



# Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

September 14, 2011

SUBJECT: FAP Route 876  
Project ACNHF-0876 (076)  
Section 2001-001BR  
Cook County  
Contract No. 62099  
Item No. 11, September 23, 2011 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 the Table of Contents to the Special Provisions.
3. Revised page 26 of the Special Provisions.
4. Added pages 103 - 113 to the Special Provisions.
5. Revised sheets 1 - 5, 8 & 10 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,

Scott E. Stitt, P.E.  
Acting Engineer of Design and Environment

A handwritten signature in cursive script, appearing to read "Ted B. Walschleger" followed by a small "P.E." monogram.

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

cc: Diane O'Keefe, Region 1, District 1; Mike Renner; D.Carl Puzey;  
Estimates

TBW:MS:jc

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT  
 NUMBER - 62099

State Job # - C-91-003-01  
 PPS NBR - 1-75655-0100  
 County Name - COOK- -  
 Code - 31 - -  
 District - 1 - -  
 Section Number - 2001 - 001BR

Project Number  
 ACNHF-0876/076/

Route  
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\* REVISED: SEPT 8, 2011

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
JS121200	LOW PRESS EPOXY INJEC	FOOT	53.000				
JT783005	WATERBLAS PM RM V/REC	SQ FT	368.000				
X2070304	POROUS GRAN EMB SPEC	CU YD	220.000				
X2502014	SEEDING CL 4A MOD	ACRE	0.090				
X7010216	TRAF CONT & PROT SPL	L SUM	1.000				
X7240505	RELOC SIGN PANEL&POST	EACH	1.000				
X7240605	REM RE-E BR MTD SIGN	EACH	4.000				
*REV X8210305	PROT-MAIN UNPASS LTG	L SUM	1.000				
X8440120	REM RE-E EX LGT UNIT	EACH	1.000				
Z0004552	APPROACH SLAB REM	SQ YD	590.000				
Z0010400	CLEANING BRIDGE SEATS	SQ FT	987.000				
Z0012754	STR REP CON DP = < 5	SQ FT	57.000				
Z0012755	STR REP CON DP OVER 5	SQ FT	55.000				
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000				
Z0018900	DRILL-GROUT DOW BARS	EACH	882.000				

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Z0021906	SILICONE JT SEAL 1.5	FOOT	66.000				
Z0026346	NIGHT WORK ZONE LIGHT	L SUM	1.000				
Z0026407	TEMP SHT PILING	SQ FT	282.000				
Z0030260	IMP ATTN TEMP FRN TL3	EACH	2.000				
Z0030330	IMP ATTN REL FRD TL3	EACH	2.000				
Z0030850	TEMP INFO SIGNING	SQ FT	598.000				
*ADD Z0033024	MAINT EX LTG SYS	L SUM	1.000				
Z0046304	P UNDR FOR STRUCT 4	FOOT	250.000				
Z0062456	TEMP PAVEMENT	SQ YD	398.000				
20200100	EARTH EXCAVATION	CU YD	25.000				
21101505	TOPSOIL EXC & PLAC	CU YD	154.000				
21101615	TOPSOIL F & P 4	SQ YD	192.000				
21101645	TOPSOIL F & P 12	SQ YD	152.000				
25000210	SEEDING CL 2A	ACRE	0.040				
25000400	NITROGEN FERT NUTR	POUND	4.000				

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25000500	PHOSPHORUS FERT NUTR	POUND	4.000				
25000600	POTASSIUM FERT NUTR	POUND	4.000				
25100630	EROSION CONTR BLANKET	SQ YD	647.000				
25200200	SUPPLE WATERING	UNIT	1.000				
28000250	TEMP EROS CONTR SEED	POUND	100.000				
28000400	PERIMETER EROS BAR	FOOT	1,541.000				
31101200	SUB GRAN MAT B 4	SQ YD	566.000				
40600100	BIT MATLS PR CT	GALLON	16.000				
42001300	PROTECTIVE COAT	SQ YD	3,874.000				
42001420	BR APPR PVT CON (PCC)	SQ YD	103.000				
44000100	PAVEMENT REM	SQ YD	501.000				
44000500	COMB CURB GUTTER REM	FOOT	96.000				
44003100	MEDIAN REMOVAL	SQ FT	3,524.000				
44004250	PAVED SHLD REMOVAL	SQ YD	19.000				
*DELETE 48100500	AGGREGATE SHLDS A-6	SQ YD	87.000				

