

ADDENDUM NO. 2
October 16, 2017

TO: PLANS AND SPECIFICATIONS FOR

THE CROSSROADS, SOUTHTOWN ESTATES AND RUSTIC OAKS SUBDIVISIONS
STORMWATER AND STREET IMPROVEMENTS
PROJECT NO. 2015-201-1

Bidders are hereby informed that the construction plans and/or specifications are modified as follows:

PLANS

Any reference to 4" aggregate base under the asphalt pavement shall be changed to 3". The bid proposal correctly lists the aggregate base as 3" thick but several locations on the plans call out 4".

BID PROPOSAL

The following changes shall be made to the bid proposal forms:

Item No. 27 – 18" RCP Pipe

Change quantity from 1,533.5 LF to 1,449 LF

Item No. 61 – Detention Basin Fence

This item is an addition and shall be 1 Lump Sum.

A new bid proposal form is included with this addendum and shall be used when submitting a bid.

JOB SPECIAL PROVISIONS

1. The following information shall be added to JSP **P. DRAINAGE**:

2.3 Pipe alternates will be allowed in accordance with the "Pipe Notes" on Sheet C0.03 in the plans. The contractor shall verify that the hydraulic design of the alternate pipes will not be compromised.

2. The following information shall be added to JSP G. ROOF DRAINS AND FOUNDATION DRAINS:

2.1 Connecting drains to a stormwater pipe shall be done with an Inserta-Tee brand connection. Information can be found at www.insertatee.com.

3. The following information shall be added to JSP AA. REMOVAL AND REPLACEMENT OF POOR SUBGRADE MATERIAL:

2.2 The Geotextile shall be a Mirafi 180N or equivalent material.

4. The following change shall be made to JSP AA. REMOVAL AND REPLACEMENT OF POOR SUBGRADE MATERIAL:

Basis of Payment for Subgrade Stabilization shall be per Square Yard, NOT Cubic Yard.

5. The following Job Special Provisions shall be added:

SS. DETENTION BASIN

1.0 Description. The detention basin behind 3418 & 3420 Horseshoe Road shall be constructed in a manner similar to a small pond according to the lines and grades shown on the plans or as modified in the field by the Engineer.

2.0 Construction Requirements. The pond shall be constructed with a standard keyway under the entire berm section. The keyway shall be a minimum of 3 feet deep and 4 feet wide. The fill placed in the keyway shall be compacted to a minimum of 95% of Standard Proctor ASTM D698 with a moisture of -2% to +4% of optimum. Compaction Testing is at the cost of the Contractor.

3.0 Basis of Payment: All costs associated with the construction of the detention basin shall be considered completely covered by "Earthwork".

TT. DETENTION BASIN FENCE

1.0 Description. This work shall consist of installing a 6' tall chain link fence around the perimeter of the detention basin.

2.0 Construction Requirements.

2.1 All requirements for the fence shall conform to Sec. 607.10 of the Missouri Standard Specifications for Highway Construction.

2.2 Section 607.10.3.1 be removed and replaced as follows: The contractor shall fill, cut or trench where necessary to produce a smooth and uniform ground surface so the bottom of the fabric is no more than 3 inches above the finished ground line except at the six-foot-wide swing gate, the top gate shall remain level with the top of the fence. All posts shall be set plumb, true to line and grade and in concrete. Concrete for the footings shall be Class B concrete or a commercial mixture in accordance with Sec 501. The concrete footing shall be a uniform thickness around the post and shall have a cone or dome shaped top. At the option of the contractor, line posts may be set in concrete or quick-setting polyurethane foam in accordance with Sec 903.3.1.2. Posts damaged during installation shall be removed and replaced at the contractor's expense.

2.3 A 6' wide swing gate shall be installed at the overflow area of the berm or in another location as directed by the engineer.

