



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

September 3, 2010

SUBJECT: FAI Route 94 (I-94/Edens)
Project ACIM-094-2 (246) 043
Section 0101.83
Cook County
Contract No. 60C18
Item No. 57, September 17, 2010 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 page vi of the Table of Contents to the Special Provisions.
3. Revised page 109 of the Special Provisions.
4. Added pages 239 - 249 to the Special Provisions,
5. Revised sheets 1, 2, 3, 7, 8, 9, 16, 35 & 45 of the Plans.
6. Added sheets 16A, 50A, 50B & 50C to 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 the initials 'P.E.'.

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

cc: Diane O'Keefe, Region 1, District 1; Mike Renner; R. E. Anderson;
Estimates

TBW:MS:jc

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT
 NUMBER - 60C18

State Job # - C-91-149-07
 PPS NBR - 1-75514-0100
 County Name - COOK- -
 Code - 31 - -
 District - 1 - -
 Section Number - 0101.8B

Project Number
 ACIM-0942/246/043

Route
 FAI 94

* REVISED : SEPTEMBER 3, 2010

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
XX004046	AERIAL CABLE REMOVAL	FOOT	1,350.000				
X0322703	TRIPLX CC 2#6 & 1#8	FOOT	1,000.000				
X0323157	REM LUM FROM UNDRPASS	EACH	2.000				
X0323364	ELCBL C 19 6/C	FOOT	850.000				
X0323710	REMOV COND ATT TO STR	FOOT	380.000				
X0324198	REMOV ASB CEM CONDUIT	FOOT	918.000				
X0324345	COMB SEW REM 24	FOOT	104.000				
X0324571	MAINT ST LTG SYS CHGO	L SUM	1.000				
X0324599	ROD AND CLEAN EX COND	FOOT	200.000				
X0324705	MA STL ST LT 12' IO	EACH	5.000				
X0325085	TEMP PAVT INTERSTATE	SQ YD	49.000				
X0325201	SHOULDER RUM STRIP RM	SQ YD	658.000				
X0325527	REM REINST SIG EQPMT	L SUM	1.000				
X0326095	PIPE UNDERDRN REM/RPL	FOOT	626.000				
X0326965	ELCBL 19 25PR	FOOT	1,050.000				

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X0327040	COMB SEWER CL A T3 24	FOOT	63.000				
X0327044	MA STL ST LT 12' FO	EACH	5.000				
X0327045	LT P S 32.5MH FO	EACH	5.000				
X0327046	ELECT FRAME & LID 30	EACH	4.000				
X0327048	TEMP CABLE INSTAL/REM	L SUM	1.000				
X2070304	POROUS GRAN EMB SPEC	CU YD	263.000				
X4022000	TEMP ACCESS- COM ENT	EACH	1.000				
X6022400	MAN TA 3D W/FR & LID	EACH	2.000				
X7030104	WET TEM PM TAPE T3 4	FOOT	30,156.000				
X7030105	WET TEM PM TAPE T3 5	FOOT	4,520.000				
X7030112	WET TEM PM TAPE T3 12	FOOT	40.000				
X7030124	WET TEM PM TAPE T3 24	FOOT	39.000				
X7830050	RAISD REF PM REFL REM	EACH	157.000				
X8130360	JUN BX CC ES 20X13X12	EACH	1.000				
X8730248	ELCBL C 18 4PR TW SH	FOOT	1,000.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X8850102	INDUCTION LOOP	FOOT	68.000				
Z0003617	REM EXIST SUB-STR	EACH	1.000				
Z0004552	APPROACH SLAB REM	SQ YD	593.000				
Z0010614	CLEAN EX MAN/HAND	EACH	2.000				
Z0012754	STR REP CON DP = < 5	SQ FT	54.000				
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000				
Z0018400	DRAINAGE STR ADJ	EACH	6.000				
Z0018940	DRILL EX MAN/HANDHOLE	EACH	2.000				
Z0026407	TEMP SHT PILING	SQ FT	3,257.000				
Z0030240	IMP ATTN TEMP NRD TL2	EACH	2.000				
Z0030250	IMP ATTN TEMP NRD TL3	EACH	2.000				
Z0030340	IMP ATTN REL NRD TL2	EACH	2.000				
Z0030350	IMP ATTN REL NRD TL3	EACH	6.000				
Z0030850	TEMP INFO SIGNING	SQ FT	163.900				
Z0033028	MAINTAIN LIGHTING SYS	CAL MO	12.000				

