



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

January 12, 2012

SUBJECT: FAP Route 307 (IL 64)
Project NHF-0307 (033)
Section 130 R-2
Kane & DuPage Counties
Contract No. 62410
Item No. 144, January 20, 2012 Letting
Addendum B

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 pages 48, 51, 52, 55-58, 64, 65, 108, 123-132, 191 & 192 of the Special Provisions.
4. Added pages 312 - 314 to the Special Provisions
5. Revised sheets 1, 2, 4-15, 15A, 24-28, 32, 33, 35, 39-42, 45, 46, 48, 49, 56, 57, 74, 105, 126, 136, 146, 166, 169, 170, 173, 178, 185, 190, 259, 262, 268, 321-324, 327-329, 332, 334, 336, 342, 345, 348, 355, 358, 361, 368, 372, 372D, 377, 378A, 380, 382, 384, 404, 406, 416-419, 421, 428, 429, 552-557, 573-575 & 639 of the Plans.
6. Added sheet 191A 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 black ink, appearing to read 'Ted B. Walschleger' with a small 'P.E.' to the right.

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 - 62410

State Job # - C-91-101-02
 PPS NBR - 1-71674-0100
 County Name - VARIOUS- DUPAGE- KANE
 Code - 0 - 43 - 89
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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
A2000220	T-ACERX FREM MM 2-1/2	EACH	19.000				
A2002376	T-BETULA NIGRA CL 12'	EACH	27.000				
A2002920	T-CELTIS OCCID 2-1/2	EACH	21.000				
A2004820	T-GLED TRI-I SK 2-1/2	EACH	43.000				
A2005020	T-GYMNOCLA DIO 2-1/2	EACH	40.000				
A2006516	T-QUERCUS BICOL 2	EACH	27.000				
A2006716	T-QUERCUS MACR 2	EACH	12.000				
B2000764	T-AMEL X GF AB SF 5'	EACH	9.000				
B2001666	T-CRATAE CRU-I SF 6'	EACH	18.000				
B2003366	T-MALUS DW CL 6'	EACH	4.000				
C2C01424	S-CORNUS AMOMUM 2'C	EACH	165.000				
C2000436	S-ARONIA ARB BRIL 3'	EACH	10.000				
K0012990	P PL ORNAMENT T GAL P	UNIT	10.000				
K0026850	PERENNIAL PLANT CARE	SQ YD	333.000				
K0029634	WEED CONTR PRE-EM GRN	POUND	40.000				

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K1001988	IRRIGATION SYSTEM SPL	L SUM	1.000				
XK029632	WEED CONT NS/NR WETLN	GALLON	2.500				
XX004907	GATE VL 12 W/ VLT 5D	EACH	5.000				
XX006653	FENCE (SPECIAL)	FOOT	5,081.000				
XX007558	GATE VALVE 6 VAULT 4	EACH	1.000				
X0301797	GATE REMOVAL	EACH	2.000				
X0322936	REMOV EX FLAR END SEC	EACH	116.000				
X0322992	COARSE SAND PLACE 4	SQ YD	111.000				
X0323003	TEMP ELECT SERV INST	EACH	1.000				
X0323149	TEMP M S EARTH RET WL	SQ FT	8,060.000				
X0324907	TEMP MAST ARM 15	EACH	4.000				
X0325134	WIRELESS INTERCON COM	EACH	1.000				
X0325225	BRICK PAVT REM & REPL	SQ FT	222.000				
X0325938	TEMP WIR INTERCON COM	L SUM	1.000				
X0326148	TEMP WP 60 CL4 15 MA	EACH	23.000				

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X0326884	TS WOOD POLE 45 CL 5	EACH	4.000				
X0326885	VIDEO DETECT SYS	EACH	1.000				
X0327024	FIRE HYDNT REM & SALV	EACH	4.000				
X0327139	AGG COLUMN GRND IMPRV	L SUM	1.000				
X0327294	STORM SEWERS GROUTED	CU YD	23.000				
X0327367	STL CAS P BOR/JKD 24	FOOT	140.000				
X0327368	SAN SEWER DI 12	FOOT	20.000				
X0327369	SAN SEWER DI 10	FOOT	20.000				
X0327371	PLUG EXISTING PIPE	CU YD	67.000				
X0487700	SAN SEW REMOV 10	FOOT	20.000				
X0487800	SAN SEW REMOV 12	FOOT	20.000				
X2010400	STUMP REMOVAL ONLY	UNIT	95.000				
X2070304	POROUS GRAN EMB SPEC	CU YD	497.000				
X2130010	EXPLOR TRENCH SPL	FOOT	500.000				
X4021000	TEMP ACCESS- PRIV ENT	EACH	10.000				

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X4022000	TEMP ACCESS- COM ENT	EACH	37.000				
X4023000	TEMP ACCESS- ROAD	EACH	13.000				
*ADD X4024100	TEMP ACCESS WINTERIZE	SQ YD	5,769.000				
X4400100	PCC SURF REM VAR DP	SQ YD	2,670.000				
X4400110	TEMP PAVT REMOVAL	SQ YD	9,904.000				
X4421000	PARTIAL DEPTH PATCH	TON	200.000				
X5537800	SS CLEANED 12	FOOT	793.000				
X5537900	SS CLEANED 15	FOOT	382.000				
X5538200	SS CLEANED 24	FOOT	188.000				
X5538400	SS CLEANED 30	FOOT	578.000				
X5620035	WAT SER CONN 1 1/2	EACH	1.000				
X5640050	CAP EXST FIRE HYDRANT	EACH	4.000				
X5640150	FIRE HYDNT ASSY COMP	EACH	5.000				
X6020096	MH TA 6D W/2 T1FCL RP	EACH	8.000				
X6030310	FR & LIDS ADJUST SPL	EACH	22.000				

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X6640300	CH LK FENCE REMOV	FOOT	621.000				
X6640308	CH LK GATES SPL	EACH	1.000				
X6700410	ENGR FLD OFF A SPL	CAL MO	24.000				
X7010216	TRAF CONT & PROT SPL	L SUM	1.000				
X7030025	WET REF TEM TP T3 L&S	SQ FT	2,031.000				
*REV X7030030	WET REF TEM TAPE T3 4	FOOT	176,423.000				
X7030040	WET REF TEM TAPE T3 6	FOOT	4,910.000				
X7030050	WET REF TEM TPE T3 12	FOOT	94.000				
X7030055	WET REF TEM TPE T3 24	FOOT	1,521.000				
X7200054	RM-STK-RPL SN P/SPA S	EACH	19.000				
X7330064	SIGN SUPPORT SPL	EACH	4.000				
X8000020	EM VEH P DET SUPP PM	EACH	1.000				
X8100053	CON ENC 6 GALVS	FOOT	12.000				
X8210015	TEMP LUM HPSV 400	EACH	27.000				
X8250070	TEMP LIGHT CONTR IO	EACH	1.000				

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X8250505	LIGHT CONTROLLER SPL	EACH	3.000				
*REV X8302405	LT P A 20MH 6MA	EACH	32.000				
*REV X8302415	LT P A 20MH 6MA-TW	EACH	15.000				
X8570226	FAC T4 CAB SPL	EACH	8.000				
X8620200	UNINTER POWER SUP SPL	EACH	8.000				
X8710012	FOCC INSTALL ONLY	FOOT	1,000.000				
X8730250	ELCBL C 20 3C TW SH	FOOT	5,135.000				
X8730255	ELCBL AS 20 3C TW SH	FOOT	1,163.000				
X8800025	SH LED 1F 3S SWM	EACH	24.000				
*ADD X8900008	TEMP TR SIG INSTAL SP	EACH	1.000				
Z0001050	AGG SUBGRADE 12	SQ YD	200,260.000				
Z0004552	APPROACH SLAB REM	SQ YD	361.000				
Z0004562	COMB C C&G REM & REPL	FOOT	322.000				
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000				
Z0018500	DRAINAGE STR CLEANED	EACH	6.000				

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Z0026407	TEMP SHT PILING	SQ FT	5,967.000				
Z0030275	IMP ATTN TEMP SUN TL2	EACH	4.000				
Z0030355	IMP ATTN REL S U TL2	EACH	4.000				
Z0030850	TEMP INFO SIGNING	SQ FT	1,670.000				
*REV Z0033020	LUM SFTY CABLE ASMBLY	EACH	213.000				
Z0033028	MAINTAIN LIGHTING SYS	CAL MO	18.000				
Z0033046	RE-OPTIMIZE SIG SYS 2	EACH	1.000				
Z0033056	OPTIM TRAF SIGNAL SYS	EACH	1.000				
Z0034210	MECH ST EARTH RET WL	SQ FT	39,027.000				
Z0042002	POROUS GRAN EMB SUBGR	CU YD	39,001.000				
Z0045450	PRESS CONN 12 VLT 5	EACH	1.000				
Z0046304	P UNDR FOR STRUCT 4	FOOT	299.000				
Z0048665	RR PROT LIABILITY INS	L SUM	1.000				
Z0056612	STORM SEW WM REQ 18	FOOT	233.000				
*REV Z0056618	STORM SEW WM REQ 27	FOOT	52.000				