3.0 Method of Measurement. No measurements will be made and contract quantity will be used.

4.0 Basis of Payment. All costs incurred for equipment, labor, materials or time required to fulfill this provision, shall be considered completely covered by the contract unit price for "Detention Basin Fence", per lump sum.

UU. LOW-TRACKING OR NON-TRACKING TACK COAT NJSP-15-15C

1.0 Description. This work shall consist of preparing and treating an existing bituminous or concrete surface with a low-tracking or non-tracking tack coat material prior to an asphalt overlay in accordance with Section 407, except as revised by this specification.

2.0 Material Requirements. All material shall be in accordance with Section 1015 of the Standard Specifications and specifically as follows:

Emulsion Properties for Low-Tracking or Non-Tracking Tack Coat			
Test on Emulsion	Method	Min	Max
Viscosity, Saybolt Furol @ 25°C (77°F), s	AASHTO T 59	20	100
Particle Charge Test		--	
Storage Stability Test ^a , 24 hr, percent	AASHTO T 59	--	1.0
Sieve Test, percent	AASHTO T 59	--	0.30
Residue by Distillation, percent	AASHTO T 59	50	
Oil Distillate by Distillation, percent	AASHTO T 59	--	1
Test on Residue from Distillation			
Softening Point, °F	AASHTO T 53	149	200
Penetration 25°C, 100 g, 5 s	AASHTO T 49	--	40
G* / sin delta @ 76° C – 10 rad/sec, kPa	AASHTO T 315	1.0	--
Solubility in Trichloroethylene ^b , %	AASHTO T 44	97.5	--

^a In addition to AASHTO T 59, upon examination of the test cylinder, and after standing undisturbed for 24 hours, the surface shall show no appreciable white, milky colored substance and shall be homogeneous brown color throughout. The storage stability test may be waved provided the asphalt emulsion storage tank at the project site has adequate provisions for circulating the entire contents of the tank, provided satisfactory field results are obtained.

^b In lieu of performing AASHTO T 44, AASHTO T 111, Ash in Bituminous Material, may be performed with a maximum allowable percent ash of 1.0 percent.

2.1 Low-Tracking or Non-Tracking Requirements. In addition to the above Material Requirements, low-tracking or non-tracking tack shall not stick to the tires, tracks or other parts of paving equipment or vehicles such that the surface to be overlaid becomes visible or void of tack prior to the placement of the asphaltic concrete pavement mixture. The tack material shall exhibit a low-tracking or non-tracking characteristic within 20 minutes of being applied to the roadway. If a tack coat material is unable to satisfy these conditions, then a polymer modified emulsion membrane as described under the Optional Polymer Modified Emulsion Membrane section of this JSP shall be used.

3.0 Equipment and Construction Requirements. All equipment and construction requirements shall be in accordance with Section 407; except as revised as follows:

3.1 Weather Limitations. The low-tracking or non-tracking tack coat shall not be placed on any wet surface or when the ambient temperature or the temperature of the pavement on which it is to be placed is below 50° F. Temperatures shall be obtained in accordance with MoDOT Test Method TM 20.

3.2 Spraying Temperature. The low-tracking or non-tracking tack coat emulsion shall be applied at temperatures between 160° F and 180° F. Temperatures of the tack shall not exceed 180° F and any overheated material shall be rejected.

3.3 Storage and Handling. All guidelines and instructions about storage and handling of the non-tracking tack product shall be followed in accordance with the product manufacturer.

3.4 Distributor. The distributor shall have the full circulating and heating capabilities in the tank. If the particle charge of the low-tracking or non-tracking tack is different from the particle charge of the emulsion that was previously used then the tank shall be thoroughly cleaned prior to use, since some products are not compatible. The following heating and circulating process shall be used:

- 1) The emulsion shall be slowly heated to 140° F.
- 2) Begin circulating the emulsion in the distributor tank only (100 to 150 gallons per minute) and continue slowly increasing heat to 160° F to 180° F.
- 3) Once the desired temperature is reached, begin circulation in the distributor bar.
- 4) Maintain circulation in the distributor's spray bar for a minimum of 30 minutes prior to tack application.

