



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

January 10, 2014

SUBJECT: FAP Route 339 (IL 62)
Section 116(R&R-3) PCC-PP
Cook County
Contract No. 60W56
Item No. 012, January 17, 2014 Letting
Addendum A

NOTICE TO PROSPECTIVE BIDDERS:

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

1. Replaced the Schedule of Prices
2. Revised pages 47-51 of the Special Provisions
3. Revised sheets 2, 4, 20B, 20C, and 20G of the Plans

Prime contractors must utilize the enclosed material when preparing their bid and must include any Schedule of Prices changes in their bidding proposal.

Bidders using computer-generated bids are cautioned to reflect any and all Schedule of Prices changes, if involved, into their computer programs.

Very truly yours,

John D. Baranzelli, P.E.
Acting Engineer of Design and Environment

A handwritten signature in black ink, appearing to read 'Ted B. Walschleger, P.E.' with a stylized flourish at the end.

By: Ted B. Walschleger, P. E.
Engineer of Project Management

cc: John Fortmann, Region 1, District 1; Tim Kell; Estimates

MS/kf

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT
 NUMBER -

60W56

State Job # - C-91-324-13

Project Number

Route

County Name - COOK- -

FAP 339

Code - 31 - -

*REVISED: JANUARY 10, 2014

District - 1 - -

Section Number - 116(R&R-3)PCC-PP

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X0326767	PROF DMD GRND CON PVT	SQ YD	96,830.000				
X0327695	PRC CON PVT SLAB 9.75	SQ FT	27,328.000				
*DEL X4423005	DOWEL BARS 1/2 RETRO	EACH	6,316.000				
*ADD X4423015	DOWEL BARS 1.5 RETRO	EACH	6,316.000				
X5537800	SS CLEANED 12	FOOT	600.000				
Z0004562	COMB C C&G REM & REPL	FOOT	600.000				
Z0030850	TEMP INFO SIGNING	SQ FT	51.400				
21101615	TOPSOIL F & P 4	SQ YD	62.000				
25200110	SODDING SALT TOLERANT	SQ YD	62.000				
42101300	PROTECTIVE COAT	SQ YD	274.000				
44003100	MEDIAN REMOVAL	SQ FT	348.000				
44200966	CL B PATCH T1 10	SQ YD	3.000				
44200970	CL B PATCH T2 10	SQ YD	11.000				
44201299	DOWEL BARS 1 1/2	EACH	36.000				
44213200	SAW CUTS	FOOT	16,028.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
60300105	FR & GRATES ADJUST	EACH	17.000				
60300305	FR & LIDS ADJUST	EACH	5.000				
60404950	FR & GRATES T24	EACH	4.000				
60622000	CONC MED TSM2.12	SQ FT	60.000				
60626300	STAB MED SURF	SQ YD	32.000				
67000400	ENGR FIELD OFFICE A	CAL MO	6.000				
67100100	MOBILIZATION	L SUM	1.000				
70100310	TRAF CONT-PROT 701421	L SUM	1.000				
70102635	TR CONT & PROT 701701	L SUM	1.000				
70300100	SHORT TERM PAVT MKING	FOOT	5,456.000				
70300210	TEMP PVT MK LTR & SYM	SQ FT	1,311.000				
70300220	TEMP PVT MK LINE 4	FOOT	44,145.000				
70300240	TEMP PVT MK LINE 6	FOOT	5,764.000				
70300250	TEMP PVT MK LINE 8	FOOT	152.000				
70300260	TEMP PVT MK LINE 12	FOOT	966.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
70300280	TEMP PVT MK LINE 24	FOOT	480.000				
70301000	WORK ZONE PAVT MK REM	SQ FT	22,738.000				
78008200	POLYUREA PM T1 LTR-SY	SQ FT	1,311.000				
78008210	POLYUREA PM T1 LN 4	FOOT	44,145.000				
78008230	POLYUREA PM T1 LN 6	FOOT	5,764.000				
78008240	POLYUREA PM T1 LN 8	FOOT	152.000				
78008250	POLYUREA PM T1 LN 12	FOOT	966.000				
78008270	POLYUREA PM T1 LN 24	FOOT	480.000				
78100100	RAISED REFL PAVT MKR	EACH	1,082.000				
78300100	PAVT MARKING REMOVAL	SQ FT	292.000				
78300200	RAISED REF PVT MK REM	EACH	974.000				
88600600	DET LOOP REPL	FOOT	730.000				

Required full depth saw cuts for removal operations will be paid for at the contract unit price per foot for SAW CUTS.