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Z0064600	SELECTIVE CLEARING	ACRE	0.180				
Z0073002	TEMP SOIL RETEN SYSTM	SQ FT	2,505.000				
Z0076600	TRAINEES	HOUR	1,500.000		0.800		1,200.000
* 20100110	TREE REMOV 6-15	UNIT	84.000				
* 20200100	EARTH EXCAVATION	CU YD	727.000				
20800150	TRENCH BACKFILL	CU YD	368.000				
* 21101505	TOPSOIL EXC & PLAC	CU YD	451.000				
21101615	TOPSOIL F & P 4	SQ YD	300.000				
* 25000210	SEEDING CL 2A	ACRE	0.500				
* 25000310	SEEDING CL 4	ACRE	0.500				
* 25000320	SEEDING CL 5	ACRE	0.500				
* 25000400	NITROGEN FERT NUTR	POUND	50.000				
* 25000500	PHOSPHORUS FERT NUTR	POUND	50.000				
* 25000600	POTASSIUM FERT NUTR	POUND	50.000				
* 25100630	EROSION CONTR BLANKET	SQ YD	4,107.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
* 28000250	TEMP EROS CONTR SEED	POUND	300.000				
* 28000400	PERIMETER EROS BAR	FOOT	255.000				
28000510	INLET FILTERS	EACH	3.000				
31101000	SUB GRAN MAT B	TON	104.000				
* 31101200	SUB GRAN MAT B 4	SQ YD	499.000				
35501316	HMA BASE CSE 8	SQ YD	16.000				
40600200	BIT MATLS PR CT	TON	1.000				
40601005	HMA REPL OVER PATCH	TON	5.000				
40603310	HMA SC "C" N50	TON	1.800				
40603395	HMA SC "F" N90	TON	10.300				
42001300	PROTECTIVE COAT	SQ YD	1,039.000				
42001420	BR APPR PVT CON (PCC)	SQ YD	499.000				
42400200	PC CONC SIDEWALK 5	SQ FT	1,698.000				
42400800	DETECTABLE WARNINGS	SQ FT	29.000				
44000100	PAVEMENT REM	SQ YD	450.000				

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44000158	HMA SURF REM 2 1/4	SQ YD	123.000				
44000200	DRIVE PAVEMENT REM	SQ YD	13.000				
44000300	CURB REM	FOOT	3.000				
44000500	COMB CURB GUTTER REM	FOOT	445.000				
44000600	SIDEWALK REM	SQ FT	1,605.000				
44002209	HMA RM OV PATCH 2 1/4	SQ YD	40.000				
44004250	PAVED SHLD REMOVAL	SQ YD	490.000				
44201771	CL D PATCH T4 10	SQ YD	34.000				
48203053	HMA SHOULDERS 14	SQ YD	490.000				
50101500	REM EXIST SUP-STR	EACH	1.000				
50102400	CONC REM	CU YD	213.000				
50200100	STRUCTURE EXCAVATION	CU YD	940.000				
50300225	CONC STRUCT	CU YD	506.600				
50300255	CONC SUP-STR	CU YD	592.800				
50300260	BR DECK GROOVING	SQ YD	1,355.000				

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50300300	PROTECTIVE COAT	SQ YD	1,822.000				
50500105	F & E STRUCT STEEL	L SUM	1.000				
50500505	STUD SHEAR CONNECTORS	EACH	5,112.000				
50800205	REINF BARS, EPOXY CTD	POUND	183,807.000				
50800515	BAR SPLICERS	EACH	928.000				
50901730	BRIDGE FENCE RAILING	FOOT	422.000				
51201600	FUR STL PILE HP12X53	FOOT	1,313.000				
51202305	DRIVING PILES	FOOT	1,313.000				
51203600	TEST PILE ST HP12X53	EACH	1.000				
51500100	NAME PLATES	EACH	1.000				
52000110	PREF JT STRIP SEAL	FOOT	182.000				
52100010	ELAST BEARING ASSY T1	EACH	24.000				
58700300	CONCRETE SEALER	SQ FT	3,723.000				
59000200	EPOXY CRACK INJECTION	FOOT	49.000				
59100100	GEOCOMPOSITE WALL DR	SQ YD	253.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
60251500	CB ADJ NEW T11F&G	EACH	1.000				
60255500	MAN ADJUST	EACH	1.000				
60261300	INLETS ADJ NEW T11F&G	EACH	2.000				
60300105	FR & GRATES ADJUST	EACH	6.000				
* 60300305	FR & LIDS ADJUST	EACH	5.000				
60500040	REMOV MANHOLES	EACH	1.000				
60600605	CONC CURB TB	FOOT	16.000				
60603800	COMB CC&G TB6.12	FOOT	161.000				
60610400	COMB CC&G TM6.24	FOOT	130.000				
63301235	REM RE-E SPBGR ATS	FOOT	182.000				
63700255	CONC BAR 2F 32HT	FOOT	243.000				
63700805	CONC BAR TRANS	FOOT	100.000				
63700900	CONC BARRIER BASE	FOOT	313.000				
64200105	SHOULDER RUMBLE STRIP	FOOT	2,958.000				
67000400	ENGR FIELD OFFICE A	CAL MO	18.000				

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67100100	MOBILIZATION	L SUM	1.000				
70101800	TRAF CONT & PROT SPL	L SUM	1.000				
70102550	TR CONT-PROT TEMP DET	EACH	4.000				
70103817	TR CONT SURVEILL SPL	CAL DA	10.000				
70300100	SHORT-TERM PAVT MKING	FOOT	992.000				
70300240	TEMP PVT MK LINE 6	FOOT	2,962.500				
70301000	WORK ZONE PAVT MK REM	SQ FT	12,053.000				
70400100	TEMP CONC BARRIER	FOOT	2,037.500				
70400200	REL TEMP CONC BARRIER	FOOT	2,050.000				
78000100	THPL PVT MK LTR & SYM	SQ FT	67.000				
78000200	THPL PVT MK LINE 4	FOOT	2,648.000				
78000400	THPL PVT MK LINE 6	FOOT	1,141.000				
78000500	THPL PVT MK LINE 8	FOOT	145.000				
78000600	THPL PVT MK LINE 12	FOOT	37.000				
78000650	THPL PVT MK LINE 24	FOOT	36.000				

