

## **LAFAYETTE CONSOLIDATED GOVERNMENT SUPPLEMENTAL SPECIFICATIONS**

The 2016 Lafayette Consolidated Government Standard Specifications for Road, Drainage, Bridges and Other Infrastructure and supplemental specifications thereto are amended as follows:

### **PART I – GENERAL PROVISIONS**

#### **SECTION 102 – BIDDING REQUIREMENTS:**

##### Subsection 102.08 – Preparation of Bid (05/17), page 23

Delete reference to La. R.S. 38:2212(A)(1)(c) or R.S. 38:2212(O) and replace with LRS Title 38:2212(B)5.

Add the following to Section 102.08: LCG requires that written evidence of the authority of the person signing the bid is required regardless of whether the project is for Public Works or not. This written evidence must be included with the vendor's sealed bid from all bidders. Failure to provide written evidence of authority with bid shall result in rejection of bid.

Section L – “Certificate of Authority” may be used in lieu of a corporate resolution.

Any other requirement found in Subsection 102.08 not addressed above shall be applicable.

##### Subsection 102.15 - Attestation Affidavit (05/17), page 27 and Subsection 102.16 – Employment Status Verification Affidavit (05/17), page 27

Delete the contents of these two subsections and substitute the following:

Attestations Affidavit (Section K) found in the specifications in accordance with the LA Revised Statutes listed below.

In addition add requirement for Verification of Employees and Certification Regarding Unpaid Workers Compensation Insurance in accordance with R.S. 23:1726 (B) which is made a part of the Attestations Affidavit.

In accordance with La. R.S. 38:2227, La. R.S. 38:2212.10 and La. R.S. 23:1726 (B) the low bidder on this project must submit the completed Attestations Affidavit (Past Criminal Convictions of Bidders, Verification of Employees and Certification Regarding Unpaid Workers Compensation Insurance) form found within this bid package.

The Attestations Affidavit form of the LOW BIDDER shall be RECEIVED by Office of Purchasing & Property Management Division of Finance & Management, no later than **ten days after opening of bids.** The submission should be identified with the name of the bidder, project name, project number and the words ATTESTATIONS AFFIDAVIT. Failure to submit this form within ten (10) days after the bid shall be cause for declaring bid non responsive and the public entity may award the bid to the next lowest bidder and afford the next lowest bidder not less than ten days from the date the apparent low bidder is declared non-responsive to submit the proper information and documentation as required by the bidding documents and may continue such process until the public entity either determines the low bidder or rejects all bids.

Form may be sent via US mail, express mail or hand delivered to:

Physical Address:  
Lafayette Consolidated Government  
Purchasing & Property Management  
705 W. University Avenue  
Lafayette LA 70506

Mailing Address  
Lafayette Consolidated Government  
Purchasing & Property Management  
PO Box 4017-C  
Lafayette LA 70502

**SECTION 105 – CONTROL OF WORK:**

Subsection 105.19 – Value Engineering Proposal (12/18), page 60

Replace paragraph two on page 60 with the following:

The net cost savings shall be divided 60% LCG - 40% Contractor and shall be determined as the difference in costs between the original contract costs for the involved work items and the actual final costs to LCG occurring as a result of the proposed change. Only those work items directly affected by the plan change will be considered in making the final determination of net cost savings. Subsequent change orders affecting the modified work items but not related to the VE Proposal will be excluded from such determination. In reviewing the VE Proposal, LCG reserves the right to reject the proposal if, in its judgment, the proposed net cost savings do not represent a reasonable measure of the value of the work to be performed or deleted.

**PART II – EARTHWORK**

**SECTION 203 – EXCAVATION AND EMBANKMENT:**

Subsection 203.05 – Borrow (08/18), page 138

Delete the contents within the first paragraph of this subsection and substitute the following:

Borrow is defined as soils required for construction of embankment or other portions of the work in excess of soils obtained from excavation. Soils obtained from on-site

excavation will not be considered borrow. Borrow shall be obtained from an approved source and shall be used in accordance with Subsection 203.06. The contractor shall make arrangements for obtaining borrow at no direct pay.

Any other requirement found in Subsection 203.05 not addressed above shall be applicable.

Subsection 203.07 – General Requirements (08/18), page 142

Delete the contents within the fourth paragraph of this subsection and substitute the following:

Excess excavated material not necessary for the construction of the project shall become the property of the contractor. Soils from excavation areas may be used when approved in embankments or other finished sections. Surplus or unusable excavated material shall be disposed of by the contractor in accordance with Subsection 202.02 or as provided in this Subsection.

Any other requirement found in Subsection 203.07 not addressed above shall be applicable.

Subsection 203.15 – Payment (08/18), page 150

Delete the following paragraph of this subsection in its entirety:

Payment of borrow material is for the material and delivery to the construction site only. Placement of borrow is paid for under the appropriate contract item for which the borrow is required.

Any other requirement found in Subsection 203.15 not addressed above shall be applicable.

**PART III – BASE COURSES**

**SECTION 305 – SUBGRADE LAYER:**

Subsection 305.07 – Payment (06/17), page 211

Replace the existing pay items and pay units with the following:

<b>Item No.</b>	<b>Pay Item</b>	<b>Pay Unit</b>
305-01	Subgrade Layer ____ in. Thick	Square Yard
305-02	Windrow Base Material ____in. Thick	Square Yard
305-03	Replace Windrowed Base Material ____in. Thick	Square Yard

Any other requirement found in Subsection 305.07 not addressed above shall be applicable.

**PART V – ASPHALTIC PAVEMENTS**

**SECTION 501 – ASPHALTIC CONCRETE MIXTURES:**

Table 501-4; Minimum Plant Sampling and Testing (12/18), page 250

Replace the existing Table 501-4 in its entirety with the following:

**Table 501-4  
Minimum Plant Sampling and Testing**

	<b>JMF Validation Tests</b>	<b>Plant Quality Control (Daily Production)</b>	<b>Plant Mix Acceptance (Daily Production)</b>
Extracted Gradation (LA DOTD TR 309)	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	1/lot or Half Day
% Extracted AC (LA DOTD TR 323)	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	1/lot or Half Day
% Crushed (LA DOTD TR 306)	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	1/lot or Half Day
Theoretical Max. Grav. G <sub>mm</sub> (aged 1 hr) (LA DOTD TR 327)	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	1/lot or Half Day
G <sub>mb</sub> (LA DOTD TR 304)	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	1/lot or Half Day
Marshall Mix Stability	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	1/lot or Half Day
% G <sub>mm</sub>	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	1/lot or Half Day
VMA, VFA, G <sub>mb</sub> , and %G <sub>mm</sub> @ N <sub>des</sub> (LA DOTD TR 304)	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	1/lot or Half Day
Air Voids, % (LA DOTD TR 304)	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	1/lot or Half Day
Tensile Strength Ratio (LA DOTD TR 322)	1/JMF	1/10 lots or Week	1/10 lots or Week

Table 502-4: Minimum Plant Sampling and Testing (12/18), page 281  
 Replace the existing Table 502-4 in its entirety with the following:

**Table 502-4**  
**Minimum Plant Sampling and Testing**

	<b>JMF Validation Tests</b>	<b>Plant Quality Control (Daily Production)</b>	<b>Plant Mix Acceptance (Daily Production)</b>
Extracted Gradation (LA-DOTD TR 309)	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	1/lot or Half Day
% Extracted AC (LA-DOTD TR 323)	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	2/lot or Half Day	1/lot or Half Day
% Crushed (LA-DOTD TR 306)	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	1/lot or Half Day
Theoretical Max. Grav. G <sub>mm</sub> (aged 1 hr) (LA-DOTD TR 327)	4 from 1 <sup>st</sup> /lot 4 from 2 <sup>nd</sup> /lot	2/lot or Half Day	1/lot or Half Day
G <sub>mb</sub> @ N <sub>initial</sub> (LA-DOTD TR 304)	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	N/A
% G <sub>mm</sub> @N <sub>initial</sub>	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	1/lot or Half Day
G <sub>mb</sub> @ N <sub>max</sub> (LA-DOTD TR 304)	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	N/A
% G <sub>mm</sub> @N <sub>max</sub>	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	1/lot or Half Day
VMA, VFA, G <sub>mb</sub> , and %G <sub>mm</sub> @ N <sub>des</sub> (LA-DOTD TR 304)	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	1/lot or Half Day
Air Voids, % at N <sub>design</sub> (LA-DOTD TR 304)	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/lot or Half Day	1/lot or Half Day
Load Wheel Tester (LWT) AASHTO T324	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	1/10 lots or Week	1/10 lots or Week
Semi Circular Bend (SCB) (LA-DOTD TR330)	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	N/A	N/A
Percent Passing No. 8 and No. 200 Sieves	2 from 1 <sup>st</sup> /lot 2 from 2 <sup>nd</sup> /lot	N/A	N/A
Moisture %, Cold Feed Aggregates (LA- DOTD TR203 or 319)	1/day	1/day	1/day
Tensile Strength Ratio (LA DOTD TR 322)	N/A	1/10 lots or Week	1/10 lots or Week

Table 502-5: Superpave Requirements (12/18), page 283

Replace the existing Table 502-5 in its entirety with the following:

**Table 502-5  
Superpave Requirements**

REQUIREMENTS FOR EXTRACTED ASPHALT CEMENT AND AGGREGATE GRADATION				
U.S. Sieve % Passing	1/2" Nominal	3/4" Nominal	1" Nominal	Mix Tolerance <sup>1</sup> (%)
2"	---	---	---	±4
1 1/2"	---	---	100	±4
1"	---	100	90-100	±4
3/4"	100	90-100	89 Max.	±4
1/2"	90-100	89 Max.	---	±4
3/8"	89 Max.	---	---	±4
No.4	---	---	---	±4
No. 8	45 - 60	40 - 55	23-45	±3
No. 16	---	---	---	±2
No. 30	---	---	---	±2
No. 50	---	---	---	±2
No. 100	---	---	---	±2
No. 200	4.0-10.0	3.0-8.0	2.0-7.0	±0.7
Extracted Asphalt, % (+/- 0.4%)	---	---	---	±2
Mix Temperature	---	---	---	±25°F
PAVEMENT REQUIREMENTS <sup>2</sup>				
Density, Min. % of Theoretical Max. Specific Gravity <sup>2</sup> , LA DOTD TR 327				
Travel Lane Wearing, Binder and Base Courses			92.0	
Shoulders, Bike Paths, and Parking Lots			90.0	
Patching, Widening, and Crossovers			90.0	
Surface Tolerance Variation, inches <sup>3</sup>	Longitudinal	Transverse <sup>3</sup>	Cross Slope <sup>4</sup>	Grade <sup>5</sup>
Roadway Travel Lane Wearing Courses	1/2	1/8	3/8	1/2
Binder Courses	1/4	1/2	3/4	3/4
Shoulder Wearing Course	1/2	3/8	3/4	¾

<sup>1</sup>Job Mix Formula based on validated mix design.

<sup>2</sup>Density requirements for acceptance of roadway cores will be calculated using the  $G_{mb}$  of the core and the representative maximum specific gravity,  $G_{mm}$ , of the LCG approved JMF, in accordance with Subsection 502.13.

<sup>3</sup>For longitudinal surface tolerance requirements, see Subsection 502.10 (b).

<sup>4</sup>Based on 10', using a loft static straight edge and static or electronic level.

<sup>5</sup>Applicable only when profile grade is specified.

**SECTION 502 – SUPERPAVE ASPHALTIC CONCRETE MIXES:**

**Subsection 502.15 – Payment (12/18), page 284**

Replace the existing pay items and pay units with the following:

Item No.	Pay Item	Pay Unit
502-01	Superpave Asphaltic Concrete (Open Ditch Roadways)	Ton
502-02	Superpave Asphaltic Concrete (Curb and Gutter Roadways)	Ton
502-03	Superpave Asphaltic Concrete (Drives, Turnouts and Miscellaneous)	Ton
502-04	Superpave Asphaltic Concrete	Cubic Yard
502-05	Superpave Asphaltic Concrete (in. Thick)	Square Yard

Any other requirement found in Subsection 502.15 not addressed above shall be applicable.

**Table 502-7: Payment Adjustment for Superpave (04/18), page 286**

Replace the existing Table 502-7 in its entirety with the following:

**Table 502-7  
Payment Adjustment for Superpave<sup>1</sup>**

Parameter <sup>3</sup>	Percent of Contract Unit Price/Lot <sup>2</sup>					
	100	98	95	90	80	50 or Remove <sup>4</sup>
Pavement Density: (% Theoretical Max. Gravity)						
Travel Lane	92.0 or above		91.0-91.9		90.0-90.9	Less than 90.0
Shoulder	91.0 or above		90.0-90.9		89.0-89.9	Less than 89.0
Patching, Widening & Joint Repair	90.0 or above			88.1-89.9		Less than 88.0
Surface Tolerance, inches/mile/lot						
-Multi-Lift New Construction, Reconstruction and Overlays more than two lifts	0.0-3.0		3.1-4.0		4.1-6.0	Over 6.0
-One or Two Lift Overlay Construction over cold planed surfaces and two lift overlays over existing surface	0.0-5.0		5.1-6.0		6.1-10.0	Over 10.0
-Single Lift New Construction or Reconstruction	0.0-8.0		8.1-9.5		9.6-11.0	Over 11.0
-Single Lift Overlays over Existing Surfaces	0.0-12.0		12.1-13.5		13.6-15.0	Over 15.0
Aggregate Gradation: Deviations from Job Mix Formula Limits for Extracted Aggregate:						
No. 8 Sieve	0.0 to 1.0	1.1 to 2.0	2.1 to 5.0			Over 5.0
No. 200 Sieve	0.0 to 0.5	0.6 to 1.0	1.1 to 2.0		2.1 to 3.0	Over 3.0
Air Voids, at Design Gyration from Table 502-6	2.5 to 4.5	2.0 to 2.4 and 4.6 to 5.0	1.5 to 1.0 and 5.1 to 5.5		5.6 to 6.0	Less than 1.5 Greater than 6.0

<sup>1</sup> Payment adjustments will be based on specification limit listed in Tables 502-5 and 502-6

<sup>2</sup> Portion of lot placed on the project.

<sup>3</sup> Of the total number of cores per lot. Determine surface tolerance in accordance with Table 502-5, if required.

<sup>4</sup> At the option of LCG.