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*ADD 48101500	AGGREGATE SHLDS B 6	SQ YD	87.000				
48203021	HMA SHOULDERS 6	SQ YD	41.000				
50101500	REM EXIST SUP-STR	EACH	1.000				
50102400	CONC REM	CU YD	40.000				
50157300	PROTECTIVE SHIELD	SQ YD	2,595.000				
50200100	STRUCTURE EXCAVATION	CU YD	220.000				
50300225	CONC STRUCT	CU YD	71.100				
50300255	CONC SUP-STR	CU YD	1,215.000				
50300260	BR DECK GROOVING	SQ YD	2,520.000				
50401005	F & E P P CON I-BM 48	FOOT	3,171.000				
50800205	REINF BARS, EPOXY CTD	POUND	215,830.000				
50800515	BAR SPLICERS	EACH	1,047.000				
50900105	ALUM RAILING TY L	FOOT	501.000				
51500100	NAME PLATES	EACH	1.000				
52000110	PREF JT STRIP SEAL	FOOT	192.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
52100010	ELAST BEARING ASSY T1	EACH	56.000				
52100530	ANCHOR BOLTS 1 1/4	EACH	112.000				
52100540	ANCHOR BOLTS 1 1/2	EACH	4.000				
58700300	CONCRETE SEALER	SQ FT	17,100.000				
59100100	GEOCOMPOSITE WALL DR	SQ YD	84.000				
59200101	BRIDGE WASHING N1	EACH	1.000				
60608521	COMB CC&G TM2.24	FOOT	96.000				
60619200	CONC MED TSB6.06	SQ FT	3,523.000				
63000001	SPBGR TY A 6FT POSTS	FOOT	125.000				
63100070	TRAF BAR TERM T5	EACH	2.000				
63100085	TRAF BAR TERM T6	EACH	2.000				
63200310	GUARDRAIL REMOV	FOOT	296.000				
*ADD 67000400	ENGR FIELD OFFICE A	FOOT	16.000				
*DELETE 67000500	ENGR FIELD OFFICE B	CAL MO	16.000				
67100100	MOBILIZATION	L SUM	1.000				

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70103815	TR CONT SURVEILLANCE	CAL DA	112.000				
70106800	CHANGEABLE MESSAGE SN	CAL MO	24.000				
70300100	SHORT TERM PAVT MKING	FOOT	424.000				
70300520	PAVT MARK TAPE T3 4	FOOT	12,271.000				
70300550	PAVT MARK TAPE T3 8	FOOT	616.000				
70301000	WORK ZONE PAVT MK REM	SQ FT	4,643.000				
70400100	TEMP CONC BARRIER	FOOT	387.500				
70400200	REL TEMP CONC BARRIER	FOOT	387.500				
78008210	POLYUREA PM T1 LN 4	FOOT	3,846.000				
78008240	POLYUREA PM T1 LN 8	FOOT	1,051.000				
78008250	POLYUREA PM T1 LN 12	FOOT	194.000				
78100100	RAISED REFL PAVT MKR	EACH	12.000				
78100105	RAISED REF PVT MKR BR	EACH	16.000				
78100200	TEMP RAIS REF PVT MKR	EACH	24.000				
78200410	GUARDRAIL MKR TYPE A	EACH	6.000				

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78300100	PAVT MARKING REMOVAL	SQ FT	1,268.000				
78300200	RAISED REF PVT MK REM	EACH	49.000				
81000600	CON T 2 GALVS	FOOT	775.000				
81018500	CON P 2 GALVS	FOOT	352.000				
*ADD 81018700	CON P 3 GALVS	FOOT	100.000				
81100605	CON AT ST 2 PVC GALVS	FOOT	550.000				
*ADD 81100805	CON AT ST 3 PVC GALVS	FOOT	280.000				
*REV 81300730	JUN BX SS AS 16X14X6	EACH	6.000				
81400100	HANDHOLE	EACH	10.000				
*ADD 81603080	UD 3#2#4GXLPUSE 1 1/4	FOOT	538.000				
*REV 81900200	TR & BKFIL F ELECT WK	FOOT	933.000				
83600200	LIGHT POLE FDN 24D	FOOT	12.000				
84200804	REM POLE FDN	EACH	1.000				



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Revised 09/14/2011

The Contractor shall conduct his work in a manner as not to keep out of service any of the lighting between 4:00 PM and 8:00 AM. All lights shall be tested daily and any necessary repairs shall be made immediately without delay.