3.5 Curing. The low-tracking or non-tracking tack shall be allowed to cure prior to any construction traffic driving on the surface. A minimum of 15 minutes of cure time shall be allowed prior to driving on the tacked surface, unless less cure time is successfully demonstrated and approved by the engineer.

3.6 Supplier Information. The low-tracking or non-tracking tack materials are a different type of product compared to the conventional tacked used in Missouri. The following manufacturers are known producers/suppliers of low-tracking or non-tracking tack products:

Blacklidge Emulsions, Inc.
Calumet Specialty Product Partners, L.P.
Heartland Asphalt Materials
Vance Brothers

There may be other manufacturer's that can produce an equivalent product. All products that are in compliance with this specification will be allowed.

4.0 Optional Polymer Modified Emulsion Membrane.

4.1 Description. In lieu of using a low-tracking or non-tracking tack coat material, a Polymer Modified Emulsion Membrane may be placed prior to a bituminous overlay of hot asphaltic concrete pavement. The Polymer Modified Emulsion Membrane shall be spray applied immediately prior to the application of the hot asphaltic concrete pavement so as to produce a homogeneous surface in accordance with Secs 401, 402, or 403.

4.2 Materials. The Polymer Modified Emulsion Membrane shall be in accordance with Sec 1015.20.5.1.1 or Sec 1015.20.6.2.

4.3 Construction Requirements. The asphaltic concrete pavement shall be placed in accordance with Secs 401, 402, or 403, except as modified herein.

4.4 Equipment. No wheel, track or other part of the paving machine or any hauling equipment shall come in contact with the Polymer Modified Emulsion Membrane before the asphaltic concrete pavement mixture is applied.

4.5 Application of Polymer Modified Emulsion Membrane.

4.5.1 The Polymer Modified Emulsion Membrane shall be sprayed at a temperature of 120 - 180° F. The sprayer shall accurately and continuously monitor the application rate and provide a uniform coverage across the entire width to be overlaid. The target application rate of the asphalt emulsion membrane shall be within ± 0.02 gallon per square yard of the target application rate indicated on the project plans. The Engineer may make adjustments to the application rate based upon the existing pavement surface conditions and the recommendations of the Polymer Modified Emulsion Membrane supplier.

4.5.2 Water may be added to SS-1hp and CSS-1hp by the emulsion manufacturer and shipped to the jobsite. No dilution shall be allowed in the field. When water is added to SS-1HP or CSS-1HP, the resulting mixture shall contain no more than 20 percent of added water. The contractor shall notify the engineer of the use of a diluted emulsion. The exact quantity of added water shall be indicated on the manufacturer's bill of lading, manifest or truck ticket. The application rate of the resulting mixture shall be adjusted such that the original emulsion will be spread at the specified rate. No water shall be added to the CPEM-1 or PEM-1.

5.0 Basis of Payment. This work shall be considered incidental to the placement of the asphalt. All costs associated with this work shall be considered completely covered by the bituminous pavement pay items in the contract.

BY THE ORDER OF:

Eric Landwehr, P.E., County Engineer
Cole County Department of Public Works
October 16, 2017