## **PART VI - RIGID PAVEMENT**

### **SECTION 602 – PORTLAND CEMENT CONCRETE PAVEMENT REHABILITATION:**

#### Subsection 602.09(b)(1) – Partial Depth Patching of Jointed Concrete Pavement; Patching Material; Portland Cement Concrete (05/17), page 377

Delete the contents of this subsection and substitute the following:

- (1) **Portland Cement Concrete:** Portland cement concrete for pavement patching shall be Type E complying with Section 901, except that a Size 89M or 67 coarse aggregate complying with Table 1003-2 shall be used. Use coarse aggregate LA-DOTD Size 89M or ASTM C-33 Size 8 aggregate gradation for patches less than 2-1/2 inches in depth. An approved non-chloride type set-accelerating admixture complying with Subsection 1011.02 may be used in the concrete mix at the dosage recommended by the admixture manufacturer for maximum strength. The set accelerator shall be added at the job site. Steel fibers complying with ASTM A-820, Type I or II shall be added to the mix. The nominal length of the fibers shall not be less than 1” nor greater than 1-1/2”. The fiber shall be deformed and shall have an aspect ratio not less than 40 or greater than 60. The concrete shall contain 85 to 90 lbs. per cubic yard of steel fibers (3.33 lbs./cu. yd. for small quantities). The fibers shall remain packaged until such time as they are included in the mix. Ensure fibers are uniformly distributed throughout the mix without clumping. Continue mixing at the manufacturer’s recommended mixing speed for at least one (1) minute is required after addition of the fibers. Mixer capacity prior to the addition of the fibers shall not exceed 80%. Tightly bound or clumped steel fibers shall be broken up or prevented from entering the mix. The fibers may be screened prior to placing onto the aggregate conveyor belt.

Any other requirement found in Subsection 602.09 not addressed above shall be applicable.

## **PART VII – INCIDENTAL CONSTRUCTION**

### **SECTION 701 – CULVERTS and STORM DRAINS:**

#### Subsection 701.13 – Measurement (10/18), page 412

Delete the contents of this subsection and substitute the following:

**Measurement:** Pipe, both new and re-laid, will be measured in linear feet as follows unless stated otherwise.

- (a) Pipe not confined by fixed structures will be measured by the number of joints at the nominal length of each joint.
- (b) Pipe confined by fixed structures will be measured along the pipe between the termini of pipe in structure walls.



- (c) Pipe confined by a fixed structure on one end and unconfined at the other end will be measured along the pipe from the terminus of pipe in the structure wall to the unconfined end of pipe.
- (d) Fabricating of pipe tees, elbows and other fittings will be measured per each fitting. The length of pipe in such fittings will be included in the pay length measurement of pipes of which they form a part of.
- (e) Excavation required for installation of pipe in such fittings will be measured for payment, except as otherwise specified in Subsection 203.14.
- (f) Furnishing and placing backfill material below natural ground for pipes will not be measured for payment. Backfill material needed to complete backfill of pipe trench when there is not sufficient useable on-site material generated from either the pipe trench excavation or other site sources will be furnished in accordance with Section 203 “Excavation and Embankment” and measured for payment in accordance with Section 203.14. Backfill material needed around pipes that extend above natural ground will be measured and payment will be made under applicable earthwork items. When specified, flowable fill will be measured and paid for in accordance with Section 710. Natural ground is defined as the existing ground surface in the area in which the pipe will be constructed. In the case of an existing open ditch section, natural ground will be considered as the existing ditch surface; i.e. the ditch banks and bottom.
- (g) Plugging and stubbing of pipes will not be measured for payment.
- (h) Cleaning existing pipes will be measured by the length of pipe cleaned and accepted.
- (i) Concrete collars will be measured per each.
- (j) Television inspection of storm drainage lines shall be measured on a linear-foot basis from centerline to centerline of drainage junctions to the nearest tenth of a foot.

**SECTION 702 – MANHOLES, JUNCTION BOXES, CATCH BASINS and END TREATMENTS:**

Subsection 702.01 – Description (07/17), page 415

Delete the contents of this subsection and substitute the following:

This work shall consist of the construction, installation, adjustment and conversion of manholes, junction boxes, catch basins, culvert end treatments and safety ends in accordance with these specifications, and in conformity with lines and grades shown on the plans or established.

Subsection 702.05 – Measurement (07/17), page 418

Delete the contents of this subsection and substitute the following:

New, adjusted and converted junction boxes, manholes, catch basins, culvert end treatments and safety ends will be measured per each.

Excavation and backfill required for installation of these units will not be measured for payment.

Subsection 702.06 – Payment (07/17), page 418

Delete the contents of this subsection and substitute the following:

Payment for new, adjusted and converted junction boxes, manholes, catch basins, culvert end treatments and safety ends will be made at the contract unit price per each which shall include all materials, tools, equipment, labor and incidentals necessary to complete the work.

The concrete in cast-in-place manholes, junction boxes, catch basins, culvert end treatments and safety ends will be identified by lots and shall be subject to pay adjustments in accordance with Table 901-5 and Note “A” therein. Acceptance for each precast concrete manhole, junction box and catch basin lot will be in accordance with the requirements of Standard Plan PC-01. Size, sampling and testing of each concrete lot shall be in accordance with the LA DOTD Materials Sampling Manual.

Payment will be made under:

<b>Item No.</b>	<b>Pay Item</b>	<b>Pay Unit</b>
702-01	Manholes	Each
702-02	Junction Boxes	Each
702-03	Catch Basins	Each
702-04	Conflict Manholes	Each
702-05	Adjusting _____	Each
702-06	Convert _____	Each
702-07	Connect to Existing (Type)	Each
702-08	Cross Drain End Treatment (Type)	Each
702-09	Side Drain End Treatment (Type)	Each
702-10	Cross Drain Safety End (Type)	Each
702-11	Side Drain Safety End (Type)	Each
702-12	Pre-Cast Catch Basins	Each

**SECTION 704 – GUARD RAIL:**

Subsection 704.03(a) – Posts (05/17), page 425

Delete the contents of this subsection and substitute the following:

- (a) Posts: Posts shall be aligned and set plumb. When driving of posts is permitted, the manner of driving shall not damage posts. Post holes shall be backfilled with Class R concrete. When posts are to be placed within existing surfaced areas, surface material shall be replaced in kind or with Class R concrete.

Any other requirement found in Subsection 704.03 not addressed above shall be applicable.

Subsection 704.03(d) – Guard Rail End Treatments (07/17), page 426

Delete the contents within the second paragraph of this subsection and substitute the following:

LCG has pre-approved a list of end treatment systems for selection by the contractor. The contractor shall provide LCG with a copy of the most recent working drawing/shop drawing of the selected guard rail end treatment system prior to installation. The drawings shall provide the details of all components of the guard rail end treatment system and shall state that all details are in compliance with the NCHRP Report 350 or MASH requirements as approved by FHWA.

Subsection 704.05 – Payment (07/17), page 427

Replace the existing pay items and pay units with the following:

<b>Item No.</b>	<b>Pay Item</b>	<b>Pay Unit</b>
704-01-01000	Guard Rail (Single Thrie Beam) (3'-1 ½" Post Spacing)	Linear Foot
704-01-01020	Guard Rail (Single Thrie Beam) (6'-3" Post Spacing)	Linear Foot
704-01-02000	Guard Rail (Double Thrie Beam) (3'-1 ½" Post Spacing)	Linear Foot
704-02-02020	Guard Rail (Single Thrie Beam) (6'-3" Post Spacing)	Linear Foot
704-03-00100	Blocked Out W-Beam Guard Rail	Linear Foot
704-06-00100	Guard Rail Anchor Sections (Trailing End)	Linear Foot
704-06-00200	Guard Rail Anchor Sections (Trailing End) (Single Thrie Beam)	Linear Foot
704-07-00200	Guard Rail Bridge Attachments (Single Thrie Beam)	Linear Foot
704-08-0200	Guard Rail Transitions (Double Thrie Beam)	Linear Foot
704-11-00100	Guard Rail End Treatment (Flared)	Each
704-11-00105	12'-6" Guard Rail End Treatment	Each
704-11-00200	Guard Rail End Treatment (Tangent)	Each
704-11-00300	Guard Rail End Treatment (Bi-Directional)	Each
NS-800-00120	Pier Protection System	Linear Foot

Any other requirement found in Subsection 704.05 not addressed above shall be applicable.