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Z0062456	TEMP PAVEMENT	SQ YD	8,860.000				
Z0062458	TEMP PAVEMT VAR DEPTH	TON	484.300				
Z0065704	BIT CT AG SLOPEWALL 6	SQ YD	1,673.000				
Z0073002	TEMP SOIL RETEN SYSTM	SQ FT	8,461.000				
Z0073510	TEMP TR SIGNAL TIMING	EACH	5.000				
20100500	TREE REMOV ACRES	ACRE	0.300				
20101100	TREE TRUNK PROTECTION	EACH	40.000				
20200100	EARTH EXCAVATION	CU YD	53,183.000				
20201200	REM & DISP UNS MATL	CU YD	21,590.000				
*REV 20400800	FURNISHED EXCAVATION	CU YD	61,154.000				
*REV 20800150	TRENCH BACKFILL	CU YD	5,132.000				
*ADD 21001000	GEOTECH FAB F/GR STAB	SQ YD	200,260.000				
21101615	TOPSOIL F & P 4	SQ YD	71,384.000				
21101685	TOPSOIL F & P 24	SQ YD	27,392.000				
21101805	COMPOST F & P 2	SQ YD	36,581.000				

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25000210	SEEDING CL 2A	ACRE	18.800				
25000310	SEEDING CL 4	ACRE	7.500				
25000314	SEEDING CL 4B	ACRE	2.200				
25000400	NITROGEN FERT NUTR	POUND	2,745.000				
25000500	PHOSPHORUS FERT NUTR	POUND	2,745.000				
25000600	POTASSIUM FERT NUTR	POUND	2,745.000				
25000775	SELECT MOWING STAKES	EACH	15.000				
25100115	MULCH METHOD 2	ACRE	28.500				
25100630	EROSION CONTR BLANKET	SQ YD	135,303.000				
25200110	SODDING SALT TOLERANT	SQ YD	29,838.000				
25200200	SUPPLE WATERING	UNIT	298.200				
28000250	TEMP EROS CONTR SEED	POUND	16,907.000				
28000305	TEMP DITCH CHECKS	FOOT	790.000				
*ADD 28000315	AGG DITCH CHECKS	TON	20.000				
28000400	PERIMETER EROS BAR	FOOT	30,761.000				

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28000500	INLET & PIPE PROTECT	EACH	170.000				
28000510	INLET FILTERS	EACH	249.000				
28100107	STONE RIPRAP CL A4	SQ YD	113.000				
*ADD 28100205	STONE RIPRAP, CLASS A3	TON	59.600				
28200200	FILTER FABRIC	SQ YD	113.000				
31101200	SUB GRAN MAT B 4	SQ YD	7,740.000				
31200502	STAB SUBBASE HMA 4.5	SQ YD	192,674.000				
*ADD 35300500	TOPSOIL F & P 4	SQ YD	5,397.000				
*ADD 35400500	PCC BASE CSE W 10	SQ YD	169.000				
35501312	HMA BASE CSE 7	SQ YD	2,339.000				
*REV 40600100	BIT MATLS PR CT	GALLON	24,978.000				
*REV 40600300	AGG PR CT	TON	453.700				
40600400	MIX CR JTS FLANGEWYS	TON	52.000				
*REV 40600827	P LB MM IL-4.75 N50	TON	1,983.300				
40600895	CONSTRUC TEST STRIP	EACH	2.000				

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40600982	HMA SURF REM BUTT JT	SQ YD	251.000				
40600985	PCC SURF REM BUTT JT	SQ YD	614.000				
40601005	HMA REPL OVER PATCH	TON	91.000				
40603080	HMA BC IL-19.0 N50	TON	294.800				
40603335	HMA SC "D" N50	TON	585.100				
*REV 40603595	P HMA SC "F" N90	TON	5,004.700				
*REV 42000501	PCC PVT 10 JOINTED	SQ YD	155,948.000				
*REV 42001300	PROTECTIVE COAT	SQ YD	199,368.000				
42001420	BR APPR PVT CON (PCC)	SQ YD	2,159.000				
42300400	PCC DRIVEWAY PAVT 8	SQ YD	5,401.000				
*REV 42400200	PC CONC SIDEWALK 5	SQ FT	31,468.000				
42400800	DETECTABLE WARNINGS	SQ FT	261.000				
44000100	PAVEMENT REM	SQ YD	114,360.000				
44000157	HMA SURF REM 2	SQ YD	2,875.000				
44000159	HMA SURF REM 2 1/2	SQ YD	20,342.000				

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44000200	DRIVE PAVEMENT REM	SQ YD	7,801.000				
44000500	COMB CURB GUTTER REM	FOOT	16,125.000				
44000600	SIDEWALK REM	SQ FT	10,007.000				
44002216	HMA RM OV PATCH 4	SQ YD	405.000				
44003100	MEDIAN REMOVAL	SQ FT	8,075.000				
44004250	PAVED SHLD REMOVAL	SQ YD	10,548.000				
44022029	PARTIAL DEPTH REM 3	SQ YD	1,180.000				
44201765	CL D PATCH T2 10	SQ YD	180.000				
44201769	CL D PATCH T3 10	SQ YD	96.000				
44201771	CL D PATCH T4 10	SQ YD	428.000				
48101620	AGGREGATE SHLDS B 10	SQ YD	5,695.000				
48300500	PCC SHOULDERS 10	SQ YD	30,879.000				
50100100	REM EXIST STRUCT	EACH	1.000				
50102400	CONC REM	CU YD	139.000				
50104400	CONC HDWL REM	EACH	13.000				

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50105220	PIPE CULVERT REMOV	FOOT	4,463.000				
50157300	PROTECTIVE SHIELD	SQ YD	4,542.000				
50200100	STRUCTURE EXCAVATION	CU YD	8,018.000				
50300225	CONC STRUCT	CU YD	2,947.300				
50300255	CONC SUP-STR	CU YD	1,575.500				
50300260	BR DECK GROOVING	SQ YD	3,710.000				
50300280	CONCRETE ENCASEMENT	CU YD	173.500				
50300300	PROTECTIVE COAT	SQ YD	8,024.000				
50500105	F & E STRUCT STEEL	L SUM	1.000				
50500505	STUD SHEAR CONNECTORS	EACH	21,996.000				
*DELETE 50606704	C & P STRUCT STL L1	L-SUM	1.000				
*REV 50800105	REINFORCEMENT BARS	POUND	7,590.000				
50800205	REINF BARS, EPOXY CTD	POUND	752,420.000				
50800515	BAR SPLICERS	EACH	2,676.000				
51201800	FUR STL PILE HP14X73	FOOT	16,932.000				

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51202305	DRIVING PILES	FOOT	16,932.000				
51203800	TEST PILE ST HP14X73	EACH	5.000				
51204650	PILE SHOES	EACH	328.000				
51500100	NAME PLATES	EACH	1.000				
52000020	PREF JOINT SEAL 1 3/4	FOOT	300.000				
52000110	PREF JT STRIP SEAL	FOOT	299.000				
52100010	ELAST BEARING ASSY T1	EACH	52.000				
52100020	ELAST BEARING ASSY T2	EACH	52.000				
52100520	ANCHOR BOLTS 1	EACH	104.000				
52100530	ANCHOR BOLTS 1 1/4	EACH	104.000				
52100540	ANCHOR BOLTS 1 1/2	EACH	52.000				
54001001	BOX CUL END SEC C1	EACH	6.000				
54001002	BOX CUL END SEC C2	EACH	4.000				
54001003	BOX CUL END SEC C3	EACH	2.000				
54010302	PCBC 3X2	FOOT	573.000				

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54010402	PCBC 4X2	FOOT	318.000				
54010704	PCBC 7X4	FOOT	174.000				
*REV 542A0217	P CUL CL A 1 12	FOOT	2,379.000				
542A0223	P CUL CL A 1 18	FOOT	122.000				
542A0226	P CUL CL A 1 21	FOOT	48.000				
542A0229	P CUL CL A 1 24	FOOT	130.000				
54213657	PRC FLAR END SEC 12	EACH	94.000				
54213660	PRC FLAR END SEC 15	EACH	3.000				
54213663	PRC FLAR END SEC 18	EACH	7.000				
54213666	PRC FLAR END SEC 21	EACH	2.000				
54213669	PRC FLAR END SEC 24	EACH	6.000				
54213672	PRC FLAR END SEC 27	EACH	2.000				
54214713	PRCF END S EL EQRS 18	EACH	2.000				
54214719	PRCF END S EL EQRS 24	EACH	1.000				
54214722	PRCF END S EL EQRS 27	EACH	1.000				