Where unsuitable material is encountered in the subgrade or subbase and its removal and replacement is required by the Engineer, such removal and replacement will be paid for according to Article 109.04.

DOWEL BAR RETROFIT

Effective: January 1, 2014

Description. This work shall consist of furnishing and installing epoxy coated round steel dowels into existing concrete pavement across transverse joints and/or cracks, in accordance with this Specification and the Dowel Bar Detail in BD-57, at locations shown in the Plans and/or as directed by the Engineer. This work shall include sawing channels into the pavement, cleaning the channels, placing dowel into the channels, filling the channels and transverse joints with adhesive, sawing and sealing the retrofitted joints, cleanup and other related work.

Materials.

- (a) Dowels. The dowel bars shall consist of a smooth, round, epoxy and bond breaker coated 14-inch long, 1-1/2 inch diameter steel dowels meeting the requirements of Article 1006.06(b).
- (b) Bond Breaker. Acceptable bond-breaker compounds include white pigmented curing compound, concrete form oil, or other approved bond breaker materials.
- (c) Expansion Caps. Use tight-fitting, commercial quality end caps made of a non-metallic, non-organic material that allows for 1/2 inch of movement at each end of the dowel bar.
- (d) Dowel Bar Support Chairs. Use chair devices for supporting the dowel bars that conform to the epoxy-coated steel requirements of ASTM A 884. Dowel bar chairs are used to firmly hold the dowels centered in the slots during backfill operations. The dowel bar chairs must hold the bar a minimum of 1/2 inch above the bottom of the slot while the backfill material is placed and consolidated.
- (e) Caulking Filler. Caulking filler used for sealing the existing transverse or crack at the bottom and sides of the slot shall be concrete sealant that is compatible with the patch material being used.
- (f) Non-Shrink Concrete Backfill Material. The backfill material shall be:
 - (1) Five Star Highway Patch, as manufactured by Five Star Products, Inc., Fairfield, Connecticut;
 - (2) Highway DB Retrofit Mortar, as manufactured by Dayton Superior, Miamisburg, Ohio; or
 - (3) A Department approved equivalent tested as Rapid Set Concrete Patching materials per AASHTO National Transportation Product Evaluation Program (NTPEP) which conforms to ASTM C 928.

Revised 1/10/14

The material shall:

- (1) Provide a compressive strength of 4,000 psi in 24 hours (opening to traffic after 3,000 psi) per ASTM C 39
- (2) Exhibit expansion of less than 0.10 percent per ASTM C 531; and have a calculated durability factor of 90.0 percent minimum at the end of 300 freeze-thaw cycles per ASTM C 666.

The Contractor shall submit the proposed concrete backfill material to the Engineer 14 days prior to any placement operations. For any backfill material that is extended with aggregate, the maximum aggregate size shall be no more than 3/8 inch.

- (g) Curing Compound. Use a Type I, II, or III curing compound to cure the approved concrete backfill material that conforms to Article 1022.01 of the Standard Specifications.
- (h) Joint / Crack Sealer. Hot poured joint / crack sealer used at retrofitted joints shall be in accordance with Article 1050.02 of the Standard Specifications. Any proposed sealant product shall be approved in writing by the Engineer prior to the delivery to the work site. The backer rod if needed shall consist of a material capable of withstanding the application temperatures of hot poured sealant to 400° F. The backer rod shall be extruded from a cross-linked, closed cell polyolefin and shall be available in a variety of diameters to readily meet the requirements of any particular application.

Equipment.