**SECTION 713– TEMPORARY TRAFFIC CONTROL:**

Subsection 713.08(d) – Traffic Control Diary (06/18), page 465

Delete the contents of this subsection and substitute the following:

The TCS shall maintain a project traffic control diary on a daily basis in a bound book which shall consist of utilizing the standard form “Traffic Control Daily Report for Lafayette Consolidated Government” (LCG Form (TCDR 100)). The TCS shall keep the traffic control diary current on a daily basis, and shall sign each daily entry. Entries shall be made in ink and there shall be no erasures or white-outs. Incorrect entries shall be struck out and then replaced with the correct entry. Photographs and videotapes may be used to supplement the written text.

The traffic control diary shall be available at all times for inspection by LCG. The traffic control diary shall become the property of LCG at the completion of the project.

**SECTION 736– TRAFFIC SIGNALS:**

Subsection 736.02 – Materials (01/18), page 545

Delete the contents of this subsection and substitute the following:

Materials shall comply with the following Sections and Subsections:

Usable Soils	203.06
Portland Cement Concrete, Class M <sup>1</sup>	901
Reinforcing Steel	1009
Precast Reinforced Concrete Junction Boxes and Manholes	1016
Manhole Frames and Covers	1018.04
Ground Rods	1018.05, 1108
Rigid Metal Electrical Conduit	1018.09, 1110.05
Electrical Conductors	1018.10
Traffic Signal Heads	1113
Traffic Detectors and Associated Equipment	1116
Traffic Signal Hardware and Equipment	1119
Pedestal Anchor Bolts	805.15, 1013.08
Support Cable	1111.06
Guy Components	1119.15
Wire and Cable	1110.06, 1111, 1112
Electrical Manhole	1114
Poles for Traffic Signal System	1115
Steel Standards and Mast Arms	1115.03

Controllers shall comply with the supplemental specifications entitled “Traffic Signal Control System, Traffic Control Standards”.

Traffic detectors and associated equipment shall be included in the Traffic Signal Control System, Traffic Control Standards, unless otherwise noted on the plans.

**SECTION 742-B– WASTEWATER FORCE MAINS:**

Subsection 742-B.02(b) – Force Main Pipe Materials (12/18), page 626

Add the following contents to this subsection

(b) Force Main Pipe Materials:

(4) Fusible PVC Pipe (F.PVC Pipe)

a. Pipe and Fittings: Made from clean, virgin NSF approved Type I, Grade I PVC conforming to ASTM Resin Specification D1784-65T.

- b. Size/Type: 4"-12"; AWWA C900, SDR 25, 165 psi pressure, NSF approved, 12454 B PVC compound conforming to ASTM Resin Specification D1784.
- 14"-24"; AWWA C905, SDR 25, 165 psi pressure, NSF approved, 12454 B PVC compound conforming to ASTM Resin Specification D1784.
- c. Fittings: Ductile iron and must conform to Section 742-B.02(b)(1)(e).
- d. Provide pipe which is homogeneous throughout, free of voids, cracks, inclusions and other defects, uniform as commercially practical in color, density and other physical properties.
- e. PVC pipe shall be supplied in standard nominal laying lengths of 20 feet. The color of the pipe shall be green or white with green lettering. The pipe shall be marked with the size, material code, dimension ratio (DR), AWWA pressure class and AWWA designation.
- f. Fusion-joined F-PVC pipe shall be Fusible C900 (4"-12") and C905 (14"-24") with the same properties (SDR, coloring, labeling, etc.) as stated above. The chemical compounds for fusion-joined PVC pipe shall be formulated to facilitate the thermal-fusion process.
- g. Fusion-joined F-PVC shall be joined by a pipe manufacturer-certified technician with manufacture approved equipment and shall include a means of logging fusion process data.

Any other requirement found in Subsection 742-B not addressed above shall be applicable.

## **PART VIII – STRUCTURES**

### **SECTION 804 – DRIVEN PILES:**

#### Subsection 804.04 – Pile Driving System Submittal and Approval (07/18), page 665

Add the following subsection:

804.06(d) – Pre-Pile Driving Meeting: A pre-pile driving meeting shall be held on-site no less than forty-eight (48) hours in advance of the pile driving operation. The contractor shall have in attendance or via conference call the contractor's geotechnical engineer who will evaluate the real-time data received from the Pile Driving Analyzer during the driving of the Indicator Piles and make recommendations or adjustments to the driving procedure during the pile driving operation to prevent damage to the proposed driven piles.

**SECTION 805 – STRUCTURAL CONCRETE:**

Table 805-1 – Classes and Uses of Concrete (12/18), page 694

Replace the existing Table 805-1 in its entirety with the following:

**Table 805-1  
Classes and Uses of Concrete**

<b>Concrete Class</b>	<b>Use</b>
A, A(M), or IC(A)(M)	Concrete exposed to sea water, and all other concrete except as listed herein. Cast-in-place bridge superstructure
P, P(M) or IC(P)	Precast-prestressed bridge superstructure, bridge piles
S	Drilled shaft foundations
M <sup>1</sup> , M <sup>2</sup> or M <sup>3</sup>	Minor Structure

Subsection 805.03(a) – Handling and Placing Concrete and Precast Units - General (07/18), page 694

Add the following as the first paragraph:

- (a) General: In preparation for placing concrete, a pre-pour meeting will be held a minimum of forty-eight (48) hours in advance of the scheduled pour. The contractor will have present representatives from the contractor’s quality control testing laboratory, concrete supplier, superintendent, foreman and lead concrete finisher. No work or staging of equipment or material will take place on any cast-in-place concrete until the test specimens have attained a compressive strength of 4,000 psi.

Any other requirement found in Subsection 805.03(a) not addressed above shall be applicable.

**PART IX – PORTLAND CEMENT CONCRETE**

**SECTION 901 – PORTLAND CEMENT CONCRETE:**

Table 901-2 – Portland Cement Concrete Mixture Substitutions (12/18), page 838

Replace the existing Table 901-2 in its entirety with the following:

**Table 901-2  
Portland Cement Concrete Mixture Substitutions**

<b>Structural Class<sup>1</sup></b> (Includes Slope Pavement)	<b>Substitute</b>
A	A(M)
A(M)	No Substitutions
IC(A)(M)	No Substitutions
P(M)	No Substitutions
P	P(M)
IC(P)	No Substitutions
S	No Substitutions
<b>Minor Structure Class<sup>1</sup></b>	
M <sup>1</sup>	A, B, D
M <sup>2</sup>	A, B, D
M <sup>3</sup>	A, B, D
R	A, B, D
<b>Pavement Type<sup>1, 2</sup></b>	
B	D
D	B
E	No Substitutions
X	No Substitutions

<sup>1</sup>The mixture being substituted shall meet the requirements of Table 901-3 and the mix design for its class or type. The compressive strength of the substituted mix shall meet the strength requirements of the original mixture specified.

<sup>2</sup>When justified in writing and approved by LCG, small irregular areas of paving projects using Types B, D, or X concrete may be substituted with Class A concrete.

Subsection 901.12 – Acceptance and Payment Schedule (05/17), page 849

Delete the contents of this subsection and substitute the following:

ACCEPTANCE AND PAYMENT SCHEDULE. Acceptance and payment schedules in Table 901-4 will apply to all structural portland cement concrete. Acceptance and payment schedules in Table 901-5 will apply to all minor structure portland cement concrete. Acceptance and payment schedules for portland cement concrete pavement are shown in Table 601-1 of Section 601.

These schedules do not apply to precast concrete.