Damaged cable shall be replaced in complete spans, no underground splices will be allowed. Temporary aerial quadruplex cable may be used to maintain luminaires operational provided it does not interfere with traffic or other operations as determined by the Engineer.

**Grounding of Existing Lighting System:** The Contractor shall furnish and install a grounding conductor for the underpass lighting system in all existing conduits, junction boxes and luminaires. The ground conductor shall be a 1/C #10 AWG EPR (Type-RHW) green insulated conductor. The new ground conductor shall be connected to the existing ground conductor in the main junction box. The cost of this work shall be included in this pay item.

The continuity and continued operation of the adjacent lighting system shall be the responsibility of the Contractor. Any temporary wiring required to comply with this requirement shall be included in this item.

**Basis of Payment:** This work shall be paid for at the contract lump sum price for PROTECTION AND MAINTENANCE OF EXISTING UNDERPASS LIGHTING, which price shall include all labor and materials necessary to satisfactorily complete the work.

## **REMOVE AND RE-ERECT EXISTING LIGHTING UNIT**

**Description:** This work shall consist of the removal and reinstallation of the lighting unit at the locations shown on the plans and as indicated in the schedule of quantities according to Section 821 and Section 842.

With the removal of the lighting unit the contractor shall remove the pole from its foundation, remove the luminaire from the arm and remove the wiring in the pole. Thoroughly clean the existing luminaire and lens.

Reinstallation of the existing lighting unit shall consist of reinstallation of luminaire with installation of new lamp if necessary, installation of all necessary wiring due to pole relocation, resetting of the pole, installation of new fuseholder and fuses and installation of any required fasteners and hardware to make a complete and operational system.

**Basis of Payment:** The work will be paid for at the contract unit price each for REMOVE AND RE-ERECT EXISTING LIGHTING UNIT which price shall include all labor and materials necessary to satisfactorily complete the work.

## **CONCRETE SEALANT**

**Description.** This work consists of furnishing all labor, materials, tools, and equipment required to furnish and apply the specified concrete sealant to the piers and retaining walls as shown in the Plans and as directed by the Engineer. Sealant shall also be applied to all surfaces of pier crashwalls adjacent to traffic lanes.

Revised 09/14/2011

## **UNDERGROUND RACEWAYS**

Effective: January 1, 2007

Revise Article 810.03 of the Standard Specifications to read:

“Installation. All underground conduit shall have a minimum depth of 30-inches (700 mm) below the finished grade.”

Add the following to Article 810.03 of the Standard Specifications:

“All metal conduit installed underground shall be Rigid Steel Conduit unless otherwise indicated on the plans.”

Add the following to Article 810.03 of the Standard Specifications:

“All raceways which extend outside of a structure or duct bank but are not terminated in a cabinet, junction box, pull box, handhole, post, pole, or pedestal shall extend a minimum of 300 mm (12”) or the length shown on the plans beyond the structure or duct bank. The end of this extension shall be capped and sealed with a cap designed for the conduit to be capped. The ends of rigid metal conduit to be capped shall be threaded, the threads protected with full galvanizing, and capped with a threaded galvanized steel cap. The ends of rigid nonmetallic conduit and coilable nonmetallic conduit shall be capped with a rigid PVC cap of not less than 3 mm (0.125”) thick. The cap shall be sealed to the conduit using a room-temperature-vulcanizing (RTV) sealant compatible with the material of both the cap and the conduit. A washer or similar metal ring shall be glued to the inside center of the cap with epoxy, and the pull cord shall be tied to this ring.”

