



STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
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JOHNNY B. BRADBERRY
SECRETARY

June 20, 2006

**SUBJECT: GENERAL ADDENDUM - REVISION OF SPECIAL PROVISION ENTITLED
"PORTLAND CEMENT CONCRETE".**

Gentlemen:

The special provision entitled **PORTLAND CEMENT CONCRETE** (2 pages) has been revised. Projects for which bids are scheduled to be received on Wednesday, June 28, 2006, in which this item appears are listed below:

Lead Project No.	Project Name	Route	Parish
005-05-0073	Barrow Street - LA 660	LA 24&LA182	Terrebonne
010-01-0019	US 71 @ LA 9 & US 71 @ LA 3163	US 71	Natchitoches
013-05-0043	E.B.R. Computerized Traffic Sig. Synchronization Sys.		East Baton Rouge
013-12-0032	LA 22 to Bayou Castine	US190,LA1087	St. Tammany
023-10-0036	Dubach - Bernice	US 167	Lincoln & Union
029-04-0027	Jct. LA 28 - Rapides Parish Line	LA 121	Vernon
053-09-0046	Youree Drive(Sand Beach Boulevard - Southfield Rd.)	LA 1	Caddo
053-09-0074	Shreveport ITS Immediate Term Phase 3	LA 1	Caddo
057-03-0039	Bayou Plaquemine Bridge and Approaches	LA 13	Acadia
238-02-0019	LA 145 Interchange	LA 145	Lincoln
249-01-0045	LA Highway 45 (Barataria Boulevard and Patriot St).	LA 45	Jefferson
258-01-0030	Perkins Road Improvements (Essen Lane to Siegen Ln)	LA 427	East Baton Rouge
266-01-0036	LA 70 to I-10 & LA 70 at LA 3125	LA 22 & LA 70	Ascension and
451-08-0068	Richland Parish Line to Junction US 80	I-20	Madison
693-03-0005	Air Cond. Welcome Center District 03 at Butte La Rose	I-10	St. Martin
713-04-0001	Lee Drive Bridge over Bayou Pierre Part		Assumption
737-55-0002	Houma ITS Deployment- Phase 2	LA 24, LA57	Terrebonne
742-26-0058	Veterans Blvd, Clearview Pky to Suburban Canal Ovly		Jefferson
832-02-0021	Junction LA 64 - Junction LA 16	LA 1019	Livingston

Please note this revision in the proposals previously furnished you and bid accordingly.

Very truly yours,


for
NEAL C. THIBODEAUX
CONTRACTS AND SPECIFICATIONS ENGINEER ADMINISTRATOR

Attachments

pc: Mr. Brian Buckel
Mr. Lawrence Hofstad
Mr. John Oglesby
Mr. Michael Stack
Mr. Brian Buckel
Mr. William Fontenot, Jr.
Mr. Michael Eldridge
Mr. John Sanders

Mr. Darrell Goza
Mr. Donald Tolar
Mr. Marshall Hill
Mr. Robert Hennigan
Mr. Lester LeBlanc
Mr. Wayne Marchand
Mr. John Gagnard
Mr. Ricky Moon

Mr. James Free
Mr. Roy Schmidt
Mr. Tom Landry
Ms. Connie Standige
Mr. Stephen Perilloux
Mr. Edwin McClanahan

PORTLAND CEMENT CONCRETE (06/20/06): Section 901 of the 2000 Standard Specifications and the supplemental specifications thereto is amended as follows.

Subsection 901.06 is amended as follows.

Heading (b) is deleted and the following substituted.

(b) **Quality Control Tests:** The contractor shall be responsible for determining gradation and moisture content of fine and coarse aggregates used in the concrete mixture and for testing the mixture at the job site for slump, unit weight (mass), temperature, and air content (when used). The contractor shall conduct operations to produce a mix complying with the reviewed and accepted mix design, except that variations will be permitted within specified control limits for individual samples. The contractor shall be responsible for monitoring the components (cement, mineral and chemical admixtures, aggregates) in their mix to protect against any changes due to component variations. As component shipments arrive, the contractor shall verify slump, air content and set time by testing at ambient temperatures. The contractor shall make adjustments to the mix design to rectify any changes which would adversely affect constructability, concrete placement or the specifications. The contractor shall submit test results to the Department for review each day of paving. Testing to validate component consistency will be documented on the control logs. Conformance or variation in mix parameters (workability, set times, air content, etc.) shall be noted on the control logs. The contractor shall provide a copy of the proposed testing plan to the engineer for record. Acceptance of the plan does not relieve the contractor's responsibility for consistency. Test results for gradation, slump, unit weight (mass), and air content shall be plotted on control charts for individual samples. These control charts shall be submitted to the engineer.

Times at which to obtain control test samples shall be set by the contractor using random number tables in accordance with DOTD S 605 or by random selection. Gradation control limits of aggregates shall be as shown in Subsection 1003.02. When required, additional test samples shall be taken as directed for slump, concrete temperature, and air content.

The minimum number of quality control tests to be performed by the contractor for structural and pavement concrete shall be in accordance with the Materials Sampling Manual.

For minor structure concrete only, the contractor will not be required to have a Certified Concrete Technician or Authorized Concrete Field Tester, but shall implement a quality control testing program to ensure that the concrete meets the requirements of these specifications.