Table 901-3 – Master Proportion Table for Portland Cement Concrete (07/18), page 850

Replace the existing Table 901-3 in its entirety with the following:

**Table 901-3  
Master Proportion Table for Portland Cement Concrete**

Class or Type of Concrete	Average Compressive Strength, psi at 28 days	Grade Of Coarse Aggregate (l)	Minimum Bags of Cement of 94 lbs. each to one Cu. Yd. of Concrete	Maximum Water per Sack of Cement (a) (Gallons)	Air Content (Percent by Volume) (d)(c)	Slump Range, inches			Surface Resistivity (k) (kΩ-cm)
						Non-Vibrated Placing (n)	Vibrated Placing Paving (b)	Slip Form Placing	
<b>STRUCTURAL CLASS (Includes Slope Pavement)</b>									
A(M)	4,500	57M, 67, B, D	6.0	6.0	2 - 7	2 - 5	2 - 4(n)	N.A.	22
A	4,500	57M, 67, 89M <sup>(m)</sup> , B, D	6.0	6.0	2 - 7	2 - 5	2 - 4(n)	1 - 2.5	22
IC(A)(M)	4,500	57M, 67, 89M <sup>(m)</sup> , B, D	6.0	6.0	2 - 7	2 - 5	2 - 4(n)	1 - 2.5	22
P(M)	6,000(e)	57M, 67, 89M <sup>(m)</sup> , B, D	7.0	5.0	2 - 7	N.A.	2 - 6(g)	N.A.	22
P	5,000(e)	57M, 67, B, D	6.5	5.0	2 - 7	N.A.	2 - 6(g)	N.A.	22
IC(P)	6,000(e)	57M, 67, 89M <sup>(m)</sup> , B, D	7.0	5.0	2 - 7	N.A.	2 - 6(g)	N.A.	22
S	4,500	B, D	7.0	6.0	2 - 7	6 - 8	N.A.	N.A.	22
<b>MINOR STRUCTURE CLASS (h)</b>									
M <sup>1</sup>	3,500	57M, 67, 89M <sup>(m)</sup> , B, D	5.5	6.0	2 - 7	2 - 5	2 - 4	1 - 2.5	N.A.
M <sup>2</sup>	3,000	57M, 67, 89M <sup>(m)</sup> , B, D	5.0	6.0	2 - 7	2 - 5	2 - 4	1 - 2.5	N.A.
M <sup>3</sup>	4,500	57M, 67, 89M <sup>(m)</sup> , B, D	5.8	6.0	2 - 7	2 - 5	2 - 4(n)	1 - 2.5	N.A.
R	2,000	57M, 67, B, D	4.5	8.0	2 - 7	2 - 5	1 - 3	N.A.	N.A.
<b>PAVEMENT TYPE</b>									
B	4,000	B, D	5.8	6.0	2 - 7	N.A.	2 - 4	1 - 2.5	N.A.
D	4,000	B, D	5.4	6.0	2 - 7	N.A.	2 - 4	1 - 2.5	N.A.
E	4,000(f) (i)	57M, 67, 89M <sup>(m)</sup> , B, D	6.5	6.0	2 - 7	N.A.	2 - 4	1 - 2.5	N.A.
X	5,000(j)	57M, 67, B, D	6.0*	6.0	2 - 7	N.A.	2 - 4	1 - 2.5	N.A.

\*LCG Will allow a lesser cement content if proof can be given that concrete will meet 700 P.S.I. Modulus of Rupture

- (a) The maximum water-cement ratio (gal/sack) shall be reduced 5% when a water-reducing admixture is used and 10% when an air-entraining admixture or air-entraining and water reducing admixtures are used
- (b) Also slump range for other concrete placed by extruded methods.
- (c) Refer to Subsection 901.08(b)
- (d) Total air content ranges when air entrainment is allowed or specified.
- (e) Minimum compressive strength required.
- (f) Grade 89M or 67 shall be used for partial depth patching in accordance with Table 1003-2.
- (g) No more than a 2" slump differential for any designated pour. Allow 8-inch maximum slump if water reducers are used
- (h) See Subsection 901.08(a) for allowable types of cement.
- (i) For use in full and partial depth patching.
- (j) Average flexural strength for pavement type concrete shall be 700 psi.
- (k) Value based on a 4-inch x 8 inch test cylinder tested at 56 days of age.
- (l) Combined aggregate gradation shall comply with the requirements of Section 1003.02(c).
- (m) Grade 89M Course aggregate shall be used only when specified or permitted.
- (n) Allow 8-inch maximum slump if water reducers are used.

**NOTE:**

- M<sup>1</sup> - To be used for all curbs and driveways.
- M<sup>2</sup> - To be used for pre-cast manholes, catch basins, junction boxes, safety ends, sidewalks and all other incidental concrete work.
- M<sup>3</sup> - To be used for pre-cast manholes, catch basins, junction boxes, safety ends and other pre-cast minor structures.
- N.A. - Not Applicable



Table 901-4 – Acceptance and Payment Schedules Cast-In-Place Structural Concrete (12/18),  
page 851

Replace the existing Table 901-4 in its entirety with the following:

**Table 901-4  
Acceptance and Payment Schedules - Structural Concrete**

Class A(M), A, IC(A)(M), P(M) <sup>4</sup> , P <sup>4</sup> , IC(P) <sup>4</sup> and S		
Compressive Strength	Surface Resistivity (kΩ-cm) (4 x 8 Test Cylinders)	Percent of Contract Price <sup>1</sup>
4500 & above	22.0 & Above	100
4301-4499	20.0 – 21.9	98
4000-4300	18.0 – 19.9	90
below 4000	Below 18.0	50 or remove and replace <sup>2,3</sup>

<sup>1</sup>When concrete is part of an item or not a direct pay item, lot sizes, sampling and acceptance testing for the required quantities will be in accordance with Subsection 805.18. The value for each cubic yard required will be assessed at \$350 for the purpose of applying payment adjustment percentages. The amount of payment adjustment for the quantity of concrete involved will be deducted from payment. Acceptance and payment schedules shall apply to the contract item itself for cast-in-place piling.

<sup>2</sup>When the average compressive strength of **any batch in a lot** is less than the specified strength a prompt investigation will be made. If concrete is allowed to remain in place by LCG, payment will be based on 50 percent of the contract price unless associated cylinders were improperly molded or tested and investigative core strength results are above design strength ( $f'_c$ ). If concrete is not allowed to remain in place, the identifiable deficient areas shall be removed and replaced at no direct pay.

<sup>3</sup>When the average surface resistivity is less than 18.0 kΩ-cm using 4-inch x 8-inch test cylinders, an investigation will be made. If concrete is allowed to remain in place by LCG, payment will be based on 50 percent of the contract price. Any cores obtained in these investigations are for evaluation purposes only. Payment will be based on original acceptance samples.

<sup>4</sup>Class P(M), P and IC(P) shall be measured for resistivity values only for acceptance and payment. No adjustment in pay will be made for these two classes of structural concrete. All test cylinders must meet or exceed the required concrete compressive strength. All other structural concrete classes shall be measured for compressive strength and resistivity values for acceptance and payment.

**PART X - MATERIALS**

**SECTION 1003 – AGGREGATES:**

Table 1003-2 – Gradation for Portland Cement Concrete Aggregates, Uncrushed (12/18)  
page 875

Replace the existing Table 1003-2 in its entirety with the following:

**Table 1003-2**  
**Gradation for Portland Cement Concrete Aggregates, Uncrushed**

<b>U.S. Sieve</b>	<b>Size 57M</b>	<b>Size 89M</b>	<b>Size 67</b>
2-1/2"	---	---	---
2"	---	---	---
1-1/2"	100	---	---
1"	90-100 <sup>1</sup>	---	100
3/4"	---	100	90-100
1/2"	25-60	90-100	---
3/8"	---	---	20-55
No. 4	0-10	15-60	0-10
No. 8	0-5	0-30 <sup>2</sup>	0-5
No. 16	---	0-5	---
No. 200	0-1	0-1	0-1

<sup>1</sup>ASTM C33 No. 57 designation required 95-100.