Add the following to Article 810.03(c) of the Standard Specifications:

“Coilable non-metallic conduit shall be machine straightened to remove the longitudinal curvature caused by coiling the conduit onto reels prior to installing in trench, encasing in concrete or embedding in structure. The straightening shall not deform the cross-section of the conduit such that any two measured outside diameters, each from any location and at any orientation around the longitudinal axis along the conduit differ by more than 6 mm (0.25”).” The longitudinal axis of the straightened conduit shall not deviate by more than 20 mm per meter (0.25” per foot” from a straight line. The HDPE and straightening mechanism manufacturer operating temperatures shall be followed

## **EXPOSED RACEWAYS**

Effective: January 1, 2007

Revise the first paragraph of Article 811.03(a) of the Standard Specifications to read:

“General. Rigid metal conduit installation shall be according to Article 810.03(a). Conduits terminating in junction and pull boxes shall be terminated with insulated and gasketed watertight threaded NEMA 4X conduit hubs.

Added 09/14/2011

The hubs shall be Listed under UL 514B. The insulated throat shall be rated up to 105° C. When PVC coated conduit is utilized, the aforementioned hubs shall also be PVC coated.”

Add the following to Article 811.03(b) of the Standard Specifications:

“Where PVC coated conduit is utilized, all conduit fittings, couplings and clamps shall be PVC coated. All other mounting hardware and appurtenances shall be stainless steel.”

“The personnel installing the PVC coated conduit must be trained and certified by the PVC coated conduit Manufacturer or Manufacturer’s representative to install PVC coated conduit. Documentation demonstrating this requirement must be submitted for review and approval.”

Revise Article 1088.01(a) of the Standard Specifications to read:

“Couplings and fittings shall meet ANSI Standard C80.5 and U.L. Standard 6. Elbows and nipples shall conform to the specifications for conduit. All fittings and couplings for rigid conduit shall be of the threaded type. All conduit hubs shall be gasketed and watertight with an integral O-ring seal.

All iron and steel products, which are to be incorporated into the work, including conduit and all conduit fittings, shall be domestically manufactured or produced and fabricated as specified in Article 106.”

Revise Article 1088.01(a)(3) of the Standard Specifications to read:

“a. PVC Coated Steel Conduit. The PVC coated rigid metal conduit shall be UL Listed (UL 6). The PVC coating must have been investigated by UL as providing the primary corrosion protection for the rigid metal conduit. Ferrous fittings for general service locations shall be UL Listed with PVC as the primary corrosion protection. Hazardous location fittings, prior to plastic coating shall be UL listed.

b. The PVC coating shall have the following characteristics:

Hardness:	85+ Shore A Durometer
Dielectric Strength:	400V/mil @ 60 Hz
Aging:	1,000 Hours Atlas Weatherometer
Temperature	The PVC compound shall conform at 0° F. to Federal Specifications PL-406b, Method 2051, Amendment 1 of 25 September 1952 (ASTM D 746)
Elongation:	200%

c. The exterior and interior galvanized conduit surface shall be chemically treated to enhance PVC coating adhesion and shall also be coated with a primer before the PVC coating to ensure a bond between the zinc substrate and the PVC coating. The bond strength created shall be greater than the tensile strength of the plastic coating.

Added 09/14/2011

- d. The nominal thickness of the PVC coating shall be 1 mm (40 mils). The PVC exterior and urethane interior coatings applied to the conduit shall afford sufficient flexibility to permit field bending without cracking or flaking at temperatures above -1°C (30°F).
- e. An interior urethane coating shall be uniformly and consistently applied to the interior of all conduit and fittings. This internal coating shall be a nominal 2 mil thickness. The interior coating shall be applied in a manner so there are no runs, drips, or pinholes at any point. The coating shall not peel, flake, or chip off after a cut is made in the conduit or a scratch is made in the coating.
- f. Conduit bodies shall have a tongue-in-groove gasket for maximum sealing capability. The design shall incorporate a positive placement feature to assure proper installation. Certified test results confirming seal performance at 15 psig (positive) and 25 in. of mercury (vacuum) for 72 hours shall be submitted for review when requested by the Engineer.
- g. The PVC conduit shall pass the following tests:

Exterior PVC Bond test RN1:

Two parallel cuts 13 mm (1/2 inch) apart and 40 mm (1 1/2 inches) in length shall be made with a sharp knife along the longitudinal axis. A third cut shall be made perpendicular to and crossing the longitudinal cuts at one end. The knife shall then be worked under the PVC coating for 13 mm (1/2 inch) to free the coating from the metal.