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78003110	PREF PL PM TB LINE 4	FOOT	5,924.000				
78003120	PREF PL PM TB LINE 5	FOOT	1,571.000				
78008200	POLYUREA PM T1 LTR-SY	SQ FT	39.000				
78008210	POLYUREA PM T1 LN 4	FOOT	711.000				
78008230	POLYUREA PM T1 LN 6	FOOT	260.000				
78008270	POLYUREA PM T1 LN 24	FOOT	39.000				
78100300	REPLACEMENT REFLECTOR	EACH	157.000				
78200530	BAR WALL MKR TYPE C	EACH	87.000				
78300100	PAVT MARKING REMOVAL	SQ FT	375.000				
81000600	CON T 2 GALVS	FOOT	300.000				
81000800	CON T 3 GALVS	FOOT	400.000				
81017515	CON T 1 1/4 CNC	FOOT	20.000				
81018500	CON P 2 GALVS	FOOT	24.000				
81018600	CON P 2 1/2 GALVS	FOOT	60.000				
81018700	CON P 3 GALVS	FOOT	90.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
81100320	CON AT ST 1 PVC GS	FOOT	400.000				
81100420	CON AT ST 1.25 GS PVC	FOOT	120.000				
81100805	CON AT ST 3 PVC GALVS	FOOT	70.000				
81200230	CON EMB STR 2 PVC	FOOT	800.000				
81200270	CON EMB STR 4 PVC	FOOT	850.000				
81300220	JUN BX SS AS 6X6X4	EACH	8.000				
81300530	JUN BX SS AS 12X10X6	EACH	3.000				
81300550	JUN BX SS AS 12X12X6	EACH	1.000				
81300730	JUN BX SS AS 16X14X6	EACH	1.000				
81306100	JUNCTION BOX SPL	EACH	2.000				
81306500	REM EX JUNCTION BOX	EACH	2.000				
81400200	HD HANDHOLE	EACH	2.000				
81603140	UD 3#10#10GEP RRHW 3/4	FOOT	300.000				
81603205	UD 3#4#4GEP RRHW 1 1/4	FOOT	550.000				
81700110	EC C EPR RHW 1C 10	FOOT	1,600.000				

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81800300	A CBL 3-1C2 MESS WIRE	FOOT	510.000				
81900200	TR & BKFIL F ELECT WK	FOOT	400.000				
81900302	TR & BKFIL W SCR/SAND	FOOT	75.000				
82102400	LUM SV HOR MT 400W	EACH	4.000				
82106400	LUM SV HOR MT 400W IO	EACH	5.000				
82106700	LUM SV HOR MT 400W MO	EACH	5.000				
82107100	UNDERPAS LUM 70W HPS	EACH	8.000				
83050110	LT P A 32.5MH 12MA IO	EACH	5.000				
83057340	LT P WD 60 CL 3	EACH	3.000				
83057345	LT P WD 60 CL3 15MA	EACH	4.000				
83057470	LT P WD 90 CL 3	EACH	1.000				
83057475	LT P WD 90 CL3 15MA	EACH	1.000				
83600200	LIGHT POLE FDN 24D	FOOT	14.000				
84200500	REM LT UNIT SALV	EACH	5.000				
84200804	REM POLE FDN	EACH	2.000				

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84400105	RELOC EX LT UNIT	EACH	2.000				
89000200	TEMP TR SIG INSTALL	L SUM	1.000				
89502300	REM ELCBL FR CON	FOOT	5,000.000				

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM / EROSION AND SEDIMENT CONTROL DEFICIENCY DEDUCTION (BDE)	210
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Revised 09/03/2010

REMOVE AND REINSTALL SIGNAL EQUIPMENT

Description. This work will consist of removal of various signal equipment as shown on the plans or as directed by the Commissioner, secure storage of said equipment, and reinstallation of these items at their original location.

General Requirements. The contractor shall remove steel monotube mast arms, bracket mounted and mast arm mounted traffic signals, pedestrian signals, foundation (on the southeast quadrant of the Cicero Intersection), and existing steel street lighting poles located in the northeast and southeast quadrants of the intersection of Cicero Ave. and Elston Ave. to facilitate bridge reconstruction.

Following completion of the conflicting bridge work, the foundation and conduit on the southeast corner will be installed, the stored poles shall be painted and reinstalled on the foundations and signal equipment shall be reinstalled at their original locations in their original operating condition. Any damage to the equipment incurred during removal, storage, or reinstallation shall be repaired, or equipment replaced, by the contractor at no additional compensation. The engineer shall be the sole judge as to the adequacy of repairs or need for replacement equipment.

Method of Measurement. This work will be measured per signal equipment removed and reinstalled per intersection as listed on the plans.