**THE CROSSROADS, SOUTHTOWN ESTATES AND RUSTIC OAKS SUBDIVISIONS
STORMWATER AND STREET IMPROVEMENTS**

ITEMIZED PROPOSAL

Item No.	Item Description	Unit	Quantity	\$ Unit Price	\$ Amount
1	Removal of Improvements	LS	1.0		
2	Clearing and Grubbing	LS	1.0		
3	Earthwork	LS	1.0		
4	Type 5 Aggregate for Base, 3"	SY	24,780.0		
5	Bituminous Pavement, 1 1/2" Surface	SY	24,780.0		
6	Bituminous Pavement, 1 1/2" Surface with Reinforcing Fibers	SY	1,600.0		
7	Bituminous Pavement, 1/2" Wedge Course	SY	1,600.0		
8	Bituminous Pavement, 3 1/2" Base	SY	24,780.0		
9	Subgrade Stabilization	SY	800.0		
10	Geotextile Fabric for Subgrade Stabilization	SY	800.0		
11	Aggregate Residential Driveway, 6"	SY	812.0		
12	PCC Residential Driveway, 6"	SY	1,697.0		
13	PCC Residential Drive Approach, 6"	SY	734.1		
14	Type A Curb & Gutter (2'-6")	LF	13,704.8		
15	PCC Sidewalk, 4"	SY	59.5		
16	8" PVC SDR-35 Sanitary Sewer	LF	242.3		
17	Type A Manhole	EA	1.0		
18	Schedule 40 PVC Service Lateral	LF	81.6		
19	Concrete Casing	LF	73.5		
20	Adjust Existing Manhole	EA	1.0		
21	Connect to Existing Line	EA	1.0		
22	Rock Lining (Rip Rap)	SY	11.1		
23	Traffic Control	LS	1.0		
24	Mobilization	LS	1.0		
25	15" CMP Culvert Pipe	LF	20.0		
26	15" RCP Pipe	LF	1,303.4		
27	18" RCP Pipe	LF	1,449.0		
28	24" RCP Pipe	LF	448.8		
29	30" RCP Pipe	LF	569.6		
30	36" RCP Pipe	LF	26.8		
31	42" RCP Pipe	LF	411.4		
32	48" RCP Pipe	LF	375.0		
33	15" CMP Flared End Section	EA	2.0		
34	15" RCP Flared End Section	EA	1.0		
35	18" RCP Flared End Section	EA	2.0		
36	18" RCP FES with Energy Dissipator	EA	1.0		

Item No.	Item Description	Unit	Quantity	\$ Unit Price	\$ Amount
37	30" RCP Flared End Section	EA	2.0		
38	36" RCP Flared End Section	EA	1.0		
39	48' RCP FES with Energy Dissipator	EA	1.0		
40	Catch Basin (4.0' x 4.0')	EA	1.0		
41	Catch Basin (6.0' x 6.0')	EA	1.0		
42	Junction Box (2.5' x 2.5')	EA	3.0		
43	Junction Box (3.0' x 3.0')	EA	2.0		
44	Junction Box (4.0' x 4.0')	EA	2.0		
45	Junction Box (5.0' x 5.0')	EA	3.0		
46	Junction Box (6.0' x 6.0')	EA	1.0		
47	Type A Inlet (3.0' x 4.0')	EA	20.0		
48	Type A Inlet (3.0' x 5.0')	EA	1.0		
49	Type A Inlet (4.0' x 4.0')	EA	1.0		
50	Type A Inlet (4.0' x 6.0')	EA	1.0		
51	Type A Inlet (6.0' x 7.0')	EA	1.0		
52	Type C Inlet (4.0' x 4.0')	EA	11.0		
53	Side Open Inlet (7.0' x 7.0')	EA	1.0		
54	Area Inlet W/ Locking Lid (4.0' x 4.0')	EA	1.0		
55	Turf Reinforcement Mat	SY	521.2		
56	Temporary Seeding	AC	2.0		
57	Seeding, Fertilizing, & Mulch	AC	2.0		
58	Silt Fence	LF	2,402		
59	Inlet Check	EA	55.0		
60	Relocate Wood Shed	LS	1.0		
61	Detention Basin Fence	LS	1.0		
TOTAL BASE BID:					

BIDDER recognizes and acknowledges the receipt of the following Addenda:

Date Addendum Number Date Addendum Number

If the Bidder intends to use any subcontractor in the course of the construction, he shall list them. (If necessary, attach additional pages to list all subcontractors.)

Company Name Address City, State, Zip Work To Be Performed % of Bid