Using pliers, the freed PVC tab shall be pulled with a force applied vertically and away from the conduit. The PVC tab shall tear rather than cause any additional PVC coating to separate from the substrate.

Boil Test:

Acceptable conduit coating bonds (exterior and interior) shall be confirmed if there is no disbondment after a minimum average of 200 hours in boiling water or exposure to steam vapor at one atmosphere. Certified test results from a national recognized independent testing laboratory shall be submitted for review and approval. The RN1 Bond Test and the Standard Method for Measuring Adhesion by Tape Test shall be utilized.

Exterior Adhesion. In accordance with ASTM D870, a 6" length of conduit test specimen shall be placed in boiling water. The specimen shall be periodically removed, cooled to ambient temperature and immediately tested according to the bond test (RN1).

Added 09/14/2011

When the PVC coating separates from the substrate, the boil time to failure in hours shall be recorded.

Interior Adhesion. In accordance with ASTM D3359, a 6" conduit test specimen shall be cut in half longitudinally and placed in boiling water or directly above boiling water with the urethane surface facing down. The specimen shall be periodically removed, cooled to ambient temperature and tested in accordance with the Standard Method of Adhesion by Tape Test (ASTM D3359). When the coating disbonds, the time to failure in hours shall be recorded.

Heat/Humidity Test:

Acceptable conduit coating bonds shall be confirmed by a minimum average of 30 days in the Heat and Humidity Test. The RN1 Bond Test and the Standard Method for Measuring Adhesion by Tape Test shall be utilized.

Exterior Adhesion. In accordance with ASTM D1151, D1735, D2247 and D4585, conduit specimens shall be placed in a heat and humidity environment where the temperature is maintained at 150°F (66°C) and 95% relative humidity. The specimens shall be periodically removed and a bond test (RN1) performed. When the PVC coating separates from the substrate, the exposure time to failure in days shall be recorded.

Interior Adhesion. In accordance with ASTM D3359, conduit specimens shall be placed in a heat and humidity environment where the temperature is maintained at 150°F (66°C) and 95% relative humidity. When the coating disbonds, the time to failure in hours shall be recorded.

Add the following to Article 1088.01(a)(4) of the Standard Specifications:

“All liquid tight flexible metal conduit fittings shall have an insulated throat to prevent abrasion of the conductors and shall have a captive sealing O-ring gasket. The fittings shall be Listed under UL 514B. The insulated throat shall be rated up to 105° C.”

Revise Article 811.05 of the Standard Specifications to read:

“**811.05 Basis of Payment.** This work will be paid for at the contract unit price per meter (foot) for **CONDUIT ATTACHED TO STRUCTURE**, of the diameter specified, **RIGID GALVANIZED STEEL** or **CONDUIT ATTACHED TO STRUCTURE**, of the diameter specified, **RIGID GALVANIZED STEEL, PVC COATED.**”

Added 09/14/2011



**UNIT DUCT**

Effective: January 1, 2007

Revise the second paragraph of Article 816.03(a) to read:

“The unit duct shall be installed at a minimum depth of 760 mm (30-inches) unless otherwise directed by the Engineer.”

Revise Article 1088.01(c) to read:

“(c) Coilable Nonmetallic Conduit.

General:

The duct shall be a plastic duct which is intended for underground use and which can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance. The duct shall be a plastic duct which is intended for underground use and can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance.

The duct shall be made of high density polyethylene which shall meet the requirements of ASTM D 2447, for schedule 40. The duct shall be composed of black high density polyethylene meeting the requirements of ASTM D 3350, Class C, Grade P33. The wall thickness shall be in accordance with Table 2 for ASTM D 2447.

The duct shall be UL Listed per 651-B for continuous length HDPE coiled conduit. The duct shall also comply with NEC Article 354.100 and 354.120.

Submittal information shall demonstrate compliance with the details of these requirements.

Dimensions:

Duct dimensions shall conform to the standards listed in ASTM D2447. Submittal information shall demonstrate compliance with these requirements.