Basis of Payment. This work will be paid for at the contract unit price Lump Sum for REMOVE AND REINSTALL SIGNAL EQUIPMENT, which price shall be considered payment in full for all labor and material necessary to perform the work as described above.

REMOVE AND REINSTALL LIGHTING EQUIPMENT

Description. This work will consist of removal of various street lighting equipment as shown on the plans or as directed by the Commissioner, secure storage of said equipment, and reinstallation of these items at their original location.

General Requirements. The contractor shall remove steel light poles, bracket arms, and luminaires from existing steel street lighting pole concrete foundations located in the northeast and southeast quadrants of the intersection of Cicero Ave. and Elston Ave. to facilitate bridge reconstruction. The existing concrete foundations and anchor bolts shall be protected from damage in a manner approved by the engineer.

Following completion of the bridge work, the stored lighting equipment shall be reinstalled at their original locations in their original operating condition. Any damage to the equipment incurred during removal, storage, or reinstallation shall be repaired, or equipment replaced, by the contractor at no additional compensation. The engineer shall be the sole judge as to the adequacy of repairs or need for replacement equipment.

Method of Measurement. This work will be measured per lighting equipment removed and reinstalled per intersection as listed on the plans.

Basis of Payment. This work will be paid for at the contract unit price Lump Sum for REMOVE AND REINSTALL LIGHTING EQUIPMENT, which price shall be considered payment in full for all labor and material necessary to perform the work as described above.

Revised 09/03/2010

ITEM 124, GALVANIZED STEEL CONDUIT IN TRENCH 2"
ITEM 126, GALVANIZED STEEL CONDUIT IN TRENCH 3"
ITEM 127, GALVANIZED STEEL CONDUIT IN TRENCH 4"

ITEM 128, GALVANIZED STEEL CONDUIT PUSHED 2"
ITEM 135, GALVANIZED STEEL CONDUIT PUSHED 3"

ITEM 123B, GALVANIZED STEEL CONDUIT ATTACHED TO STRUCTURE 3/4"
ITEM 129, GALVANIZED STEEL CONDUIT ATTACHED TO STRUCTURE 1-1/4"
ITEM 130, GALVANIZED STEEL CONDUIT ATTACHED TO STRUCTURE 1-1/2"
ITEM 131, GALVANIZED STEEL CONDUIT ATTACHED TO STRUCTURE 2"

ITEM 131A, COILABLE NON-METALLIC CONDUIT IN TRENCH, 1.25", SCHEDULE 40
ITEM 131B, COILABLE NON-METALLIC CONDUIT IN TRENCH, 1.25", SCHEDULE 80

ITEM 132, PVC CONDUIT IN TRENCH 2"
ITEM 133, PVC CONDUIT IN TRENCH 3"
ITEM 134, PVC CONDUIT IN TRENCH 4"
ITEM 136, PVC CONDUIT IN TRENCH 2" (Schedule #80)
ITEM 137, PVC CONDUIT IN TRENCH 3" (Schedule #80)
ITEM 138, PVC CONDUIT IN TRENCH 4" (Schedule #80)

ITEM 165, GALVANIZED STEEL CONDUIT UNDER VAULTED WALK 4"
ITEM 166, GALVANIZED STEEL CONDUIT UNDER VAULTED WALK 3"
ITEM 123G, ALUMINUM CONDUIT ATTACHED TO STRUCTURE 3/4"

1. **DESCRIPTION** - this work will consist of furnishing and installing a conduit lateral of the type and size specified.
2. **MATERIALS**

Galvanized rigid steel conduit and PVC coated steel conduit must conform to the requirements of Material Specification 1462.

Polyvinyl chloride (PVC) conduit must conform to the requirements of Material Specification 1533 and to the requirements of the National Electrical Manufacturers Association Standard, Publication Number TC2 for EPC-40, or EPC-80. Conduit color will be determined by the Resident Engineer.

Coilable non-metallic conduit must be a high density polyethylene meeting the requirements of Material Specification 1533 and ASTM-D1248, Type III, Grade PE34, Category 5, and Class C. The duct must meet the requirements of Section 1088.01(c) of the Standard Specifications. The average outside diameter of the 1.25 inch duct must be 1.66 inches, with a minimum wall thickness of .15 inches for the Schedule 40 conduit, and a wall thickness of .20 for the Schedule 80 conduit. Conduit color will be as determined by the Resident Engineer.

Aluminum conduit will be rigid wall conduit with a minimum wall thickness of 0.099". The conduit will be extruded from 6063 aluminum alloy and tempered to T-1. Aluminum conduit must meet the requirements of UL-6 and ANSI C80.5.

Added 09/03/2010

3. **CONSTRUCTION.**

DEFINITION OF LATERALS - A lateral will mean a conduit raceway extending from one sub-surface location to another sub-surface location, and in every case intended to encase electric circuit cable under paved surfaces, or in unpaved parkway, street or alley, where specifically designated.

LOCATIONS - Laterals must be installed at the locations shown on the construction plans. Laterals must be installed in the shortest practicable line between points of termination, or under adverse conditions, as directed by the Resident Engineer. Laterals not shown on the drawing, but necessary to be installed will be paid for at the unit price bid for laterals as additional units of construction.