- (a) A template shall be used to locate the saw cuts on any non-skewed crack or joint in order to align the saw cuts consistently. Either single diamond bladed saws or diamond bladed gang saws shall be used to make the saw cuts to allow for dowel bar placements within the specified tolerances.
- (b) Chipping hammers shall be hand held and have a maximum weight of 30 lbs. prior to any handle modification where applicable to minimize damage to the concrete pavement that remains.
- (c) The compressor for air blasting shall have a minimum capacity of 120 cu. ft. per minute. The compressed air shall be free from oil and other contaminants.
- (d) Consolidation equipment used to consolidate the concrete repair material in the dowel bar slats shall be internal vibrators with a maximum diameter of 1 inch and shall have a resilient covering that will not damage the epoxy coated reinforcement during use.
- (e) Equipment for mixing and pumping any backfill materials for retrofitting the dowel bars shall be in accordance with the material manufacturer's instructions and specifications.
- (f) Routing or sawing equipment for crack sealant, where required, shall be power driven and be capable of cutting the cracks to the required dimensions without excessive spalling of the adjacent surface. Equipment for heating and placing hot poured sealant material shall be an oil jacketed, double boiler type, heating kettle or other thermostatically controlled equipment of a type approved by the Engineer, capable of heating the material to 400° F (205° C) and pumping the material into the prepared crack or joint.

Revised 1/10/14

Submittals.

Submit samples to the Engineer for approval prior to the installation of the following items:

- a. Dowel bars
- b. Dowel bar chairs
- c. Dowel bar end caps
- d. Backfill material
- e. Aggregate for extension of backfill material

Submit the material samples, except for the backfill and aggregate, at least 10 days prior to use. Submit backfill material and aggregate used for extension 30 days prior to use.

Drawings. The proposed location of the dowel bars is shown in the Plans. Before any fabrication is started, the Contractor shall prepare and submit shop drawings and/or catalog cuts to the Engineer for approval, in accordance with Article 105.04 of the Standard Specifications. The shop drawings shall give full detailed dimensions and sizes of the channels to be sawed and the dowel bar retrofit.

Construction Methods.

Install dowel bars in the existing portland cement concrete pavement as shown on the Plans and in the Specifications.

- (a) Concrete Removal. Create slots to a depth and length that allows the center of the dowel to be placed at mid-depth in the pavement slab and parallel to the pavement surface. Slots can be created with a gang saw, or by making two saw cuts and removing the concrete between the saw cuts with a 30-lb maximum jackhammer or hand tools. Slots are to be parallel to each other and to the centerline of the roadway with a maximum tolerance of 1/4 inch per 12 inches of dowel bar length to allow for the dowel bar to be placed parallel to the centerline of the roadway. For non-skewed cracks and joints, the saw cut locations shall be pre-marked using a template. Skewed joints or cracks may require slots longer than the length specified in the plans to allow for equal length of the dowel bar to be placed across the transverse joint or crack. Remove water and residue immediately after sawing. If the concrete removal operations cause damage to the pavement that is to remain, discontinue concrete removal operations and only resume after taking corrective measures. Repair or replace pavement damaged during concrete removal operations at no additional expense to the Department. The bottom of the slot must be flat and level. Dispose of any concrete removal debris.
- (b) Slot Cleaning and Preparation. Sandblast all exposed surfaces in the dowel bar slot to remove saw slurry and debris such that clean aggregate is exposed. After sandblasting, clean the slot by blowing with moisture-free, oil-free compressed air having a minimum capacity of 120 cu. ft. per minute to remove any dust, residue or debris left in the slot.