When producing concrete for Type B and D pavements, gradations shall be determined daily on each stockpile of aggregate to be used. All gradation calculations shall be based on percent of dry weight (mass). Upon determination of the gradation of each stockpile, the percent of the total aggregates retained shall be determined mathematically based on the proportions of the combined aggregate blend, and checked for conformance with Table 1003-1A.

Subsection 901.08 is amended as follows.

The second paragraph of Heading (a) is deleted and the following substituted.

For concrete placements having a least dimension of 48 inches (1200 mm) or greater, or if designated on the plans or the project specifications as being mass concrete, the allowable cement type shall be Type II portland cement, Type IP portland-pozzolan cement, or Type IS portland blast furnace slag cement. The cement or combination of cement and fly ash or ground granulated blast furnace slag, shall be certified to generate a heat of hydration of not more than 70 calories/gram (290 kJ/kg) at 7 days.

Table 901-02, Master Proportion Table for Portland Cement Concrete, is deleted and the following substituted.

Table 901-2

Master Proportion Table for Portland Cement Concrete

Average Compressive Strength, psi (MPa) at 28 days		Grade of Coarse Aggregate	Min. Cement, lb/yd ³ (kg/m ³) of Concrete ⁹	Maximum Water/Cement ratio, ^{1,9} lb/lb(kg/kg)	Total Air Content (Percent by volume) ⁴	Slump Range ¹⁰ , inches (mm)		
						Non-Vibrated	Vibrated	Slip Form Paving ²
Structural Class ¹¹								
AA(M)	4400 (30.4)	A, P	560 (332)	0.44	5±1	2-5 (50-125)	2-4 (50-100)	N.A.
AA	4200 (29.0)	A, P	560 (332)	0.44	5±1	2-5 (50-125)	2-4 (50-100)	N.A.
A(M)	4400 (30.4)	A, P	510 (302)	0.53	5±2	2-5 (50-125)	2-4 (50-100)	N.A.
A	3800 (26.2)	A, F ⁸ , P	510 (302)	0.53	5±2	2-5 (50-125)	2-4 (50-100)	1-2.5 (25-65)
D	3300 (22.8)	A, B, D, P	420 (249)	0.58	5±2	2-5 (50-125)	1-3 (25-75)	N.A.
F	3400 (23.5) ⁵	A, P	460 (273)	0.44	5±1	2-5 (50-125)	2-4 (50-100)	N.A.
P(X)	7500 (51.7) ⁵	A, F ⁸ , P	700 (415)	0.40	5±2	N.A.	2-10 (50-250)	N.A.
P(M)	6000 (41.4) ⁵	A, F ⁸ , P	600 (356)	0.44	5±2	N.A.	2-6 (50-150) ⁷	N.A.
P	5000 (34.5) ⁵	A, F ⁸ , P	560 (332)	0.44	5±2	N.A.	2-6 (50-150) ⁷	N.A.
S	3800 (26.2)	A, P	650 (385)	0.53	5±2	6-8 (150-200)	N.A.	N.A.
Minor Structure Class ¹¹								
M	3000 (20.7)	A, B, P	470 (279)	0.56	5±2	2-5 (50-125)	2-4 (50-100)	1-2.5 (25-65)
R	1800 (12.4)	A, B, D, P	370 (219)	0.70	5±2	2-5 (50-125)	2-4 (50-100)	N.A.
Y	3000 (20.7)	Y	560 (332)	₃	6-9	N.A.	1-3 (25-75)	N.A.
Pavement Type ¹¹								
B	4000 (27.6) ⁶	N/A ¹³	475 (282)	0.53	5±2	N.A.	2-4 (50-100)	1-2.5 (25-65)
D	4000 (27.6) ⁶	N/A ¹³	450 (267)	0.53	5±2	N.A.	2-4 (50-100)	1-2.5 (25-65)
E	4000 (27.6) ⁶	A, F ¹² , P	600 (356)	0.40	5±2	N.A.	2-4 (50-100)	1-2.5 (25-65)

N.A. – Not Applicable

¹ Except for Class AA, AA(M), or F concrete, the maximum volume of water, gal. (L), shall be reduced 5 percent when a water-reducing admixture is used, and 10 percent when an air-entraining admixture, or air-entraining and water-reducing admixtures, is used. When the coarse aggregate portion of the mix is 100 percent crushed aggregate, the water may be increased by 5 percent provided the maximum water listed in Table 901-2 is not exceeded.

² Also slump range for other concrete placed by extrusion methods.

³ Refer to Subsection 901.08(c).

⁴ Total air content ranges when air-entrainment is allowed or specified. Air content shall be designed at midrange.

⁵ Values shown represent the minimum compressive strengths allowed.

⁶ Average compressive strengths for Pavement Type concrete shall be 3600 psi (24.8 MPa) when air-entrainment is used.

⁷ No more than a 2 inch (50 mm) slump differential for any design pour.

⁸ Grade F coarse aggregate shall be used only when specified or permitted. The minimum cement content shall be increased when this aggregate is used.

⁹ For mixes including partial replacement of cement with fly ash or ground granulated blast furnace slag, the minimum cement and maximum water contents shown apply to the total cement and fly ash or ground granulated blast furnace slag content of the mix. Additional cement may be required to achieve minimum compressive strength.

¹⁰ When a slump range is specified in other sections, that range shall govern.

¹¹ See Subsection 901.08(a) for allowable types of cement.

¹² For use in partial depth patching.

¹³ Aggregate grading shall comply with the requirements of Subsection 1003.02(c).