<sup>2</sup>ASTM C33 No. 89 designation required 0-15.

Any other requirement found in Subsection 1003.02 not addressed above shall be applicable.

**SECTION 1016 – CONCRETE PIPE and PRECAST REINFORCED CONCRETE DRAINAGE UNITS:**

Subsection 1016.01 – General (06/17), page 959

Delete the contents of this subsection and substitute the following:

**GENERAL:** This specification covers the manufacture of precast reinforced concrete box culverts, manhole sections, catch basins, junction boxes, safety ends and concrete pipe. Concrete pipe and precast reinforced concrete drainage units shall be as listed in the LA DOTD AML and from Certified Plants. The fabrication procedure will require that the walls and bases of these structures be poured monolithically (one pour) with smooth wall faces. All shop drawings must be submitted for approval by LCG and the Consultant before fabrication can begin. Any deviation from either the LCG Precast Details or the specific design structure details contained within the plans will require design calculations, signed and stamped by a Professional Engineer registered in the State of Louisiana be submitted for approval by LCG and its Consultant before fabrication can begin.

Subsection 1016.01(h)(1) Rubber Gaskets – General (11/17), page 960

Replace AASHTO M 315 with ASTM C443 for compliance of rubber gaskets.

Any other requirement found in Subsection 1016.01 not addressed above shall be applicable.

**SECTION 1018 – MISCELLANEOUS MATERIALS:**

Subsection 1018.31(a) – Flexible Revetment – General (07/18), page 984

Delete the contents of this subsection and substitute the following:

- (a) General: Flexible Revetment (pump filled concrete articulating block mat) shall consist of an approved unreinforced concrete liner made of double layer synthetic forms, cabled in two directions between the two layers of fabric. A minimum of two cables shall be included in the transverse direction of the mat and shall pass through each form compartment. A minimum of one cable shall be included in the longitudinal direction of the mat and shall pass through each form compartment. Forms shall be filled with a fine aggregate concrete mix meeting the mix design specified in Section 712.03(f).

Any other requirement found in Subsection 1018.31 not addressed above shall be applicable.

**PART XIV – NON-STANDARD ITEMS**

**SECTION 1401 – NS DETECTABLE WARNING SYSTEM RETROFIT FOR CURB RAMPS:**

Subsection 1401.01 – General (06/18), page 1121

Delete Item No. NS-MSA “Detectable Warning System Retrofit for Curb Ramps” in its entirety and replace with the following item: NS-1401-00080 “Detectable Warning System Retrofit for Curb Ramps”. Pay unit remains the same.

**SECTION 1402 – NS TEMPORARY CONSTRUCTION ENTRANCE**

Subsection 1402.01 – General (06/18), page 1122

Delete Item No. NS-MSA “Temporary Construction Entrance” in its entirety and replace with the following item: NS-1402-00240 “Temporary Construction Entrance”. Pay unit remains the same.

**SECTION 1403 – NS CLEANING EXISTING DITCHES**

Subsection 1403.01 – General (06/18), page 1123

Delete Item No. NS-200 “Cleaning Existing Ditches” in its entirety and replace with the following item: NS-1403-00020 “Cleaning Existing Ditches”. Pay unit remains the same.

**SECTION 1404 – NS DOUBLE APPLICATION LIME TREATMENT**

Subsection 1404.01 – General (06/18), page 1125

Delete Item No. NS-300 “Lime” in its entirety and replace with the following item: NS-1404-00020 “Lime”. Pay unit remains the same.

Delete Item No. NS-300 “Double Application Lime Treatment” in its entirety and replace with the following item: NS-1404-00040 “Double Application Lime Treatment”. Pay unit remains the same.

**SECTION 1405 – NS GEOGRID**

Subsection 1405.04 – Measurement and Payment (06/18), page 1127

Delete Item No. NS-300 “Geogrid Biaxial” in its entirety and replace with the following item: NS-1405-00100 “Geogrid Biaxial”. Pay unit remains the same.

Delete Item No. NS-300 “Geogrid Triaxial” in its entirety and replace with the following item: NS-1405-00200 “Geogrid Triaxial”. Pay unit remains the same.

**SECTION 1406 – NS RAISED ASPHALTIC CONCRETE MEDIAN**

Subsection 1406.01 – General (06/18), page 1128

Delete Item No. NS-500 “Raised Asphaltic Concrete Median (4” Thick)” in its entirety and replace with the following item: NS-1406-00120 “Raised Asphaltic Concrete Median (4” Thick)”. Pay unit remains the same.

Delete Item No. NS-500 “Raised Asphaltic Concrete Median (6” Thick)” in its entirety and replace with the following item: NS-1406-00140 “Raised Asphaltic Concrete Median (6” Thick)”. Pay unit remains the same.

**SECTION 1407 – NS SAWING and SEALING LONGITUDINAL and TRANSVERSE JOINTS in ASPHALTIC CONCRETE OVERLAY, and SAW CUTS in ASPHALTIC CONCRETE LIFTS**

Subsection 1407.01 – General (06/18), page 1130

Delete Item No. NS-500 “Sawing and Sealing Longitudinal Joints in Asphaltic Concrete Overlay” in its entirety and replace with the following item: NS-1407-00100 “Sawing and Sealing Longitudinal Joints in Asphaltic Concrete Overlay”. Pay unit remains the same.

Delete Item No. NS-500 “Sawing and Sealing Transverse Joints in Asphaltic Concrete Overlay” in its entirety and replace with the following item: NS-1407-00200 “Sawing and Sealing Transverse Joints in Asphaltic Concrete Overlay”. Pay unit remains the same.

Delete Item No. NS-500 “Sawcuts Asphaltic Concrete Lifts” in its entirety and replace with the following item: NS-1407-00300 “Sawcuts in Asphaltic Concrete Lifts”. Pay unit remains the same.

**SECTION 1408 – NS SAWCUTTING ASPHALTIC CONCRETE PAVEMENT**

Subsection 1408.01 – General (06/18), page 1131

Delete Item No. NS-500 “Sawcutting Asphaltic Concrete Pavement” in its entirety and replace with the following item: NS-1408-00340 “Sawcutting Asphaltic Concrete Pavement”. Pay unit remains the same.

**SECTION 1409 – NS SAWCUTTING ASPHALTIC CONCRETE PAVEMENT OVER PORTLAND CEMENT CONCRETE PAVEMENT**

Subsection 1409.01 – General (06/18), page 1132

Delete Item No. NS-500 “Sawcutting Asphaltic Concrete Pavement Over Portland Cement Pavement” in its entirety and replace with the following item: NS-1409-00360 “Sawcutting Asphaltic Concrete Pavement Over Portland Cement Concrete Pavement”. Pay unit remains the same.

**SECTION 1410 – NS MICRO SURFACING AGGREGATE and MICRO SURFACING ASPHALT (POLYMER MODIFIED EMULSION)**

Subsection 1410.08 – Payment (06/18), page 1144

Delete Item No. NS-500 “Micro Surfacing Aggregate” in its entirety and replace with the following item: NS-1410-00100 “Micro Surfacing Aggregate”. Pay unit remains the same.

Delete Item No. NS-500 “Micro Surfacing Asphalt (Polymer Modified Emulsion)” in its entirety and replace with the following item: NS-1410-00200 “Micro Surfacing Asphalt (Polymer Modified Emulsion)”. Pay unit remains the same.

Delete Item No. NS-500 “Micro Surfacing Mineral Filler” in its entirety and replace with the following item: NS-1410-00300 “Micro Surfacing Mineral Filler”. Pay unit remains the same.