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54214725	PRCF END S EL EQRS 30	EACH	1.000				
54214731	PRCF END S EL EQRS 36	EACH	1.000				
54247130	GRATING-C FL END S 24	EACH	6.000				
54247140	GRATING-C FL END S 27	EACH	3.000				
54247150	GRATING-C FL END S 30	EACH	1.000				
54248130	GRT-C FL END S EQV 24	EACH	1.000				
54248160	GRT-C FL END S EQV 36	EACH	1.000				
54248510	CONCRETE COLLAR	CU YD	35.000				
*REV 550A0050	STORM SEW CL A 1 12	FOOT	1,527.000				
550A0070	STORM SEW CL A 1 15	FOOT	580.000				
550A0090	STORM SEW CL A 1 18	FOOT	75.000				
550A0130	STORM SEW CL A 1 27	FOOT	30.000				
550A0140	STORM SEW CL A 1 30	FOOT	194.000				
*REV 550A0340	STORM SEW CL A 2 12	FOOT	4,176.000				
*REV 550A0360	STORM SEW CL A 2 15	FOOT	5,429.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
550A0380	STORM SEW CL A 2 18	FOOT	1,782.000				
550A0400	STORM SEW CL A 2 21	FOOT	1,426.000				
550A0410	STORM SEW CL A 2 24	FOOT	3,193.000				
*REV 550A0420	STORM SEW CL A 2 27	FOOT	1,644.000				
550A0430	STORM SEW CL A 2 30	FOOT	1,185.000				
550A4000	SS CL A 1 EQRS 18	FOOT	335.000				
550A4100	SS CL A 1 EQRS 24	FOOT	257.000				
*REV 550A4200	SS CL A 1 EQRS 27	FOOT	465.000				
*REV 550A4300	SS CL A 1 EQRS 30	FOOT	400.000				
550A4500	SS CL A 1 EQRS 36	FOOT	156.000				
55100500	STORM SEWER REM 12	FOOT	1,459.000				
55100700	STORM SEWER REM 15	FOOT	1,087.000				
55100900	STORM SEWER REM 18	FOOT	1,025.000				
55101200	STORM SEWER REM 24	FOOT	1,667.000				
55101300	STORM SEWER REM 27	FOOT	117.000				

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55101400	STORM SEWER REM 30	FOOT	651.000				
55101600	STORM SEWER REM 36	FOOT	124.000				
56103550	DI WATER MAIN CL52 12	FOOT	2,114.000				
56400300	FIRE HYDNPTS TO BE ADJ	EACH	24.000				
58700300	CONCRETE SEALER	SQ FT	2,668.000				
59100100	GEOCOMPOSITE WALL DR	SQ YD	180.000				
*REV 60100060	CONC HDWL FOR P DRAIN	EACH	54.000				
60103500	PIPE DRAINS CS 12	FOOT	100.000				
*REV 60107700	PIPE UNDERDRAINS 6	FOOT	44,433.000				
*REV 60108200	PIPE UNDERDRAIN 6 SP	FOOT	2,626.000				
60200805	CB TA 4 DIA T8G	EACH	3.000				
60201310	CB TA 4 DIA T20F&G	EACH	2.000				
60201340	CB TA 4 DIA T24F&G	EACH	174.000				
60204505	CB TA 5 DIA T8G	EACH	3.000				
60218400	MAN TA 4 DIA T1F CL	EACH	49.000				

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60221100	MAN TA 5 DIA T1F CL	EACH	52.000				
60222240	MAN TA 5 DIA T24F&G	EACH	2.000				
60223800	MAN TA 6 DIA T1F CL	EACH	6.000				
60224446	MAN TA 7 DIA T1F CL	EACH	4.000				
*REV 60224459	MAN TA 8 DIA T1F CL	EACH	2.000				
60234200	INLETS TA T1F OL	EACH	14.000				
60237420	INLETS TA T20F&G	EACH	12.000				
60237470	INLETS TA T24F&G	EACH	32.000				
60240215	INLETS TB T1F CL	EACH	1.000				
60240328	INLETS TB T24F&G	EACH	3.000				
60250200	CB ADJUST	EACH	12.000				
60255500	MAN ADJUST	EACH	28.000				
60265700	VV ADJUST	EACH	28.000				
60265900	VV ADJ NEW T1F CL	EACH	1.000				
60300105	FR & GRATES ADJUST	EACH	5.000				

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60300305	FR & LIDS ADJUST	EACH	5.000				
60404950	FR & GRATES T24	EACH	2.000				
60500040	REMOV MANHOLES	EACH	39.000				
60500050	REMOV CATCH BAS	EACH	43.000				
60500060	REMOV INLETS	EACH	31.000				
60500205	FILL CATCH BAS	EACH	5.000				
60500305	FILL INLETS	EACH	12.000				
60600605	CONC CURB TB	FOOT	904.000				
60602800	CONC GUTTER TB	FOOT	185.000				
60603800	COMB CC&G TB6.12	FOOT	1,870.000				
60605000	COMB CC&G TB6.24	FOOT	32,318.000				
60607400	COMB CC&G TB9.24	FOOT	500.000				
60620000	CONC MED TSB6.24	SQ FT	16,518.000				
60621200	CONC MED TSB9.24	SQ FT	1,596.000				
63100089	TRAF BAR TERM T6B	EACH	2.000				

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63100167	TR BAR TRM T1 SPL TAN	EACH	2.000				
63200310	GUARDRAIL REMOV	FOOT	2,419.000				
66400305	CH LK FENCE 6	FOOT	514.000				
66408000	CH LK GATES 6X20 DBL	EACH	1.000				
66408200	CH LK GATES 6X24 DBL	EACH	1.000				
66900200	NON SPL WASTE DISPOSL	CU YD	3,578.000				
66900450	SPL WASTE PLNS/REPORT	L SUM	1.000				
66900530	SOIL DISPOSAL ANALY	EACH	7.000				
67000600	ENGR FIELD LAB	CAL MO	18.000				
67100100	MOBILIZATION	L SUM	1.000				
70100310	TRAF CONT-PROT 701421	L SUM	1.000				
70100320	TRAF CONT-PROT 701422	L SUM	1.000				
70100450	TRAF CONT-PROT 701201	L SUM	1.000				
70100500	TRAF CONT-PROT 701326	L SUM	1.000				
70102625	TR CONT & PROT 701606	L SUM	1.000				

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70102630	TR CONT & PROT 701601	L SUM	1.000				
70102632	TR CONT & PROT 701602	L SUM	1.000				
70102635	TR CONT & PROT 701701	L SUM	1.000				
70102640	TR CONT & PROT 701801	L SUM	1.000				
70103815	TR CONT SURVEILLANCE	CAL DA	300.000				
70106800	CHANGEABLE MESSAGE SN	CAL MO	40.000				
70300100	SHORT TERM PAVT MKING	FOOT	2,530.000				
70300210	TEMP PVT MK LTR & SYM	SQ FT	990.000				
70300220	TEMP PVT MK LINE 4	FOOT	6,890.000				
70300240	TEMP PVT MK LINE 6	FOOT	9,520.000				
70300250	TEMP PVT MK LINE 8	FOOT	120.000				
70300260	TEMP PVT MK LINE 12	FOOT	1,000.000				
70300280	TEMP PVT MK LINE 24	FOOT	670.000				
70301000	WORK ZONE PAVT MK REM	SQ FT	67,304.000				
70400100	TEMP CONC BARRIER	FOOT	4,000.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
70400200	REL TEMP CONC BARRIER	FOOT	4,000.000				
72000100	SIGN PANEL T1	SQ FT	1,428.900				
72000200	SIGN PANEL T2	SQ FT	423.300				
72400100	REMOV SIN PAN ASSY TA	EACH	66.000				
72400200	REMOV SIN PAN ASSY TB	EACH	14.000				
72400310	REMOV SIGN PANEL T1	SQ FT	248.400				
72400320	REMOV SIGN PANEL T2	SQ FT	125.500				
72900100	METAL POST TY A	FOOT	1,814.500				
72900200	METAL POST TY B	FOOT	2,417.400				
78000100	THPL PVT MK LTR & SYM	SQ FT	1,409.900				
78000200	THPL PVT MK LINE 4	FOOT	8,328.000				
*REV 78000400	THPL PVT MK LINE 6	FOOT	8,101.000				
78000500	THPL PVT MK LINE 8	FOOT	120.000				
78000600	THPL PVT MK LINE 12	FOOT	1,342.000				
78000650	THPL PVT MK LINE 24	FOOT	845.000				