INSTALLATION REQUIREMENTS - Galvanized rigid steel conduit may be installed in a trench, pushed underground, or attached to a structure. PVC conduit will normally be installed in a trench or attached to a structure. Coilable conduit will be installed in a trench. The Contractor must exercise care in installing the conduit to ensure that it is smooth, free from sharp bends or kinks, and has the minimum practicable number of bends. Crushed or deformed conduit will not be accepted. All conduit and fittings must have the burrs and rough places smoothed, and all conduit runs must be cleaned and swabbed before installation of electric cables. If cable is not to be installed immediately after cleaning of the conduit, a light weight pulling line such as 1/8" polyethylene line must be placed in the conduit and will remain in the conduit for future work. The excavation for pushing conduit must be located at least two feet (2') from the edge of pavement. All underground conduits must have a minimum cover of thirty inches (30") below grade. If conduit cannot be installed with a minimum cover of thirty inches (30"), the conduit must be encased in concrete for protection. The method of encasement and protection must be approved by the engineer. Concrete encasement will be paid for as a separate pay item.

When multiple laterals in a common trench are required, no more than three (3) three inch (3") or smaller conduit laterals can be laid on a single, horizontal level. Four or more conduit laterals must be installed on two (2) levels in accordance with instructions of the Resident Engineer.

Conduit laterals attached to a structure must be flush to the structure where possible. Clamps or hangers must be used at a maximum interval of five feet (5') to hold the conduit rigidly in place. Fittings must be supplied and installed that are compatible with the conduit in use. Expansion couplings must be used at locations where the conduit crosses expansion joints in the structure.

Conduit laterals installed under vaulted walks must be securely attached to the retaining wall by means of galvanized clamps and clamp backs held in place by anchor bolts. Laterals will be fastened as close to the underside of the sidewalk as possible, and securing clamps installed every five feet (5'). Laterals must be continuous through party walls.

Threaded fittings and bends of the same material as conduit must be furnished and installed as required. Threadless couplings may be used only for splicing existing conduit. All conduit splices, where required, will be considered incidental to this pay item.

Added 09/03/2010

4. **METHOD OF MEASUREMENT** - The length measured will be the number of lineal feet of conduit installed and accepted, measured in place. Each conduit will be measured separately even if in a single trench. The length for measurement will be the distance horizontally between changes in the direction of the conduit plus the conduit vertically attached to structures. All conduit on structures will be measured from point to point, whether vertical or horizontal.
5. **BASIS OF PAYMENT** - This work will be paid for at the contract unit price Lump Sum for REMOVE AND REINSTALL SIGNAL EQUIPMENT, which price will be payment in full for furnishing and installing the conduit and fittings complete. Cleaning, swabbing, and p-lining of new conduit will be incidental to this pay item. Hangers, clamps, and fittings for conduit attached to structure will be incidental to this item. Trench and backfill will be paid for separately. Concrete encasement, if required, will be paid for separately. No additional payment will be allowed for pushing under pavements or for jackholes for conduit laterals.

MATERIAL SPECIFICATIONS
1462 1533

DRAWINGS
579 813

PAINT EXISTING TRAFFIC SIGNAL POLE

1. **DESCRIPTION.** This work will consist of field painting existing steel and aluminum structures including poles and arms that support street lights and traffic control signals, controller cabinets for street lights and traffic signals, traffic signal housings, and street light luminaire housings.
2. **MATERIAL.** All paints and painting materials intended for applications specified herein must be certified by the contractor to be of highest quality, must be from the same manufacturer, and must conform to the following, as applicable:
 - a. **Naptha.** The solvent to be used for wiping down all metallic surfaces prior to application of paint must be NAPTHA conforming to ASTM Standard D838.
 - b. **Primer.** This paint must meet the requirements of Section 4 (composition) and Section 5 (properties) of the Steel Structures Painting Council's Paint Specification No. 25 for red iron oxide, zinc oxide, raw linseed oil and alkyd primer as outlined in Volume 2, Systems and Specifications, Third Edition.
 - c. **Intermediate Coat.** The paint must meet the same requirements as the primer except that it will contain a contrasting shade of iron oxide/ or be tinted or shaded to produce a distinct contrast of at least 10 Hunter Delta E units compared to the primer.
 - d. **Finish Coat.** This paint must meet the requirements of Section 4 (composition) and Section 5 (properties) of the Steel Structures Painting Council's Paint Specification No. 21 for lead free white or colored silicone alkyd paint, Type 1, high gloss as outlined in Volume 2, Systems and Specifications, Third Edition.
 - e. **Color.** A paint sample must be submitted for approval prior to authorization to paint. The color will be as specified by the Engineer. The sample must be in the form of a 4" by 8" color chip.

Added 09/03/2010

The contractor must provide a field-painted sample, if requested by the Commissioner. The field sample must be of the same type of equipment to be painted and will be chosen by the Commissioner. Color will be green ,gray,, black, or another color as specified.

- f. **Product Data.** The contractor must submit the manufacturer=s technical information, label analysis, and application instructions for each material proposed for use. Each material must be listed and cross-referenced for the specific coating, finish system, and application. Each material must include the manufacturer=s catalog number.