Nominal Size		Nominal I.D.		Nominal O.D.		Minimum Wall	
mm	in	mm	in	mm	in	mm	in
31.75	1.25	35.05	1.380	42.16	1.660	3.556 +0.51	0.140 +0.020
38.1	1.50	40.89	1.610	48.26	1.900	3.683 +0.51	0.145 +0.020

Nominal Size		Pulled Tensile	
mm	in	N	lbs
31.75	1.25	3322	747
38.1	1.50	3972	893

Added 09/14/2011

**Marking:**

As specified in NEMA Standard Publication No. TC-7, the duct shall be clearly and durably marked at least every 3.05 meters (10 feet) with the material designation (HDPE for high density polyethylene), nominal size of the duct and the name and/or trademark of the manufacturer.

**Performance Tests:**

Polyethylene Duct testing procedures and test results shall meet the requirements of UL 651. Certified copies of the test report shall be submitted to the Engineer prior to the installation of the duct. Duct crush test results shall meet or exceed the following requirements:

Duct Diameter		Min. force required to deform sample 50%	
mm	in	N	lbs
35	1.25	4937	1110
41	1.5	4559	1025

**WIRE AND CABLE**

Effective: January 1, 2007

Revise the second sentence of the first paragraph of Article 1066.02(a) to read:

“The cable shall be rated at a minimum of 90°C dry and 75°C wet and shall be suitable for installation in wet and dry locations, and shall be resistant to oils and chemicals.”

Revise the second paragraph of Article 1066.02(b) to read:

“Uncoated conductors shall be according to ASTM B3, ICEA S-95-658/NEMA WC70, and UL Standard 44. Coated conductors shall be according to ASTM B 33, ASTM B 8, ICEA S-95-658/NEMA WC70 and UL Standard 44.”

Revise the third paragraph of Article 1066.02(b) to read:

“All conductors shall be stranded. Stranding meeting ASTM B 8, ICEA S-95-658/NEMA WC70 and UL Standard 44. Uncoated conductors meeting ASTM B 3, ICEA S-95-658/NEMA WC70 and UL Standard 44.”

Revise the first sentence of Article 1066.03(a)(1) to read:

“General. Cable insulation designated as XLP shall incorporate cross-linked polyethylene (XLP) insulation as specified and shall meet or exceed the requirements of ICEA S-95-658, NEMA WC70, U.L. Standard 44.”

Add the following to Article 1066.03(a)(1) of the Standard Specifications:

Added 09/14/2011

“The cable shall be rated 600 volts and shall be UL Listed Type RHH/RHW/USE.”

Revise the Aerial Electric Cable Properties table of Article 1066.03(a)(3) to read:

Aerial Electric Cable Properties

Phase Conductor		Messenger wire			
Size AWG	Stranding	Average Insulation Thickness		Minimum Size AWG	Stranding
		mm	mils		
6	7	1.1	(45)	6	6/1
4	7	1.1	(45)	4	6/1
2	7	1.1	(45)	2	6/1
1/0	19	1.5	(60)	1/0	6/1
2/0	19	1.5	(60)	2/0	6/1
3/0	19	1.5	(60)	3/0	6/1
4/0	19	1.5	(60)	4/0	6/1

Revise the first paragraph of Article 1066.03(b) to read:

“EPR Insulation. Cable insulation shall incorporate ethylene propylene rubber (EPR) as specified and the insulation shall meet or exceed the requirements of ICEA S-95-658, NEMA Standard Publication No. WC70, and U.L. Standard 44, as applicable.”

Add the following to Article 1066.03(b) of the Standard Specifications:

“Cable sized No. 2 AWG and smaller shall be U.L. listed Type RHH/RHW and may be Type RHH/RHW/USE. Cable sized larger than No. 2 AWG shall be U.L. listed Type RHH/RHW/USE.”

Revise Article 1066.04 to read:

“Aerial Cable Assembly. The aerial cable shall be an assembly of insulated aluminum conductors according to Section 1066.02 and 1066.03. Unless otherwise indicated, the cable assembly shall be composed of three insulated conductors and a steel reinforced bare aluminum conductor (ACSR) to be used as the ground conductor. Unless otherwise indicated, the code word designation of this cable assembly is “Palomino”. The steel reinforced aluminum conductor shall conform to ASTM B-232. The cable shall be assembled according to ANSI/ICEA S-76-474.”

Revise the second paragraph of Article 1066.05 to read:

“The tape shall have reinforced metallic detection capabilities consisting of a woven reinforced polyethylene tape with a metallic core or backing.”