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78008200	POLYUREA PM T1 LTR-SY	SQ FT	2,804.100				
78008210	POLYUREA PM T1 LN 4	FOOT	54,614.000				
78008230	POLYUREA PM T1 LN 6	FOOT	12,087.000				
78008250	POLYUREA PM T1 LN 12	FOOT	6,961.000				
*REV 78008270	POLYUREA PM T1 LN 24	FOOT	1,031.000				
78100100	RAISED REFL PAVT MKR	EACH	1,823.000				
78100105	RAISED REF PVT MKR BR	EACH	34.000				
78200100	MONODIR PRIS BAR REFL	EACH	160.000				
78201000	TERMINAL MARKER - DA	EACH	2.000				
78300100	PAVT MARKING REMOVAL	SQ FT	18,550.000				
78300200	RAISED REF PVT MK REM	EACH	342.000				
80400100	ELECT SERV INSTALL	EACH	3.000				
80400200	ELECT UTIL SERV CONN	L SUM	1.000		39,000.000		
80500010	SERV INSTALL GRND MT	EACH	4.000				
80500020	SERV INSTALL POLE MT	EACH	2.000				

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81026464	CON ENC RC 6 PVC 3X4	FOOT	210.000				
81028200	UNDRGRD C GALVS 2	FOOT	12,682.000				
81028210	UNDRGRD C GALVS 2 1/2	FOOT	137.000				
*REV 81028220	UNDRGRD C GALVS 3	FOOT	5,217.000				
81028240	UNDRGRD C GALVS 4	FOOT	3,002.000				
81028410	UNDRGRD C PVC 6	FOOT	7.000				
81200120	CON EMB STR 2 GALVS	FOOT	407.000				
81200230	CON EMB STR 2 PVC	FOOT	3,386.000				
81304520	JUN BOX EM S 18X8X8	EACH	4.000				
81400100	HANDHOLE	EACH	17.000				
81400200	HD HANDHOLE	EACH	35.000				
81400300	DBL HANDHOLE	EACH	10.000				
*REV 81603090	UD 3#4#6GXLPUSE 1 1/4	FOOT	40,214.000				
81702130	EC C XLP USE 1C 6	FOOT	800.000				
81702220	EC C XLP USE 1C 350	FOOT	645.000				

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81800290	A CBL 3-1C1/0 MESS W	FOOT	70.000				
81800300	A CBL 3-1C2 MESS WIRE	FOOT	4,745.000				
*REV 82102150	LUM SV HOR MT 150W	EACH	62.000				
*REV 82102310	LUM SV HOR MT 310W	EACH	141.000				
82102400	LUM SV HOR MT 400W	EACH	10.000				
*REV 82200700	AVIATION OBS WARN LUM	EACH	16.000				
*REV 83050810	LT P A 47.5MH 15MA	EACH	126.000				
83060450	LT P GS 45MH 15MA	EACH	14.000				
*REV 83600200	LIGHT POLE FDN 24D	FOOT	2,249.000				
*REV 83800205	BKWY DEV TR B 15BC	EACH	174.000				
84100110	REM TEMP LIGHT UNIT	EACH	24.000				
84200500	REM LT UNIT SALV	EACH	34.000				
84200804	REM POLE FDN	EACH	34.000				
84400105	RELOC EX LT UNIT	EACH	3.000				
84500120	REMOV ELECT SERV INST	EACH	2.000				

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84500130	REMOV LTG CONTR FDN	EACH	2.000				
*REV 85000200	MAIN EX TR SIG INSTAL	EACH	5.000				
85000400	MAIN TEMP TR SIG INST	EACH	1.000				
86400100	TRANSCEIVER - FIB OPT	EACH	7.000				
87001275	ECA C XLPTC 3C 4 6	FOOT	2,950.000				
87100020	FOCC62.5/125 MM12SM12	FOOT	18,492.000				
87200400	SPAN WIRE	FOOT	779.000				
87200500	TETHER WIRE	FOOT	779.000				
87300925	ELCBL C TRACER 14 1C	FOOT	18,463.000				
87301215	ELCBL C SIGNAL 14 2C	FOOT	3,354.000				
87301225	ELCBL C SIGNAL 14 3C	FOOT	6,767.000				
*REV 87301245	ELCBL C SIGNAL 14 5C	FOOT	13,077.000				
*REV 87301255	ELCBL C SIGNAL 14 7C	FOOT	8,216.000				
87301305	ELCBL C LEAD 14 1PR	FOOT	12,326.000				
87301805	ELCBL C SERV 6 2C	FOOT	581.000				

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87301900	ELCBL C EGRDC 6 1C	FOOT	3,429.000				
87302225	ELCBL AS SIGL 14 3C	FOOT	907.000				
87302245	ELCBL AS SIGL 14 5C	FOOT	5,330.000				
87302505	ELCBL AS SERV 6 2C	FOOT	106.000				
87302705	ELCBL AS EGRDC 6 1C	FOOT	106.000				
87502440	TS POST GALVS 10	EACH	3.000				
87502480	TS POST GALVS 14	EACH	2.000				
87502500	TS POST GALVS 16	EACH	5.000				
87601200	PED P-B POST GALVS T2	EACH	2.000				
87700120	S MAA & P 16	EACH	2.000				
87700160	S MAA & P 24	EACH	1.000				
87700190	S MAA & P 30	EACH	1.000				
87700250	S MAA & P 42	EACH	1.000				
87702718	S MAA & P DMA 46 & 30	EACH	1.000				
87702726	S MAA & P DMA 48 & 26	EACH	1.000				

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87702742	S MAA & P DMA 50 & 22	EACH	1.000				
87702980	STL COMB MAA&P 50	EACH	1.000				
87703000	STL COMB MAA&P 55	EACH	1.000				
87703030	STL COMB MAA&P 60	EACH	2.000				
87703040	STL COMB MAA&P 62	EACH	1.000				
87703090	STL COMB MAA&P 70	EACH	1.000				
87704555	S C MAA&P DMA 55 & 32	EACH	1.000				
87704642	S C MAA&P DMA 64 & 32	EACH	1.000				
87704740	S C MAA&P DMA 68 & 40	EACH	1.000				
87704844	S C MAA&P DMA 70 & 44	EACH	1.000				
87800100	CONC FDN TY A	FOOT	52.000				
87800150	CONC FDN TY C	FOOT	16.000				
87800400	CONC FDN TY E 30D	FOOT	30.000				
87800415	CONC FDN TY E 36D	FOOT	114.000				
87800420	CONC FDN TY E 42D	FOOT	159.000				

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87900200	DRILL EX HANDHOLE	EACH	13.000				
87900205	DRILL EX HD HANDHOLE	EACH	6.000				
88030020	SH LED 1F 3S MAM	EACH	62.000				
88030100	SH LED 1F 5S BM	EACH	9.000				
88030110	SH LED 1F 5S MAM	EACH	35.000				
88030210	SH LED 2F 3S BM	EACH	3.000				
*REV 88030220	SH LED 2F 5S BM	EACH	4.000				
*REV 88030240	SH LED 2F 1-3 1-5 BM	EACH	8.000				
88102717	PED SH LED 1F BM CDT	EACH	16.000				
88102747	PED SH LED 2F BM CDT	EACH	4.000				
88200210	TS BACKPLATE LOU ALUM	EACH	97.000				
88500100	INDUCTIVE LOOP DETECT	EACH	75.000				
88600100	DET LOOP T1	FOOT	4,693.000				
88600700	PREFORM DETECT LOOP	FOOT	6,226.000				
88700200	LIGHT DETECTOR	EACH	20.000				

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88700300	LIGHT DETECTOR AMP	EACH	5.000				
88800100	PED PUSH-BUTTON	EACH	18.000				
*REV 89000100	TEMP TR SIG INSTALL	EACH	3.000				
*ADD 89501410	REL EM VEH PR SYS P U	EACH	3.000				
89502200	MOD EX CONTR	EACH	1.000				
89502300	REM ELCBL FR CON	FOOT	25,906.000				
89502375	REMOV EX TS EQUIP	EACH	8.000				
89502380	REMOV EX HANDHOLE	EACH	53.000				
89502385	REMOV EX CONC FDN	EACH	28.000				
89502400	REM EX FB INSTAL COMP	EACH	1.000				

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TEMPERATURE CONTROL FOR CONCRETE PLACEMENT (DISTRICT ONE)

Effective: May 1, 2007

Delete the second and third sentences of the second paragraph of Article 1020.14(a) of the Standard Specifications.

CLEANING EXISTING DRAINAGE STRUCTURES

Effective: September 30, 1985

Revised: December 1, 2011

All existing storm sewers, pipe culverts, manholes, catch basins and inlets shall be considered as drainage structures insofar as the interpretation of this Special Provision is concerned. When specified for payment, the location of drainage structures to be cleaned will be shown on the plans.

All existing drainage structures which are to be adjusted or reconstructed shall be cleaned in accordance with Article 602.15 of the Standard Specifications. This work will be paid for in accordance with Article 602.16 of the Standard Specifications.

All other existing drainage structures which are specified to be cleaned on the plans will be cleaned according to Article 602.15 of the Standard Specifications.

Basis of Payment. This work will be paid for at the contract unit price each for DRAINAGE STRUCTURES TO BE CLEANED, and at the contract unit price per foot (meter) for STORM SEWERS TO BE CLEANED, of the diameter specified.

FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)

Effective: August 1, 1995

Revised: August 25, 2010

Add the following to Article 603.03 of the Standard Specifications:

"The contractor shall adjust the structures to the finished pavement elevation no more than 5 calendar days prior to placement of the final lift of surface unless approved by the Engineer."

Add the following to Article 603.09 of the Standard Specifications:

"Removing frames and lids on drainage and utility structures in the pavement prior to milling, and adjusting to final grade prior to placing the surface course, will be paid for at the contract unit price each for FRAMES AND LIDS TO BE ADJUSTED (SPECIAL).

MANHOLES, TYPE A, WITH 2 TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE

Description: This work shall consist of furnishing and installing manholes, MANHOLES, TYPE A, WITH 2 TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE, in accordance with Section 602 of the IDOT Standard Specifications for Road & Bridge Construction, except as modified herein.

Revised 01/12/12

ADJUSTMENTS AND RECONSTRUCTIONS

Effective: March 15, 2011

Revise the first paragraph of Article 602.04 to read:

“602.04 Concrete. Cast-in-place concrete for structures shall be constructed of Class SI concrete according to the applicable portions of Section 503. Cast-in-place concrete for pavement patching around adjustments and reconstructions shall be constructed of Class PP-1 concrete, unless otherwise noted in the plans, according to the applicable portions of Section 1020.”

Revise the third, fourth and fifth sentences of the second paragraph of Article 602.11(c) to read:

“Castings shall be set to the finished pavement elevation so that no subsequent adjustment will be necessary, and the space around the casting shall be filled with Class PP-1 concrete, unless otherwise noted in the plans, to the elevation of the surface of the base course or binder course. HMA surface or binder course material shall not be allowed. The pavement may be opened to traffic according to Article 701.17(e)(3)b.”

Revise Article 603.05 to read:

“603.05 Replacement of Existing Flexible Pavement. After the castings have been adjusted, the surrounding space shall be filled with Class PP-1 concrete, unless otherwise noted in the plans, to the elevation of the surface of the base course or binder course. HMA surface or binder course material shall not be allowed. The pavement may be opened to traffic according to Article 701.17(e)(3)b.”

Revise Article 603.06 to read:

“603.06 Replacement of Existing Rigid Pavement. After the castings have been adjusted, the pavement and HMA that was removed, shall be replaced with Class PP-1 concrete, unless otherwise noted in the plans, not less than 9 in. (225 mm) thick. The pavement may be opened to traffic according to Article 701.17(e)(3)b.

The surface of the Class PP concrete shall be constructed flush with the adjacent surface.”

Revise the first sentence of Article 603.07 to read:

“603.07 Protection Under Traffic. After the casting has been adjusted and the Class PP concrete has been placed, the work shall be protected by a barricade and two lights according to Article 701.17(e)(3)b.”

Revised 01/12/12

BACKFILLING STORM SEWER UNDER ROADWAY

Effective: September 30, 1985

Revised: July 2, 1994

For storm sewer constructed under the roadway, backfilling methods two and three authorized under the provisions of Article 550.07 of the Standard Specifications will not be allowed.

COARSE AGGREGATE FOR BACKFILL, TRENCH BACKFILL AND BEDDING (D-1)

Effective: November 1, 2011

This work shall be according to Section 1004.05 of the Standard Specifications except for the following:

Reclaimed Asphalt Pavement (RAP) maybe blended with gravel, crushed gravel, crushed stone crushed concrete, crushed slag, chats, crushed sand stone or wet bottom boiler slag. The RAP materials shall be crushed and screened. Unprocessed RAP grindings will not be permitted. The RAP shall be uniformly graded and shall pass the 1.0 in. (25 mm) screen. When RAP is blended with any of the coarse aggregate listed above, the blending shall be done mechanically with calibrated feeders. The feeders shall have an accuracy of ± 2.0 percent of the actual quantity of material delivered. The final blended product shall not contain more than 40 percent by weight RAP.

The coarse aggregate listed above shall meet CA 6 and CA 10 gradations prior to being blended with the processed and uniformly graded RAP.

STORM SEWER ADJACENT TO OR CROSSING WATER MAIN

Effective: February 1, 1996

Revised: January 1, 2007

This work consists of constructing storm sewer adjacent to or crossing a water main, at the locations shown on the plans. The material and installation requirements shall be according to the latest edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois", and the applicable portions of Section 550 of the Standard Specifications; which may include concrete collars and encasing pipe with seals if required.

Pipe materials shall meet the requirements of Sections 40 and 41-2.01 of the "Standard Specifications for Water and Sewer Main Construction in Illinois", except PVC pipe will not be allowed. Ductile-Iron pipe shall meet the minimum requirements for Thickness Class 50.

Revised 01/12/12

SANITARY SEWERS, DUCTILE IRON

This work consists of constructing sanitary sewers adjacent to or crossing a water main, at the locations shown on the plans. The material and installation requirements shall be according to the applicable portions of Section 550 of the Standard Specifications; which may include concrete collars if required.

Pipe materials shall meet the requirements of Sections 40 and 41-2.01 of the "Standard Specifications for Water and Sewer Main Construction in Illinois", except PVC pipe will not be allowed. Ductile-Iron pipe shall meet the minimum requirements for Thickness Class 50.

Basis of Payment: This work will be paid according to Article 550.10 of the Standard Specifications, except the pay item shall be SANITARY SEWERS, DUCTILE IRON of the diameter specified.

GRATING FOR CONCRETE FLARED END SECTION 27"

This work consists of constructing Grating for Concrete Flared End Section 27". The Gratings shall be fabricated and installed as shown on the plans. Structural steel shapes and plates shall be according to the requirements of Article 1006.04. Galvanized steel pipe shall be according to the requirements of Article 1006.27(b). Bolts, nuts, and washers shall be according to the requirements of Article 1006.27 (f).

Basis of Payment: Grating for precast reinforced concrete flared end sections will be paid for at the contract unit price per each for GRATING FOR CONCRETE FLARED END SECTION, of the size specified.

PLUG AND ABANDON EXISTING PIPE

Revised: January 4, 2012

Description. This work consists of plugging and filling existing sewers and underdrains that are to be abandoned at the locations shown on the Plans or as directed by the Engineer.

Construction Requirements. Based on a review of available information it is believed that there are no existing active connections draining into the pipe to be abandoned. However, before the pipe is abandoned, the Contractor must field verify that there are no existing active connections draining into the pipe to be abandoned. In the event there are existing active connections, the Contractor must either re-route the existing active connection or maintain the existing pipe so as not to block flow from the existing active connections at no additional cost.

After field verification that there are no existing active connections draining into the pipe to be abandoned, the Contractor must plug the pipe with Class SI Concrete or brick and suitable mortar to the satisfaction of the Engineer, and fill the remaining empty length of pipe with Controlled Low-Strength Material. The Controlled Low-Strength Material (CLSM) must meet material requirements of Article 593.02.

Method of Measurement. The pipe to be abandoned will be measured in place, and the volume of void to be filled will be computed in cubic yards.

Revised 01/12/12

Basis of Payment. This work shall be paid for at the contract unit price per cubic yard, for PLUG EXISTING PIPE which price is payment in full for all labor, tools, equipment, backfilling of any excavation, and materials necessary to complete this work.

ADJUSTMENT OF CITY OF WEST CHICAGO MANHOLE AND VALVE VAULTS

Description. This work shall consist of adjusting existing West Chicago manholes and valve vaults during construction.

Construction Requirements. No City of West Chicago manhole or valve vault structure shall be replaced, regardless of the amount of grade change adjacent to the structure. All structures affected by an increase in grade shall be adjusted by installing new barrel sections and/or concrete adjusting rings. The new and existing concrete adjusting rings shall not exceed 12" in height and three (3) in number. If these numbers are exceeded, then barrel sections shall be used in lieu of concrete adjustment rings. Rubber mastic shall be installed between all joints. All structures affected by a decrease in grade shall be adjusted by removing concrete adjusting rings and/or removing and replacing barrel sections.

If the valve vault or manhole frame is in good, working condition, it shall be reused. Otherwise, Contractor shall replace the existing frame with a new Type 1, frame with closed lid per City of West Chicago standards. "Water" and "City of West Chicago" shall be cast into valve vault lids. "Sanitary" and "City of West Chicago" shall be cast into sanitary sewer manhole lids.

Contractor shall provide new City of West Chicago approved chimney seals and external joint seals for the adjusted structures. No structures shall have steps.

Basis of Payment. This work shall be paid for at the contract unit price per each for MANHOLES TO BE ADJUSTED or VALVE VAULTS TO BE ADJUSTED, of the type specified, which prices is payment in full for all labor, tools, equipment, and materials necessary to complete this work.

ADJUSTING CITY OF WEST CHICAGO FIRE HYDRANTS

Description: Contractor shall adjust all City of West Chicago fire hydrants and valve boxes affected by new grading.