Revised 1/10/14

- (c) Sealing Joints and Cracks in Slot before Backfilling. Seal the existing transverse contraction joint and/or all cracks at the bottom and the sides of the dowel bar slot with an approved caulking or silicone filler to prevent any of the backfill material from entering these areas. The caulking filler should not be placed any farther than 1/2 inch outside either side of the joint. Excessive sealant around the slot does not allow the concrete patching material to bond to the sides of the slot. Prior to slot sealing, ensure that surfaces receiving the caulking filler are clean and free of moisture. Do not extend the caulking filler beyond 3/8 inches of each side of the existing joint or crack.
- (d) Placing Dowel Assembly in Slot. Prevent contamination of the cleaned slot before or while placing dowel assemblies to limit the potential of bonding loss with the backfill material. Place the dowel bars to within 1/2 inch of the midpoint of the slab. Ensure that the bar is parallel to the traffic lane centerline and the top of the roadway surface within a tolerance of 1/4 inch per 12 inches of dowel bar length. Center dowels at the non-skewed transverse joints such that at least 6 inches of the dowel extends into each adjacent panel. For dowel bars at any skewed joint and at all cracks, the dowel shall be centered over the joint or crack in each slot. Cease and adjust operations if the chairs do not hold dowel bars securely in place during placement of the backfill material.

Place a foam core insert at the middle of the dowel bar and to the surface of the pavement. Place insert so it covers the existing transverse joint or crack and is capable of remaining in a vertical position, tight to all edges during backfill placement operations. Re-establish the joint or crack above the foam core insert within 4 hours of backfill placement by sawing after the backfill material has hardened sufficiently.

- (e) Mixing and Placing Backfill Material. Mix backfill material in accordance with the manufacturer's instructions and the specifications. Refer to manufacturer's information on handling, mixing, and placing backfill material.

Fill each dowel bar slot with backfill material after placement of the caulking filler, the coated dowel bar, expansion caps, support chairs, and the foam core insert. Ensure that the foam core inserts remain upright, extends to the surface of existing pavement, and is over the existing joint or crack during the backfill process. Vibrate the backfill material with a small hand held vibrator capable of thoroughly consolidating the backfill material into the slot around the dowel bars and support chairs.

Slightly overfill the slot and finish the surface of the filled slot level with, to no more than 1/4 inch above the existing concrete. Any slots insufficiently filled below existing pavement surfaces shall be redone at the contractor's expense. Cure the backfill material in accordance with the manufacturer's recommendations. Apply curing compound per the manufacturer's recommendation.

- (f) Sawing Cracks after Backfilling. After installation of dowel bars and backfill material is completed for retrofitting mid-slab cracks, where the foam insert is not observed present on the finished surface of the patch the patched channels shall be saw cut by the Contractor between existing crack openings within 24 hours of placement to a nominal 1-1/2 inch depth to reduce surface stress and spalling at the surface of the backfilled slot. Such saw cutting will be at no additional cost to the Department.

Revised 1/10/14

Method of Measurement. This work will be measured for payment in units of each dowel bar assembly installed.

Basis of Payment. This work will be paid at the contract unit price per each for DOWEL BAR RETROFIT of the diameter specified.

CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE)

Effective: June 1, 2010

Revised: January 1, 2014

The reduction of emissions of particulate matter (PM) for off-road equipment shall be accomplished by installing retrofit emission control devices. The term “equipment” refers to diesel fuel powered devices rated at 50 hp and above, to be used on the jobsite in excess of seven calendar days over the course of the construction period on the jobsite (including rental equipment).

Contractor and subcontractor diesel powered off-road equipment assigned to the contract shall be retrofitted using the phased in approach shown below. Equipment that is of a model year older than the year given for that equipment’s respective horsepower range shall be retrofitted:

Effective Dates	Horsepower Range	Model Year
June 1, 2010 ^{1/}	600-749	2002
	750 and up	2006
June 1, 2011 ^{2/}	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006
June 1, 2012 ^{2/}	50-99	2004
	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006

1/ Effective dates apply to Contractor diesel powered off-road equipment assigned to the contract.

2/ Effective dates apply to Contractor and subcontractor diesel powered off-road equipment assigned to the contract.

The retrofit emission control devices shall achieve a minimum PM emission reduction of 50 percent and shall be:

- a) Included on the U.S. Environmental Protection Agency (USEPA) *Verified Retrofit Technology List* (<http://www.epa.gov/cleandiesel/verification/verif-list.htm>), or verified by the California Air Resources Board (CARB) (<http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>); or

Revised 1/10/14