Added 09/14/2011

Revise Article 1066.08 to read:

“Electrical Tape. Electrical tape shall be all weather vinyl plastic tape resistant to abrasion, puncture, flame, oil, acids, alkalies, and weathering, conforming to Federal Specification MIL-I-24391, ASTM D1000 and shall be listed under UL 510 Standard. Thickness shall not be less than 0.215 mm (8.5 mils) and width shall not be less than 20 mm (3/4-inch).”

## **TRENCH AND BACKFILL FOR ELECTRICAL WORK**

Effective: January 1, 2011

Revise the first sentence of Article 819.03(a) of the Standard Specifications to read:

“Trench. Trenches shall have a minimum depth of 30 in. (760 mm) or as otherwise indicated on the plans, and shall not exceed 12 in. (300 mm) in width without prior approval of the Engineer.”

Revise the second sentence of Article 819.03(b) of the Standard Specifications to read:

“The installation depth shall have a minimum depth of 30 in. (760 mm) below the finished grade or as shown on the plans.”

Revise the first sentence of Article 819.05 of the Standard Specifications to read:

“Underground cable marking tape shall have a reinforced metallic detection strip.”

Revise the second paragraph of Article 1066.05 of the Standard Specifications to read:

“The tape shall be a woven reinforced polyethylene tape with a metallic core or backing that is detectable.”

## **MAINTAIN EXISTING LIGHTING SYSTEM**

Replace Article 801.11 and 801.12 of the Standard Specifications with the following:

Effective the date the Contractor's activities (electrical or otherwise) at the job site begin, the Contractor shall be responsible for the proper operation and maintenance of all existing and proposed lighting systems which are part of, or which may be affected by the work until final acceptance or as otherwise determined by the Engineer. This item shall consist of providing protection, temporary support, removal and reattachment as required, of the existing lighting system. The system consists of, but not limited to, luminaires, junction boxes, conduits, raceways, support equipment and conductors. Any wiring required to maintain the operation of the lighting system shall be included in this item.

Added 09/14/2011

Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall initiate a request for a maintenance transfer and preconstruction inspection, as specified elsewhere herein, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any lighting systems which may be affected by the work. An inventory of all missing hardware of the existing lighting system shall be taken. A request for the maintenance preconstruction inspection shall be made no less than seven (7) calendar days prior to the desired inspection date.

Existing lighting systems, when depicted on the plans, are intended only to indicate the general equipment installation of the systems involved and shall not be construed as an exact representation of the field conditions. It remains the Contractor's responsibility to visit the site to confirm and ascertain the exact condition of the electrical equipment and systems to be maintained.

### **Maintenance of Existing Lighting Systems**

**Existing lighting systems.** Existing lighting systems shall be defined as any lighting system or part of a lighting system in service prior to this contract. The contract drawings indicate the general extent of any existing lighting, but whether indicated or not, it remains the Contractor's responsibility to ascertain the extent of effort required for compliance with these specifications and failure to do so will not be justification for extra payment or reduced responsibilities.

Existing lighting system along west side of the bridge shall be disconnected during Stage II construction. Conduit and conduit hangers attached to the bridge deck shall be removed prior to the removal of the existing bridge deck. Lighting along Halsted Street shall be provided by proposed lighting system installed on the east side of the roadway after east side of the bridge is constructed. The proposed lighting system will be paid separately.

Prior to bridge deck removal the Contractor shall measure and log the location of all existing conduit and hangers for reattachment purposes. Upon completion of the bridge deck reconstruction, the existing lighting system shall be permanently reattached at these locations. New heavy duty expansion anchors, as approved by the Engineer, shall be used. The new hangers shall be equivalent to the existing hangers or as approved by the Engineer. The cost of the new expansion anchors and hangers shall be included in this pay item.

#### **Extent of Maintenance.**

**Partial Maintenance.** Unless otherwise indicated, if the number of circuits affected by the contract is equal to or less than 40% of the total number of circuits in a given controller and the controller is not part of the contract work, the Contractor needs only to maintain the affected circuits. The affected circuits shall be isolated by means of in-line waterproof fuse holders as specified elsewhere and as approved by the Engineer.

Added 09/14/2011

**Full Maintenance.** If the number of circuits affected by the contract is greater than 40% of the total number of circuits in a given controller, or if the controller is modified in any way under the contract work, the Contractor shall maintain the entire controller and all associated circuits.