Construction Requirements: Contractor shall not operate any hydrant auxiliary valves, but shall coordinate closing of hydrant auxiliary valves with the City of West Chicago. No other shutdowns of the City's water supply system will be permitted. The existing auxiliary valve shall be closed, and the existing hydrant shall be disconnected from the flanged or mechanical joint of the valve. If the fire hydrant is in good, working condition, it shall be reused. Otherwise, Contractor shall replace the existing hydrant with a new fire hydrant that has been approved by the City of West Chicago and meets the requirements of AWWA C502. Contractor shall return all unusable hydrants to the City of West Chicago Department of Public Works.

Supply all piping, appurtenances, fittings and adapters required for a complete installation and to adjust the hydrant to meet the finished grade. All piping, appurtenances, fittings and adapters shall meet the requirements of AWWA C104, AWWA C151, AWWA C150, AWWA 900, and City of West Chicago standards and shall be disinfected according to the requirements of AWWA C651.

Revised 01/12/12

All piping, appurtenances, fittings and adapters installed east of North Avenue Station 3360+00 shall be PVC pipe. All piping, appurtenances, fittings and adapters installed west of North Avenue Station 3360+00 shall be ductile iron pipe. Provide fluorocarbon coated cor-ten steel t-bolts and NSS cor-blue bolts or City of West Chicago approved equal. All joints shall be restrained. Install hydrant with a minimum of 5.5 ft. of cover over the connection pipe. The frost ring shall be set at the finished grade. The grade ring of the hydrant shall be set 0.2' above the finished grade or nearest top of curb.

The existing valve box shall be adjusted as required to meet the finished grade. If the grade change is such that the existing valve box cannot be adjusted to meet the finished grade, then the contractor shall provide a new City of West Chicago approved valve box or extensions.

The temporary thrust block, old permanent thrust block and drainage gravel shall be removed from the site. Set each hydrant on a large flat stone or concrete block and not less than 1/2 cubic yard of new gravel or crushed stone shall be provided at the base for drainage. Back or brace hydrants with a new concrete thrust block extending from the hydrant to the wall of the excavation, and placed to permit removal of the hydrant.

Basis of Payment: This work shall be paid for at the contract unit price per each for FIRE HYDRANTS TO BE ADJUSTED, which price is payment in full for all labor, tools, equipment, and materials necessary to complete this work.

TEMPORARY CAPPING OF CITY OF WEST CHICAGO FIRE HYDRANTS

Revised: January 4, 2012

Description: Contractor shall temporarily remove any existing City of West Chicago fire hydrant that may conflict with the temporary roadway.

Construction Requirements: Contractor shall not operate any hydrant auxiliary valves, but shall coordinate closing of hydrant auxiliary valves with the City of West Chicago. No other shutdowns of the City's water supply system will be permitted. The existing auxiliary valve shall be closed, and the existing hydrant shall be disconnected from the flanged or mechanical joint of the valve. If the fire hydrant is in good, working condition, it shall be reused. Otherwise, Contractor shall replace the existing hydrant with a new fire hydrant that has been approved by the City of West Chicago. Contractor shall return all unusable hydrants to the City of West Chicago Department of Public Works.

Contractor shall install a temporary cap to protect the water main from contamination. Contractor shall also install any temporary thrust blocking and bracing that may be required. Hydrant shall be protected from any damage and temporarily stored in a weather tight, climate controlled enclosure in an environment favorable to the hydrant.

After temporary roadway has been removed in the adjacent area, Contractor shall remove the temporary cap and disinfect the water main and hydrant according AWWA C651.

The temporary thrust block, old permanent thrust block and drainage gravel shall be removed. Set hydrant on a large flat stone or concrete block and not less than 1/2 cubic yard (0.4 cu m) of new gravel or crushed stone shall be provided at the base for drainage. Back or brace hydrants with new concrete thrust block extending from the hydrant to the wall of the excavation, and placed to permit removal of the hydrant.

Revised 01/12/12

Hydrant shall be reinstalled within two (2) working days of the removal of the temporary roadway adjacent to the fire hydrant.

Basis of Payment: This work shall be paid for at the contract unit price per each for CAP EXISTING FIRE HYDRANTS, which price is payment in full for all labor, tools, equipment, and materials necessary to complete this work.

FIRE HYDRANTS TO BE REMOVED AND REPLACED

Description.

This work shall consist of the removal and replacement of fire hydrants, auxiliary valves and valve boxes. These existing materials shall be delivered to the Department of Public Works. Contractor shall contact James Bernahl, Public Works Engineering Division Manager, at 630-443-3709 to coordinate delivery location.

All new fire hydrants shall conform to the following requirements:

Fire Hydrant:

- a. Approved Models: (Refer to standard Fire Hydrant Detail)
 - i. Mueller Super Centurion 200
 - ii. Waterous Pacer Model WB-67-250
 - iii. Clow Medallion
 - iv. All hydrants shall have:
 1. 6" mechanical joint connection
 2. 5 ¼" valve opening
 3. 5" cover over hydrant lateral
 4. 6" valve on lateral
 5. "Hydrafinder" standard hydrant locator, installed
 6. Valve box shall have a valve box stabilizer installed *
*(Valve box adaptor #2 type A, as made by Adaptor, Inc. or approved equal)
- b. Fire Hydrant Paint: Safety Red, Sherwin Williams 'Shercryl' 6403-31922, B66R300
- c. Bolts Placed Underground: All below grade factory installed bolts and fasteners shall be 304-grade stainless steel.

The contractors shall familiarize themselves with the City of St. Charles Public Works Engineering Details for more detailed specifics.

All fire hydrants shall be equipped with an auxiliary valve and cast iron valve box. The auxiliary valve shall be six-inch (6") ductile iron water pipe conforming to AWWA Standard C151, C111, and C104. The valve boxes shall be of the adjustable type, shall be set at finished grade, and shall have the valve box covers stamped "Water".

Basis of Payment. This work shall be paid at the contract unit price per each for FIRE HYDRANT ASSEMBLY, COMPLETE or FIRE HYDRANTS TO BE REMOVED & SALVAGED which price shall include the cost of all labor, materials, and equipment necessary to perform the work herein specified as detailed in the Sewer and Water Specifications and to the satisfaction of the Engineer.

Revised 01/12/12

All piping installed under sidewalks, roadways, etc., shall be sleeved in a galvanized steel pipe two sizes larger than the pipe to be sleeved. All sleeves shall extend a minimum of three feet beyond the edge of curbing or paving.

Thrust blocks shall be constructed at all direction changes and/or termination points or at any point in the system that will result in an unbalanced thrust. Thrust blocks shall be set against undisturbed earth.

Irrigation plans are diagrammatic due to scale. System modification may be required by field conditions. Written consent from Owner's representative is necessary to make such changes. In any situation that the plans conflict with the actual site conditions, it shall be the Contractor's responsibility to notify the Owner of the conflict to receive direction.

Basis of Payment: This work shall be paid at the contract unit price Lump Sum for IRRIGATION SYSTEM SPECIAL, which price shall include all labor, equipment, materials, disposal of excavation materials, incidental items, connection to the existing roadway valve, trench backfill, RPZ enclosure, water meter, RPZ backflow preventer, all 1-1/2" PVC piping supply system, 3" diameter galvanized steel sleeve, flushing of the system, and any tests necessary for the completion of the system, and the restoration of the site to original condition. The Contractor should refer to the construction plans and details for quantities and proposed distances.

VALVE AND VAULT INSTALLATION

Revised: January 4, 2012

Description. This work shall consist of the furnishing and installation of valve vaults and associated valving in accordance with the plans. The work shall be constructed in accordance with the applicable sections of the "Standard Specifications for Water and Sewer Main Construction in Illinois", latest edition and the City of St Charles's Standards.

Valve vaults are to be precast reinforced concrete, concentric type, with a minimum 60 inch inside diameter barrel section. Barrel sections shall be sealed using a butyl rubber or HMA mastic material strip. Steps shall be of steel reinforced plastic using an approved plastic meeting ASTM D4101, Type II, Grade 49108, over a #3 grade 60 ASTM reinforcing bar.

Valves are to be right-hand closing resilient wedge gate valves, in accordance to the City of St Charles's standards.

Frames and covers shall be Neenah Foundry Number R-1713, or approved equal, Valve Vault covers must have "Water" cast into the top of the cover. Furnishing and final adjustments of new valve vault frames and covers shall be considered incidental to this pay item.

The final adjustment of the frame and cover shall adhere to the following guidelines based on the location of the structure. For structures located within a paved area, mortar shall be used between adjusting rings and the top of the structure. Structures located within an unpaved area shall use a preformed HMA joint sealant to be placed between each adjusting ring and the top of the structure. The preformed HMA joint sealant shall be E-Z Stick or an Engineer approved equivalent. The minimum dimension of the preformed material shall be one-half square inch. Prior to the placement of the final layer of the roadway, frames and adjusting rings located within paved areas shall be set in an IDOT approved concrete SI mixture.

