Engineer prints requested mix designs from the database, completes administrative information on each Form 312U printed from database and distributes copies.

Helpful hints:

1. Always include contract number if job is in, or is to be in, HiCams. Use other administrative numbers only if job is not in HiCams.
2. Advise contractor to submit only mixes required for specific job, not every mix the concrete producer is capable of producing. Extraneous mixes and contingency mixes from multiple plants only clutter records and confuse our personnel. Specified mixes from one or two plants should be plenty.
3. Submit mix design requests early in the game. Do not call and say, "The concrete truck is enroute with a mix design we used on such-and-such a job. May we use it on this job?"

Recision and Reinstatement of Mix Designs

Mix designs may be rescinded from the database and a contract for a number of reasons: poor performance, upon request by the producer, en masse when a concrete plant loses its certification, or when specifications change and mixes do not comply with the new specifications.

A mix design rescinded due to poor performance may be reinstated if the producer requests reinstatement in writing accompanied by laboratory data that shows compliance with specifications.

Concrete Mix Numbering Explanation 3-23-07

The mix numbers on Form 312R are the concrete producers' mix numbers. We incorporate those into our mix number (the number that appears on the Form 312U and in HiCams). Our number simply adds a prefix and suffix to the producer's number. Here's the system:

The first 1, 2, or 3 numbers is the concrete plant number. For example, #94 is Cemex's Elm St. plant in Greensboro. All mixes from that plant will begin with 94.

Next comes a three-place DOT code for (1) the class of concrete, (2) the vibration and air-entrainment status of the mix, and (3) the type of pozzolan used, if any. For example, 2VF means Class AA, vibrated and air-entrained, with Class F fly ash.

Next comes the producer's mix number. For example, 156142.

Finally comes the suffix, which is always the letter "E," meaning English (as opposed to metric). No mixes are issued in metric, regardless of which units the job is designed in. Initially, we planned to have a dual system with metric mixes ending in the letter "M," but metric conversion by hand (no magic conversion button was devised by HiCams personnel) proved too cumbersome and time-consuming for our limited staff (me), so we got a dispensation from on HIGH to issue all mixes in English.

OK, so when you see the mix # 942V156142E, you can recognize it as Class AA, vibrated and air-entrained, with Class F fly ash, from plant 94. Furthermore, you can see that the producer's mix number is 156142 (which should match the Form 312R request) and that the mix is in English units.

Concrete Mix Design Codes

Class of Concrete

- 1 = Class A
- 2 = Class AA
- 3 = Class AAA
- B = Class B
- C = shotcrete
- D = drilled shaft
- E = regular precast
- F = flowable fill
- G = grout

H = high early strength patch mix
L = latex modified concrete
M = Class B curb & gutter machine
P = regular prestress
R = Class AA slip-form barrier rail
S = Class S
T = pavement
Y = self consolidating prestress
Z = self consolidating precast

Air Entrainment and Vibration Status

V = vibrated and air entrained
N = non-vibrated and air entrained
X = vibrated and non-air entrained
Y = non-vibrated and non-air entrained

Pozzolan

O = no pozzolan
F = Class F fly ash
C = Class C fly ash
G = ground granulated blast furnace slag
U = silica fume

WORK ZONE TRAFFIC CONTROL:
(7-19-11)

SP11 R20

Revise the 2006 *Standard Specifications* as follows:

Page 11-3, Article 1101-12 Traffic Control Supervision, in addition to the stated requirements, add the following:

Provide the service of at least one qualified Work Zone Supervisor. The Work Zone Supervisor shall have the overall responsibility for the proper implementation of the traffic management plan, as well as ensuring all employees working inside the NCDOT Right of Way have received the proper training appropriate to the job decisions each individual is required to make.

The work zone supervisor is not required to be on site at all times but must make periodic project reviews and be available to address concerns of the Engineer. The name and contact information of the work zone supervisor shall be provided to the Engineer prior to or at the preconstruction conference.

Qualification of Work Zone Supervisors shall be done by an NCDOT approved training agency or other approved training provider. For a complete listing of these, see the Work Zone Traffic Control's webpage, <http://www.ncdot.gov/doh/preconstruct/wztc/>.

Page 11-13, Article 1150-3 Construction Methods, replace the article with the following:

Provide the service of properly equipped and qualified flaggers (see *Roadway Standard Drawings* No. 1150.01) at locations and times for such period as necessary for the control and protection of vehicular and pedestrian traffic. Anyone who controls traffic is required to be qualified. Qualification consists of each flagger receiving proper training in the set-up and techniques of safely and competently performing a flagging operation. Qualification of flaggers is to be done at an NCDOT approved training agency. For a complete listing of these, see the Work Zone Traffic Control's webpage, <http://www.ncdot.gov/doh/preconstruct/wztc/>.

Prior to beginning work on the project, a Qualification Statement that all flaggers used on the project have been properly trained through an NCDOT approved training resource shall be provided to the Engineer.

Flagging operations are not allowed for the convenience of the Contractor's operations. However, if safety issues exist (i.e. sight or stopping sight distance), the Engineer may approve the use of flagging operations. Use flagging methods that comply with the guidelines in the MUTCD.