**Maintenance of Proposed Lighting Systems**

**Proposed Lighting Systems.** Proposed lighting systems shall be defined as any lighting system or part of a lighting system which is to be constructed under this contract.

The Contractor shall be fully responsible for maintenance of all items installed under this contract. Maintenance shall include, but not be limited to, any equipment failures or malfunctions as well as equipment damage either by the motoring public, Contractor operations, or other means. The potential cost of replacing or repairing any malfunctioning or damaged equipment shall be included in the bid price of this item and will not be paid for separately.

**Lighting System Maintenance Operations**

The Contractor's responsibility shall include all applicable responsibilities of the Electrical Maintenance Contract, State of Illinois, Department of Transportation, Division of Highways, District One. These responsibilities shall include the maintenance of lighting units (including sign lighting), cable runs and lighting controls. In the case of a pole knockdown or sign light damage caused by normal vehicular traffic, the Contractor shall promptly clear the lighting unit and circuit discontinuity and restore the system to service.

Responsibilities shall also include weekly night-time patrol of the lighting system, with patrol reports filed immediately with the Engineer and with deficiencies corrected within 24 hours of the patrol. Patrol reports shall be presented on standard forms as designated by the Engineer. Uncorrected deficiencies may be designated by the Engineer as necessitating emergency repairs as described elsewhere herein.

The following chart lists the maximum response, service restoration, and permanent repair time the Contractor will be allowed to perform corrective action on specific lighting system equipment.

INCIDENT OR PROBLEM	SERVICE RESPONSE TIME	SERVICE RESTORATION TIME	PERMANENT REPAIR TIME
Control cabinet out	1 hour	4 hours	7 Calendar days
Hanging mast arm	1 hour to clear	na	7 Calendar days
Radio problem	1 hour	4 hours	7 Calendar days
Motorist caused damage or leaning light pole 10 degrees or more	1 hour to clear	4 hours	7 Calendar days
Circuit out – Needs to reset breaker	1 hour	4 hours	na
Circuit out – Cable trouble	1 hour	24 hours	21 Calendar days
Outage of 3 or more successive lights	1 hour	4 hours	na
Outage of 75% of lights on one tower	1 hour	4 hours	na

Added 09/14/2011

Outage of light nearest RR crossing approach, Islands and gores	1 hour	4 hours	na
Outage (single or multiple) found on night outage survey or reported to EMC	na	na	7 Calendar days
Navigation light outage	na	na	24 hours

- **Service Response Time** -- amount of time from the initial notification to the Contractor until a patrolman physically arrives at the location.
- **Service Restoration Time** – amount of time from the initial notification to the Contractor until the time the system is fully operational again (In cases of motorist caused damage the undamaged portions of the system are operational.)
- **Permanent Repair Time** – amount of time from initial notification to the Contractor until the time permanent repairs are made if the Contractor was required to make temporary repairs to meet the service restoration requirement.

Failure to provide this service will result in liquidated damages of \$500 per day per occurrence. In addition, the Department reserves the right to assign any work not completed within this timeframe to the Electrical Maintenance Contractor. All costs associated to repair this uncompleted work shall be the responsibility of the Contractor. Failure to pay these costs to the Electrical Maintenance Contractor within one month after the incident will result in additional liquidated damages of \$500 per month per occurrence. Unpaid bills will be deducted from the cost of the Contract. Repeated failures and/or a gross failure of maintenance shall result in the State's Electrical Maintenance Contractor being directed to correct all deficiencies and the resulting costs deducted from any monies owed the contractor.

Damage caused by the Contractor's operations shall be repaired at no additional cost to the Contract.

**Operation of Lighting**

The lighting shall be operational every night, dusk to dawn. Duplicate lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously. Lighting systems shall not be kept in operation during long daytime periods. The contractor shall demonstrate to the satisfaction of the Engineer that the lighting system is fully operational prior to submitting a pay request. Failure to do so will be grounds for denying the pay request.

**Basis of Payment.** Maintenance of lighting systems shall be paid for at the contract lump sum price for **MAINTAIN EXISTING LIGHTING SYSTEM**, which price shall include all labor and materials necessary to satisfactorily complete the work.

Added 09/14/2011