**SECTION 1411 – NS SAWCUTTING PORTLAND CEMENT CONCRETE PAVEMENT**

Subsection 1411.01 – General (06/18), page 1145

Delete Item No. NS-600 “Sawcutting Portland Cement Concrete Pavement” in its entirety and replace with the following item: NS-1411-00100 “Sawcutting Portland Cement Concrete Pavement”. Pay unit remains the same.

## **SECTION 1412 – NS FLEXIBLE POST TRAFFIC DELINEATORS**

### Subsection 1412.01 – General (06/18), page 1146

Delete Item No. NS-700 “Flexible Post Traffic Delineators” in its entirety and replace with the following item: NS-1412-00100 “Flexible Post Traffic Delineators”. Pay unit remains the same.

Delete Item No. NS-700 “Replacement of Flexible Post Traffic Delineators” in its entirety and replace with the following item: NS-1412-00120 “Replacement of Flexible Post Traffic Delineators”. Pay unit remains the same.

## **SECTION 1413 – NS WHITE PREFORMED HEAT-APPLIED RETROFLECTIVE THERMOPLASTIC STRIPING MATERIAL**

### Subsection 1413.09 – Measurement and Payment (06/18), page 1150

Delete Item No. NS-700 “White Preformed Heat-Applied Retroreflective Thermoplastic Striping Materials (Lines)” in its entirety and replace with the following item: NS-1413-00200 “White Preformed Heat-Applied Retroreflective Thermoplastic Striping Materials (Lines)”. Pay unit remains the same.

Delete Item No. NS-700 “White Preformed Heat-Applied Retroreflective Thermoplastic Striping Materials (Symbols)” in its entirety and replace with the following item: NS-1413-00220 “White Preformed Heat-Applied Retroreflective Thermoplastic Striping Materials (Symbols)”. Pay unit remains the same.

## **SECTION 1414 – NS DYNAMIC MESSAGE SIGN UNIT**

### Subsection 1414.01 – General (06/18), page 1152

Delete Item No. NS-713 “Dynamic Message Sign Unit” in its entirety and replace with the following item: NS-1414-00001 “Dynamic Message Sign Unit”. Pay unit remains the same.

## **SECTION 1415 – NS NAVIGATIONAL CLEARANCE GAUGE (MOUNTED)**

### Subsection 1415.05 – Payment (06/18), page 1153

Delete Item No. NS-729 “Navigational Clearance Gauge (Mounted)” in its entirety and replace with the following item: NS-1415-00001 “Navigational Clearance Gauge (Mounted)”. Pay unit remains the same.

## **SECTION 1416 – NS NAVIGATIONAL LIGHTING (TEMPORARY)**

### Subsection 1416.05 – Payment (06/18), page 1154

Delete Item No. NS-730 “Navigational Lighting (Temporary)” in its entirety and replace with the following item: NS-1416-00001 “Navigational Lighting (Temporary)”. Pay unit remains the same.

## **SECTION 1417 – NS VIBRATION MONITORING**

Replace the entire Section 1417 with the following: (12/18), page 1155

### **Section 1417 NS Vibration Monitoring**

1417.01 DESCRIPTION. This work consists of monitoring the ground or structure vibration caused by pile driving operations; heavy construction equipment operations, structure demolition, and other known sources of vibrations during construction activities. Locations and structures to be monitored shall be in accordance with the plan details, and the specifications. It shall include all labor, materials, and equipment necessary to complete the work.

1417.02 MATERIALS. Monitoring equipment shall directly measure particle velocity (rate of ground movement) in three mutually perpendicular directions (longitudinal, transverse and vertical) and be capable of recording the vector sum of these three measurements to an accuracy of 0.01 in/sec. In addition, the monitoring equipment shall be capable of producing a continuous written record of all measurements taken and the location of each station shall be recorded.

1417.03 VIBRATION MONITORING PLAN. When an item is included in the Contract for vibration monitoring, submit a Vibration Monitoring Plan to the Project Engineer for review at least 30 calendar days prior to commencing pile driving activities or construction activities that may produce vibrations. Describe how vibration monitoring will be performed, any equipment to be used, the schedule, and how the data and information will be reported. Comply with the plans for the limits and features to be monitored. Plan limits may be extended and features added by the Project Engineer. Show survey limits and features to be monitored.

Do not begin pile driving operations until acceptance of the Vibration Monitoring Plan.

Upon completion of pile driving operations, submit to the Project Engineer for record a comprehensive report for each feature monitored during the pile driving operations.

1417.04 PRE-CONSTRUCTION SITE SURVEY. Submit to the Project Engineer for review the Pre-construction Site Survey. Do not begin pile driving activities or construction activities that may produce vibrations until acceptance of the survey.

1417.05 VIBRATION MONITORING REPORT. Submit to the Project Engineer for review the Vibration Monitoring Report in accordance with 804.12.7 upon completion of pile driving activities or construction activities that may cause vibrations. Acceptance of the work will be contingent on acceptance of the Vibration Monitoring Report.

1417.06 POST-CONSTRUCTION SITE SURVEY. Submit to the project engineer for review the post-construction site survey upon completion of pile driving activities or construction activities which may create vibrations. Acceptance of the work will be contingent on acceptance of the post-construction site survey.

**1417.07 VIBRATION MONITORING.** Perform vibration monitoring in and around sensitive features as indicated in the Vibration Monitoring Plan, the Contract or as directed by the Project Engineer. Sensitive features may include archaeological sites, historic features, utilities, instruments, structures, etc.

Use the services of a testing lab and a vibration specialist engineer, acceptable to the Project Engineer to develop the vibration monitoring plan and conduct seismic monitoring of vibrations during pile driving and other heavy equipment operations in areas that are not normally subjected to such operations. Render complete reports and interpretations of the data obtained including the possible effects of the measured vibrations on adjacent and surrounding structures. Acquire baseline vibration data for a period of at least 24 hours prior to beginning construction activities.

Perform vibration monitoring during Test Pile and Indicator/Production Pile driving operations to verify that vibrations from construction activities are below required threshold values. Modify construction methods as necessary to stay below threshold values.

Peak particle velocity (PPV) is the maximum rate of change of position of a soil particle with respect to time, measured on the ground. The velocity magnitude is given in units of inches per second.

Frequency of vibration is the number of oscillations that occur in 1 second. The frequency units given are in hertz (cycles per second).

Provide seismic monitoring of vibrations during pile driving and other heavy equipment operations in areas subjected to such operations as specified on the plans. Use an independent third party Louisiana registered professional engineer to provide complete reports and interpretations of the data obtained including the possible effects of the measured vibrations on adjacent and surrounding structures.

**1417.08 EQUIPMENT AND INSTRUMENTATION.** Provide seismograph(s) with self-triggering units(s), accepted by the Project Engineer, and capable of recording three mutually perpendicular components (longitude, transverse, and vertical) of ground motion time histories, in terms of particle velocity. Provide units capable of reporting the frequency as well as the peak values for all vibration time histories.

The seismographs shall be Type I waveform recorders. It provides a particle velocity wave form or time history of the recorded event, sometimes in conjunction with peak event information. Independent chart recorders with separate motion transducers can be used in place of "stand-alone" monitors like seismographs when accepted by the Project Engineer.

**1417.09 NUMBER AND LOCATION.** Place seismographs and ground transducers in the ground outside and adjacent to the structure(s) or feature(s) to be monitored on the side facing the construction activity. Monitor structure(s) in accordance with the Vibration Monitoring Plan, the Contract, and as directed by the Project Engineer. Exact transducer number and locations shall be as directed by the Louisiana registered professional engineer.

Vibration monitoring distance (VMD) is the distance from the construction activity to the limits of monitoring. Comply with the limits shown in Table 1417-1, the Contract, and the Vibration Monitoring Plan.