Revised 01/12/12

Basis of Payment. This work shall be paid for at the contract unit price each for GATE VALVE 12" WITH VAULT 5' DIAMETER, PRESSURE CONNECTION 12" WITH VAULT 5' DIAMETER, or GATE VALVE 6" WITH VAULT 4' DIAMETER which price shall be payment in full for performing the work therein and shall include valve, fittings, and vault deliver and installation, all saw cutting, excavation and compaction of backfill, including granular trench backfill, area restoration with topsoil and sod, any mortaring required around pipes, adjustment rings, sections and frames as required, disposal of excess material.

BACKFILLING AND ABANDONMENT OF VALVE VAULTS

This work shall be in accordance with the applicable portions of Article 550.07 of the Standard Specifications and is herein specified. Structures under pavement shall be backfilled with course aggregate CA-7 (crushed virgin limestone). Structures in parkway shall be backfilled with fine aggregate FA-6 (fine clean brown beach sand). This work shall not be paid for separately but shall be considered incidental to work performed on structures.

APPROACH SLAB REMOVAL

Description: This work shall consist of the complete existing approach slabs including bituminous overlays, reinforcing bars, and sleeper slabs, at locations designated in the plans and in accordance with the applicable portions of Sections 440 and 501 of the Standard Specifications.

This work shall also include the removal of existing timber piles and pile caps to at least 300mm (1 ft) below the proposed elevation of subgrade or ground surface within the area of construction and within the limits of the right of way. This work shall also include the removal of any mud jack cylinders encountered within the existing approach slabs.

The Contractor shall remove the existing approach slabs in a manner so as not to damage the adjacent structures that are to remain.

Method of Measurement: APPROACH SLAB REMOVAL shall be measured in place in square yards.

Basis of Payment. This work will be paid for at the contract unit price per square yard for APPROACH SLAB REMOVAL, which price shall include all labor and equipment necessary to remove and dispose of the entire approach slab pavement.

CHAIN LINK FENCE AND GATE REMOVAL

Description. This work consists of the removal and satisfactory disposal of existing chain link fence and gates at the locations shown on the plans or as directed by the Engineer. This work shall be performed in accordance with the applicable portions of Section 201 of the Standard Specifications and as herein specified.

General. The chain link fence to be removed is approximately 5 feet in height with the posts set in concrete. Removal shall include posts, fence fabric, fittings, appurtenances, attachments and concrete foundation.

Revised 01/12/12

Method of Measurement. This work will be measured for payment in feet in place. Measurements will be made in straight lines along the centerline of the ductbank between ends and changes in direction.

Rigid steel conduit elbows installed for conduit bends and changes in direction will not be measured for payment under this pay item.

Basis of Payment. This work will be paid for at the contract unit price per foot for CONDUIT ENCASED, REINFORCED CONCRETE, 6" DIA., PVC 3 HIGH X 4 WIDE which shall be payment in full for the work specified herein.

Rigid steel conduit elbows installed for conduit bends and changes in direction will be paid for separately.

CONDUIT ELBOW ENCASED, 6" DIA., GALVANIZED STEEL
Revised: January 4, 2012

Description. This item shall consist of providing a rigid galvanized steel conduit elbow in a conduit run as shown on the plans and as directed by the Engineer.

All PVC to rigid steel conduit adapter fittings required to connect the steel elbow to the PVC conduits shall be included in this item and will not be paid for separately.

Materials. Materials shall be according to the following Articles of Division 1000 – Materials

<u>Item</u>	<u>Article</u>
(a) Rigid Metal Conduit.....	1088.01(a)

CONSTRUCTION REQUIREMENTS

General. This item shall be done according to Article 810.05(d) of the Standard Specifications. Rigid steel conduit elbows shall be installed in ductbank conduit runs wherever conduit bends and changes in direction occur.

Elbows shall be manufactured in the factory and have a minimum bending radius of 48 inches. No field bending of the conduit is allowed.

Basis of Payment. This work shall be paid for at the contract unit price each for CONDUIT ENCASED, 6" DIA., GALVANIZED STEEL, which shall be payment in full for the work described herein.

Concrete, rebar, spacers and all formwork required for the installation of the concrete encasement will be paid for under a separate pay item.

WIRE AND CABLE

Add the following to Article 1066.03 of the Standard Specifications:

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

Revised 01/12/12

Method of Measurement. This work will be measured for payment per temporary luminaire, as shown on the Plans, which shall include payment for labor, materials, and equipment required to mount, wire, and connect the luminaire.

Basis for Payment. This work will be paid at the Contract unit price per each for TEMPORARY LUMINAIRE, of the lamp type, and wattage specified.

AERIAL CABLE REMOVAL

Description. This item shall consist of disconnecting and removing aerial cable with messenger wire and all associated apparatus, and mounting hardware. The removal shall include removal of all mounting hardware, associated apparatus, and connections to the associated lighting controller, sign controller, electric service pole, telephone service pole, or the last connection unaffected by the removal work as shown on the plans and as directed by the Engineer.

No removal work shall be permitted without approval from the Engineer. Aerial cables with messenger, mounting hardware and associated apparatus removed as part of this item shall become the property of the Contractor and shall be removed from the site.

Method of Measurement. The removed aerial cable will be measured in feet in place and will be taken as the length of the messenger wire. Measurement will be made in a straight line between changes in direction and to the centers of poles and control cabinets. Sag of the aerial cable or vertical cable will not be measured for payment.

Basis of Payment. This work will be paid for at the Contract unit price per foot for AERIAL CABLE REMOVAL.

LIGHTING CONTROLLER, SPECIAL

Revised: January 4, 2012

Description: *This work shall consist of furnishing and installing a roadway lighting electrical control cabinet with radio control complete with foundation and wiring for the control of highway lighting.*

General. *The completed controller shall be an Industrial Control Panel under UL 508, and shall be suitable for use as service equipment*

Double Door Enclosure.

Cabinet. The cabinet shall be of the dimensions shown on the plans and fabricated from 1/8 in. (3 mm) thick aluminum alloy No. 3003-H14. The cabinet shall comply with ANSI C 33.71 and UL 50 and be reinforced with aluminum angles.

Doors. The doors shall have stainless steel hinges. The door handle shall be stainless steel, a minimum diameter of 1/2 in. (13 mm) and be furnished with a rain and ice resistant lock. The doors shall be gasketed to exclude the entry of moisture, dirt, and insects. A linkage-arm system, of simple construction, shall be attached to the cabinet doors to allow securing in a wide open position during field operations.

Revised 01/12/12

Insulation. When specified, the interior compartment shall be insulated on the inside of the sides, back, top, bottom, and inside of the doors with 1 in. (25 mm) thick polyisocyanurate rigid foam insulation board. The foam board shall have foil facers on each side. The side facing the interior of the cabinet shall have a white tinted foil facer with a satin finish. The insulation shall have a minimum aged thermal resistance (R-value) of 8 at a 40°F (4°C) mean temperature. The insulation shall comply with Federal Specification HH-I-1972/1, Class 2.

Mounting. The cabinet shall be mounted as indicated on the plans.

Work Pad. Except where the cabinet is facing a sidewalk, a poured, 4 in. (100 mm) thick concrete pad, not less than 48 in. (1.2 m) square shall be provided in front of the cabinet.

Finish. All aluminum enclosures shall be finished.

Surface Preparation: The cabinet, doors and all other parts to be painted will be submerged in each tank of a 3 step iron phosphate conversion technique. After phosphatizing the parts shall be passed through an oven and baked to eliminate any moisture.

Finish coat: Shall be polyester powder paint applied electrostatically to a minimum thickness of 2 mils and baked at 375°F for 20 minutes.

The color of the finish paint shall be ANSI Standard No. 70 Sky Gray or as specified by the Engineer.

The finish shall be applied according to the paint manufacturer's recommendations and the manufacturer shall certify, in writing, to the Department, that the finish has been applied properly.

Submittal data submitted for approval shall address the requirement for the paint manufacturer's certification and shall include a standard, single source paint warranty by the paint manufacturer of the controller manufacturer to the Department.

Identification. The cabinet door shall have a stainless steel name plate of the dimensions and engraving indicated on the plans. An identification decal shall also be installed on the back of the cabinet as specified elsewhere herein.

Control Components.

Time Switch. When specified, each controller shall have an electric time switch for automatic control of highway lighting circuits operating on a daily schedule having a fixed relation to sunrise and sunset. Turn-on and Turn-off times shall be adjustable \pm 45 minutes from sunrise and sunset. All settings shall be field adjustable without special tools. Complete installation instructions, details on wiring connections, and information on time setting, manual operation, and necessary adjustments shall be furnished with each time switch.

The time switch shall be a microprocessor-based two channel controller with astronomic functions on both channels. The latitude shall be adjustable from ten to 60 degrees in the Northern hemisphere.

Revised 01/12/12

Latitude changes shall be user settable without the use of special tools.

The time switch shall be programmable in an AM/PM format, with a resolution of one minute or better. The time switch shall automatically adjust for daylight saving time and have automatic leap year correction and operate on 240 V AC without the use of an additional transformer.