3. Delivery, Storage, and Handling. The contractor must deliver, store, and handle the paint as herein specified.

- a. The materials must arrive at the job site in the manufacturer=s original, unopened packages and containers bearing the manufacturer=s name label, product name, product description, manufacturer=s stock number, date of manufacture, contents by volume for pigment and vehicle constituents, thinning instructions, application instructions, and color name and number.
- b. Materials to be stored should be kept in tightly covered containers in a well ventilated area at a minimum ambient temperature of 45° Fahrenheit.

4. Preparation of Surfaces.

- a. **Steel Surfaces.** Remove loose or scaling paint, dirt, oil grease, rust and foreign matter, as necessary, to receive paint. Wire brushing, where specified herein, must be done with an approved power tool operated from a portable power source. After wire brushing, the complete surface must be thoroughly wiped with a rag containing NAPTHA.
- b. **Aluminum Surfaces.** Remove loose scale and paint, dirt, oil, grease and foreign matter, as necessary, to receive paint. Wire brush surfaces, where necessary, to remove loose scale. Wire brushing, where specified herein, must be done with an approved power tool operated from a portable power source. After wire brushing, the complete surface must be thoroughly wiped with a rag containing NAPTHA.
- c. **Weather Conditions.** Do not apply paint coatings when temperature is below 40° F., or during periods of rain, fog, snow, or when relative humidity is above 85 %.
- d. **Application Conditions.** Surfaces to be painted must be clean, dry, and relatively smooth. Each paint coating must be applied smoothly and worked out evenly. Paint must be thoroughly mixed just prior to application. Thinning must be held to a minimum, and must be done only when required for proper application. Thinners to be used will be the manufacturer's recommended thinner for the paints used; mixed thoroughly to assure complete blending with the coating. Spray painting will not be permitted when wind conditions are greater than 15mph. Painting must be done as soon after cleaning as possible.

Added 09/03/2010

5. Detail Painting Requirements.

- a. Street Light Poles. Street light poles to be painted under these specifications are steel structures which will vary from twenty-seven (27) to thirty (30) feet in height, with average surface required to be painted of approximately forty-eight (48) square feet. Some rusting and/or bare spots will be encountered which the contractor will be required to wire-brush. The pole must be thoroughly wiped with NAPTHA, and the finish coating applied.
- b. Mast Arm Brackets and Electrical Luminaries. Mast arms which are attached to the street light poles will consist of 2-inch steel pipe sections which will vary between eight feet (8') and fifteen feet (15') in length. Mast arms in twelve foot (12') and 15 foot (15') sizes will have a supporting strut of two inch (2") steel pipe. Surface scale and rust will be wire-brushed, and these mast arms thoroughly wiped with NAPTHA, and finish painted .
- c. Traffic Signal Post. Aluminum and steel posts consist of five inch (5") pipe sections atop a conical base or base flange sixteen inches (16") in diameter, and will vary in height from three feet six inches (3' - 6") to twenty feet (20'). Spot scaling must be wire-brushed and the posts thoroughly wiped with NAPTHA, and finish painted.
- d. Street Light Controllers. The control cabinets will be cast aluminum and are approximately 18" x 14" x 30" in size. They will be mounted atop a three foot six inch (3' 6") high post. The Contractor will wire-brush, as necessary, and thoroughly wipe the complete cabinet and casting with NAPTHA, and apply a finish coating .

6. Basis of Payment.

This work will be paid for at the contract unit price Lump Sum for REMOVE AND REINSTALL SIGNAL EQUIPMENT, which will be payment in full for all labor and materials necessary in painting the existing equipment.

DETECTABLE WARNINGS

SUBJECT

1. This specification states the requirements for a tactile detectable warning surface tile for installation in sidewalks at curb ramps and hazardous vehicular areas.

GENERAL

2. (a) Standards. Tiles furnished under this specification must meet the appropriate requirements of the following standards, as required within the body of this specification, including:

American Society for Testing and Material (ASTM): Provide tiles that meet the requirements of the latest revisions of the referenced specifications.

Added 09/03/2010

Americans with Disabilities Act (ADA): Provide tactile warning surfaces which comply with the detectable warnings on walking surfaces section of the Americans with Disabilities Act (Title 49 CFR TRANSPORTATION, Part 37.9 STANDARDS FOR ACCESSIBLE TRANSPORTATION FACILITIES, Appendix A, Section 4.29.2 DETECTABLE WARNINGS ON WALKING SURFACES.

California Code of Regulations (CCR): Provide only approved DSAAC detectable warning products as provided in the California Code of Regulations (CCR). Title 24, Part 1, Articles 2, 3 and 4 and Part 2, Section 205 definition of "Detectable Warning". Section 1127B.5 for "Curb Ramps" and Section 1133B.8.5 for "Detectable Warnings at Hazardous Vehicle Area's".