Table 1417-1  
Vibration Monitoring Distance (VMD)

Maximum Distance	Receptor
200 feet	Residential and Commercial Structures
500 feet	Historical Structures, Industrial Structures, Sensitive Features, Settlement Sensitive Ground, Utilities, Instruments, & Archeological Sites

The number of seismographs required is dependent on the specific site. As a minimum, two seismographs of Type I are required on site. One seismograph will be used on site with one or more held in reserve for use at a specific complaint or potential complaint location.

1417.10 TRANSDUCER ATTACHMENT (COUPLING). Place transducers on the measurement surface and cover with heavy sandbags as directed by the Louisiana registered professional engineer.

1417.11 PARTICLE VELOCITY CONTROLS AND THRESHOLD LIMITS. Limit ground particle velocity so that structural damage due to pile driving is avoided. Measure Peak Particle Velocity (PPV) with instrumentation and methods described 1417.08. Peak particle velocity shall satisfy the following controls:

- (1) Limit PPV to values less than a specific control limit at the nearest structure, which is summarized in Table 1417-2 for different types of structures.
- (2) Record particle velocities in three mutually perpendicular axes. The maximum allowable peak particle velocity reading will be that of any of the three axes.

Table 1417-2  
Limiting Particle Velocity

Structure and Condition	Limiting Particle Velocity (in/sec)
Historic Structures, Sensitive Features, Sensitive Instruments, and Sensitive Utilities	0.1
Residential Structures	0.5
Commercial and Industrial Structures	2.0
Bridges	2.0

1417.12 MONITORING GROUND VIBRATIONS. Monitor ground vibrations at specified locations. All three components (longitudinal, transverse, and vertical) of particle velocity shall be measured and recorded. Background vibrations due to passing traffic or other activities should also be monitored prior to pile driving activities to establish a baseline.

Maintain a vibration monitoring log for the full length of pile penetration or heavy equipment operation and submit daily reports to the Project Engineer on vibrations measured.

1417.13 APPLICATION OF THE PARTICLE VELOCITY CONTROL. If 80percent of the limiting particle velocity shown in Table 1417-2 for the structure monitored is exceeded for any single axis, cease pile driving operations or the construction activity causing vibration, and notify the Project Engineer with a written report. Include in the report driving/operation information, vibration measurement data, and the proposed corrective action. The Project Engineer will make a determination before proceeding with pile driving operations or heavy equipment operation.

If 100 percent of the limiting particle velocity shown in Table 1417-2 for the structure monitored is exceeded or more, cease operations and notify the Project Engineer with a written report. Include in the report driving/operation information, vibration measurement data, and the proposed corrective action. Evaluate alternative pile installation equipment and techniques as well as having equipment operation in case corrective/mitigation action is not effective. Adjusting pile driving operations will be at no additional cost or time to the Department.

Do not commence with pile driving operations until the Project Engineer acknowledges in writing that a pile installation change has been implemented. Modify the Pile Installation Plan accordingly.

Notify the Project Engineer immediately if visual inspection indicates that damage to structure(s) may be occurring due to vibrations, or if property owners claim damage due to vibrations. Additional vibration monitoring or construction site survey may be required.

1417.14 VIBRATION MONITORING REPORT. Submit to the Project Engineer a digital copy and hard copy of a comprehensive report for each structure and feature monitored. Include in each report a discussion of the following:

- (1) Site conditions and descriptions, including a site map drawn to scale showing the location of the structures and/or sensitive features and the location of the construction activity.
- (2) Field procedures and equipment used, including seismograph manufacturer, model and unit serial number.
- (3) The name of the seismograph operator.
- (4) A digital and hard copy of all ground vibration time histories, in units of velocity.
- (5) A record summary of the maximum value of ground vibration in any one of three directions measured (longitudinal, transverse, or vertical), the frequency associated with the maximum value in hertz, and the measured distance between the seismograph and the construction activity.
- (6) Construction activities including construction equipment used, environmental conditions such as temperature and relative humidity ranges during construction, and other activities that are not construction related (train activity, heavy traffic, flooding, etc.).
- (7) Analysis of results with conclusions and recommendations.
- (8) Any additional inclusions to the report(s) requested by the Project Engineer.

1417.15 ARCHIVING. Maintain copies of all submittals for at least 5 years, or until all pending litigation is completed.

1417.16 MEASUREMENT. Vibration monitoring will be measured per day. A day is defined as a day in which the contractor drives piles for at least 6 hours.

1417.17 PAYMENT. Payment will be made at the contract unit price which includes all materials, equipment and labor necessary to complete the item.

(a) Vibration Monitoring. Payment for vibration monitoring will be made at the contract unit price which includes monitoring service, reporting and documentation of results, equipment, material, labor, and time necessary to complete the item.

<b>Item No.</b>	<b>Pay Item</b>	<b>Pay Unit</b>
NS-1417	Vibration Monitoring	Each

**SECTION 1418 – NS RAISING and/or UNDERSEALING CONCRETE SLABS**

Subsection 1418.06 – Measurement and Payment (06/18), page 1160

Delete Item No. NS-602 “Raising and/or Undersealing Concrete Slabs (Polyurethane)” in its entirety and replace with the following item: NS-1418-00100 “Raising and/or Undersealing Concrete Slabs (Polyurethane)”. Pay unit remains the same.

**SECTION 1419 – NS POLYESTER CONCRETE BRIDGE DECK OVERLAY**

Subsection 1419.05 – Payment (06/18), page 1170

Delete Item No. NS-805 “Polyester Concrete Bridge Deck Overlay” in its entirety and replace with the following item: NS-1419-00001 “Polyester Concrete Bridge Deck Overlay”. Pay unit remains the same.

Delete Item No. NS-805 “Polyester Concrete Placement” in its entirety and replace with the following item: NS-1419-00002 “Polyester Concrete Placement”. Pay unit remains the same.

**PART XV – APPENDIX**

**Table of Contents**

Replace the existing Table of Contents in its entirety with the following: (12/18), page 1171

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**APPENDIX D (Reserved)**

Add the following as Appendix D (12/18), page 1178

**LCG/LUS STREET LIGHT 72-HOUR BURN TEST PROCEDURE  
Arterial and Collector Streets**

1. Contractor will construct and install street lighting on LCG Public Works CID projects per plans and specifications (Lafayette City-Parish Consolidated Government / Lafayette Utilities System Street Lighting Standards guide).
2. Upon street lighting system installation and when general contractor desires 72 hour burn test contractor notifies engineer of record (consultant or Public Works engineer if designed in house) that street lighting test period be scheduled.
3. Engineer proceeds to have an electrical engineer licensed in the State of Louisiana field inspect the system to ensure street lighting was installed in accordance with the project plans and specifications. A written report is required stating installation approved or rejected. Any minor punch list item(s) needing correction is listed on the report.
4. If installation is approved engineer of record provides written request to Public Works project engineer street light system is ready to be energized system and that test period can commence. Copy of the electrical engineer report must be included with the request. Main breaker must be off (contractor’s responsibility) prior to LUS connecting power.
5. Public Works will notify LUS Power Marketing to hook up system for test.
6. LUS Power Marketing hooks up and notifies Public Works burn test can proceed.
7. 72-hour burn test can proceed. Notification chain: Public Works Engineer of Record →General Contractor. Public Works must be notified when burn test commences.
8. Public Works/LUS inspects system after 72 hour period with Public Works notifying engineer of record that test passed or failed. If test passes contractor returns to normal operation with breaker in off position; if test fails contractor corrects problem with repeat of above steps.
9. When LCG accepts and opens road for public use Public Works will contact LUS to put street lights in service.