- (b) Sample and Certified Test Reports. Two tile samples of the manufacture proposed to be furnished must be submitted along with the required certified test reports, within fifteen (15) business days upon request of the Chief Procurement Officer. The sample must be delivered to the Engineer of Electricity, Bureau of Electricity, 2451 South Ashland Avenue, Chicago, Illinois 60608.
- (c) Warranty. The manufacturer must warrant the TACTILE/DETECTABLE WARNING SURFACE TILE to meet the requirements of this specification, and must warrant all components against defective design, material and workmanship for a period of five (5) years from date of acceptance. In the event that defects or failures occur during the warranty period, the manufacturer must repair and/or replace all defective materials at no expense to the City. This warranty must be evidenced by a letter or certificate of warranty submitted to the City at the time final delivery is made. The warranty must cover all units delivered in an order. The warranty must be signed by an official of the manufacturer who is empowered by the manufacturer to enter into such an agreement.

MATERIAL REQUIREMENTS

- 3. (a) Reinforced Ceramic Cement (RCC). Tiles are to be composite concrete panels, composed of a ceramic cement blend. Only one brand, type, and source of cement should be used throughout the production run. Aggregate and water must be added to the cement in proper proportions. The water must be free from foreign materials in amounts harmful to the concrete. Any admixtures must conform to ASTM C260 for air entrapment, ASTM C494 for chemical admixtures, or ASTM C618 for fly ash or natural pozzolan admixtures, at the manufacturer's option. Admixtures that contain more than 0.1% chloride ions are not acceptable.
- (b) Coloring Agent.
 - 1. The coloring agent must conform to ASTM C979. It must be ultraviolet resistant, high temperature stable, and harmless to concrete set or strength.
 - 2. The amount of coloring agent must not exceed 10% of the cement weight.
 - 3. Color: The color must be Federal Brick Red 30166. The color must be homogeneous throughout the tile.

Added 09/03/2010

- (c) Anchors and Subsystems. Each RCC panel is to be attached to the supporting concrete with a minimum of 2-4 4 ABS anchors in the top horizontal plane and in the preformed holes.

DIMENSIONS

4. (a) Tile Surface. The tile must incorporate an in-line dome pattern of truncated domes 0.2" in height, 0.9" diameter at the base, and 0.4" diameter at top of dome spaced 2.35" nominal as measured on a diagonal and 1.70" nominal as measured side by side. For wheelchair safety the field area must consist of a non-slip surface with a minimum of 40 - 90° raised points 0.045" high, per square inch. The depth of the tiles must be between 0.5" to 1.5".
- (b) Tile Dimensions. Tiles must be available in the following shapes and overall dimensions. Tiles which differ slightly in dimensions will be considered.
1. Square tiles with length and width: 24" x 24"
 2. Triangular: 12" x 24"
 3. Radii of 4', 6', 8', 12' and 15'

PERFORMANCE REQUIREMENTS

5. (a) Water Absorption. Water absorption must not exceed + 0.35%, per ASTM-D570.
- (b) Slip Resistance. The wet/dry static co-efficient of friction must be + 0.90 on top of the domes and field area, per ASTM-C1028.
- (c) Compressive Strength should be + 18,000 psi, per ASTM-D 695-91.
- (d) Tensile Strength should be + 10,000 psi, per ASTM-D 638-91.
- (e) Flexural Strength should be + 24,000 psi, per ASTM - C293-94.
- (f) Chemical Stain Resistance: +1% hydrochloric acid, urine, calcium chloride, stamp pad ink, gum and red aerosol paint, ASTM-D 543-87 to withstand without discoloration or staining.
- (g) Abrasive Wear: BYK - Gardner Tester ASTM-D 2486* with reciprocating linear motion of 37 cycles per minute over a 10" travel. The abrasive medium, a 40-grit Norton Metallite sand paper, to be fixed and leveled to a holder. The combined mass of the sled, weight and wood block to be 3.2 lb. Average wear depth must not exceed 0.030 after 1000 abrasion cycles measured on the top surface of the dome representing the average of three measurement locations per sample.
- (h) Fire Resistance: flame spread – 25, ASTM E84.
- (i) Gardner Impact to geometry "GE" of the standard when tested by ASTM-D 5420-93 to have a mean failure energy expressed as a function of specimen thickness of not less than 450 in. 1bf/in. A failure is noted if a hairline fracture is visible in the specimen.

Added 09/03/2010

- (j) Accelerated Weathering of Tile when tested by ASTM-G26-95 for 2000 hours must exhibit the following result - no deterioration, fading or chalking of surface of tile.

TESTING AND DOCUMENTATION REQUIREMENTS

6. (a) The contractor must provide certified manufacturing and testing documentation to demonstrate that the TACTILE/DETECTABLE WARNING SURFACE TILE being supplied meets or exceeds the specification requirements. Testing must be conducted by an independent and certified testing laboratory.
- (b) Maintenance Instructions: Contractor must submit copies of manufacturer's specified maintenance practices for tactile system and accessories as required.
- (c) Manufacturer's specifications stating required materials, equipment, and installation procedures.

BASIS OF PAYMENT

This work will be paid for at the contract unit price per square foot for DETECTABLE WARNINGS, which price shall be considered payment in full for all labor and material necessary to perform the work as described above.

**SPECIFICATION 1467
DIVISION OF ELECTRICAL OPERATIONS
DEPARTMENT OF TRANSPORTATION
CITY OF CHICAGO
MAY 12, 1993**

ROD: ANCHOR, STEEL, WITH HARDWARE

SUBJECT

1. This specification states the requirements for steel anchor rods with hardware for street light pole foundations.

GENERAL

2. (a) Specifications. The anchor rods shall conform in detail to the requirements herein stated, and to the specifications of the American Society for Testing and Materials cited by ASTM Designation Number, of which the most recently published revision will govern.
- (b) Drawing. The drawings mentioned herein are issued by the Department of Transportation, Division of Electrical Operations, and are an integral part of this specification.

ANCHOR ROD

3. (a) Fabrication. Each anchor rod must be fabricated in conformity with City of Chicago drawings numbered 806, 811, 830 and 844.

Added 09/03/2010

(b)Material. The rods must be fabricated from cold rolled carbon steel bar meeting the requirements of ASTM Specification A-36, except that the Specification must be modified to provide a minimum yield point of 55,000 psi (379 MPa).

(c)Thread. The straight end of each rod must be threaded as shown on City of Chicago drawing for that size rod, and must be American Standard, National Coarse.

HARDWARE

4. Hardware furnished with the anchor rod shall be as shown on the applicable drawing. It must include two (2) hexagonal nuts, American Standard Regular, two (2) flat washers, type B, series W, and one (1) lock washer, steel, helical spring. The nuts must have a Class 2 or 3 fit.

FINISH

5. (a) Galvanizing. The threaded end of each rod must be hot dipped galvanized for the distance shown on the applicable drawing. The thickness of the galvanized coating must not be less than 0.0021 inches. Each hexagonal nut and washer must be galvanized to the minimum thickness required by ASTM A-153, Class C, or ASTM B-454, Class 50. After galvanization, each anchor rod and nut must have a mating fit equivalent to the American Standard Class 2 or 3 fit for nuts and bolts.

(b) Rust Inhibitor. With the hardware in place on the end of the bolt, the galvanized portion of the bolt must be coated with heavy No-Ox-Id or equal rust inhibiting greasy compound.

TESTS

6. At the discretion of the Commissioner, anchor rods and hardware furnished under this specification will be subject to testing to determine compliance with the materials physical requirements.

INSPECTION

7. Final inspection must be made at point of delivery. Any anchor rods and hardware rejected must be removed by the Contractor at his sole expense.

THIS SPECIFICATION SHALL NOT BE ALTERED

Added 09/03/2010

SPECIFICATION 1465
DIVISION OF ELECTRICAL OPERATIONS
DEPARTMENT OF TRANSPORTATION
CITY OF CHICAGO
REVISED JULY 12, 2006

GROUND RODS

SUBJECT

1. This specification states requirements for ground rods and clamps to be used for ground electrodes in street lighting, traffic signal, and miscellaneous electrical circuits.

GENERAL

2. (a) Ground rods must be copper clad, steel rods suitable for driving into the ground without deformation of the rod or scoring, separation or other deterioration of the copper cladding.
(b) Sample. If requested by the Chief Procurement Officer, the contractor must furnish one sample of the ground rod proposed to be furnished within fifteen (15) business days from receipt of such request. The sample ground rod must be delivered to the Engineer of Electricity, 2451 S. Ashland Avenue, Chicago, Illinois 60608.
(c) Warranty. The manufacturer shall warrant every ground rod against defects due to design, workmanship, or material developing within a period of one (1) year after the ground rod has been accepted. Any ground rod which fails during this period must be replaced by the contractor without expense to the City. The Commissioner of Transportation or his duly authorized representative will be the sole judge in determining which replacements are to be made.
(d) The Commissioner will be the sole judge in determining whether the submitted ground rods meet the requirements of this specification. Ground rods not accepted must be removed at the sole expense of the contractor.

DESIGN

3. (a) The ground rods and couplings must meet the latest requirements of (National Electrical Manufacturer's Association) NEMA Standard GR-1, for copper bonded ground rod electrodes and couplings. The ground rods must also meet the requirements of (Underwriters' Laboratories) UL 467.
(b) Ground rods shall be made of steel core suitable for driving into the earth without deformation.

Added 09/03/2010

- (c) A uniform covering of electrolytic copper, 10 mils in thickness, shall be metallicly bonded to the steel core to provide a corrosion resistant, inseparable bond between the steel core and the copper overlay.
- (d) The finished rod must be of uniform cross-section; straight, and free of nicks, cuts or protuberances.
- (e) The rod must be pointed at one end and chamfered at the other.
- (f) All ground rods must be three-quarter inches (3/4") in diameter. The length shall be as specified in the order or in the plans. The length and diameter of the rod and the manufacturer must be clearly and permanently marked near the top of the rod (chamfered end).
- (g) All ground rods must have a ground clamp capable of accommodating a No. 6 AWG Copper Wire.

PACKING

- 4. (a) Ground rods must be packed in bundles with reinforced tape or plastic banding that will not damage the rods. Small bundles may then be bound in larger bundles held together with steel banding.
- (b) Ground clamps must be packed in a suitable carton. The carton must be labeled to indicate the contents.

THIS SPECIFICATION SHALL NOT BE ALTERED

Added 09/03/2010