A battery backup shall be integral with the controller and shall use a nickel-cadmium battery. The battery backup shall provide power to the controller memory for a minimum of 72 hours in the event of power failures.

The published operating temperature range of the time switch shall be from 86 to 158°F (-30 to 70°C).

The time switch output relay contacts shall be rated sufficiently to handle the inrush current of two 200 A contactors. The time switch shall have a NEMA Type 1 enclosure as a minimum. The time switch programming instructions shall be moisture proof and permanently affixed to the time switch or as otherwise approved by the Engineer.

Circuit Breakers.

All feeders, branch circuits, and auxiliary and control circuits shall have overcurrent protection. The overcurrent protection shall be by means of circuit breakers.

Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type circuit breakers with trip free indicating handles.

240 V circuit breakers shall have a UL listed interrupting rating of not less than 10,000 rms symmetrical amperes at rated circuit voltage for which the breaker is applied. 480 V applications shall have a UL listed interrupting rating of not less than 14,000 rms symmetrical amperes at rated circuit voltage.

Multi-pole circuit breakers larger than 100 A size shall have adjustable magnetic trip settings.

The number of branch circuit breakers shall be as indicated on the Control Cabinet detail drawing or as indicated in the lighting system wiring diagram which ever is greater plus two spare circuit breakers.

Contactors.

Contactors shall be electrically operated, mechanically held as specified, with the number of poles required for the service and with operating coil voltage as indicated. The contactor shall have an in-line drive operating mechanism. Ampere rating of contactors shall be not less than required for the duty shown and shall otherwise be rated as indicated.

Contactors shall be complete with a non-conducting inorganic, non-asbestos subpanel for mounting.

Mechanically held contactors shall be complete with coil clearing contacts to interrupt current through the coil once the contactor is held in position.

Revised 01/12/12

The main contactor contacts shall be the double break, silver to silver type. They shall be spring loaded and provide a wiping action when opening and closing. The contacts shall be renewable from the front panel, self aligning, and protected by auxiliary arcing contacts.

The line and load terminals shall be pressure type terminals of copper construction and of the proper size for the ampere rating of the contactor.

A lever for manual operation shall be incorporated in the mechanically held contactor. Protection from accidental contact with current carrying parts when operating the contactor manually shall be provided.

The contactor operating coil shall operate at phase to neutral voltage. Single phase contactors shall be two pole devices with continuous rating for the amperage selected per pole.

Open and closed positions for mechanically held contactors shall be clearly indicated and labeled in permanent manner as approved by the Engineer.

Auto/Manual Switches. The cabinet shall be equipped with automatic and manual operating controls via two, single pole double throw switches, one being a maintained-contact manual-automatic selector switch and one being a momentary-contact manual on-off switch with a center rest position. Both switches shall be premium specification grade, rated for the applied duty but not less than 20 A at 240 V and each shall be mounted in a 4 in. (100 mm) square box with cover.

The control circuit shall have overcurrent protection as indicated and as required by NEC requirements.

Ground & Neutral Bus Bars.

Separate ground and neutral bus bars shall be provided. The ground bus bar shall be copper, mounted on the equipment panel, fitted with 22 connectors of the type shown on the plans, as a minimum. The neutral bar shall be similar. The heads of connector screws shall be painted white for neutral bar connectors and green for ground bar connectors.

Interior Lighting, Receptacle and CCTV power.

The cabinet shall have an auxiliary device circuit at 120 V single phase to supply a convenience receptacle, cabinet light and a dedicated 120v circuit for CCTV camera power indicated in the plans. Where 120 V is not available directly from the service voltage, an outdoor dry type step-down transformer not less than 2 KVA shall be provided as described elsewhere herein.

The auxiliary circuit, including transformer primary and secondary, shall have overcurrent protection according to NEC requirements.

The interior, 60 W incandescent lighting fixture of the enclosed-and-gasketed type, shall be switched from a single pole, single throw, 20 A switch. The switch shall be premium specification grade in a suitable 4 in. (100 mm) box with a cover.

Revised 01/12/12

A 20 A duplex receptacle, ground fault interrupting, premium specification grade shall be furnished in a 4 in. (100 mm) square box with cover, for 120 V auxiliary use.

Surge Arrester.

The control circuit in the cabinet shall be protected by a surge arrester meeting the requirements of Article 1065.02.

Wiring and Identification.

Power wiring within the cabinet shall be of the size specified for the corresponding service conductors and branch circuits and shall be rated RHH/RHW, 600 V.

Control and auxiliary circuit wiring shall be rated RHH/RHW or MTW with jacket, 600 V.

All power and control wiring shall be stranded copper. When specified all wiring shall be tagged with self-sticking cable markers. When the contract drawings do not specifically indicate assigned wire designations, the manufacturer shall assign wire designations and indicate them on the shop drawings.

All switches, controls and the like shall be identified both as to function and position (as applicable) by means of engraved two color nameplates attached with screws, or where nameplate are not possible in the judgement of the Engineer, by the use of cloth-backed adhesive labels as approved by the Engineer.

The cabinet with all of its electrical components and parts shall be assembled in a neat orderly fashion. All of the electrical cables shall be installed in a trim, neat, professional manner. The cables shall be trained in straight horizontal and vertical directions and be parallel, next to, and adjacent to other cables whenever possible.

Transformer, General Purpose.

The transformer shall be dry type and weatherproof so that it may be installed indoors or outdoors without additional housing. It shall have an enclosure for splices with provisions for weather tight conduit connections.

The transformer shall have four taps on the primary side, one at 2 1/2 percent, one at 5 percent, one at 7 1/2 percent and one at ten percent below rated voltage.

Insulation shall be Class F or Class H. The transformer shall meet the applicable ASA and IEEE standards.

Mounting and back plates shall be of Aluminum Alloy 2024, 3003 or 6061. Bolts, nuts and washers shall be of Series 300 stainless steel. Bolts shall have hexheads. Nuts shall be hexagon and self locking. Washers shall be of the flat type.

Radio Control Equipment.

Receiver - Decoder: The radio control module consists of a radio receiver, digital decoder, and an output interface which allows centralized remote radio control of the lighting controller turn-on and turn-off functions.

Revised 01/12/12

The radio control module must be capable of operation consistent with the existing radio control system, a Motorola SCADA Central Station.

The existing control system currently operates over 250 discrete lighting controllers via a securely coded proprietary data scheme. For this reason, the control module must consist of a Motorola ACE 3600 Modular Remote Unit, model F 7563, (small housing), with no less than the following options:

<i>Motorola Designation</i>	<i>Description</i>
<i>F 7563 (VHF), F 7564 (UHF)</i>	<i>ACE 3600 CPU *</i>
<i>V 245</i>	<i>Mixed I/O</i>
<i>V 261</i>	<i>240 VAC Power Supply w/charger</i>
<i>Z 857AA</i>	<i>Surge Protection</i>

** Includes (1) three slot frame, (1) ACE 3600 CPU plus firmware, (1) mixed I/O Module, (1) VHF or UHF (as directed by the Engineer) CDM 750 Radio with FSK Radio Interface, port 3 (1) AC Power Supply with Charger, (1) 6.5 Ah battery, installed in a 15" X 15" X 8.26" NEMA 4X/IP 56 painted metal enclosure with instruction manual.*

The manufacturer's designation by no means relieves the Contractor of providing a fully functional radio system as described herein.

A 120/240 to 24VAC step down transformer shall be included for the SCADA system.

The Radio Control Module shall be programmed for the following operational parameters:

- Transceiver Frequency: To be specified by the Engineer*
- Receive Frequency: To be specified by the Engineer*
- Communications Failure Preset: Normally Open*
- Individual Station address: To be specified by the Engineer*

Antenna. The antenna shall be thick mount up to ½" mounting surface mounted by screw adapter (no magnet mounts). The low profile antenna mount shall be equivalent to Antenex – MABT8XNSI antenna Mount Low Profile. Accompanying antenna shall be equivalent to Antenex – B132 (Broad Band – VHF/UHF ¼ wave 150-928 MHz. Accompanying cable shall be equivalent to Antenex-RG8X and conductor equivalent to Antenex – CN8X from Radio to Antenna and shall be of appropriate length and not longer than 8 ft.

Installation. I/O Module. All motherboard cards shall be configured and installed as per manufacturer's specifications and IDOT specification Ltg SCADA 397. Modules include but are not limited to; CPU, Mixed I/O. All digital inputs terminated on the Mixed I/O card shall be dry. Termination points for all digital input points will be reflected on power center wiring diagram or additional wiring schematic provided by the engineer. All digital outputs received from the Mixed I/O card shall be rated at 24 VAC 2A. All digital outputs shall be connected to interposing relays prior to being integrated into the power center wiring logic.

Revised 01/12/12

The digital outputs shall maintain a momentary closure for approximately 2 seconds.

All wiring termination points shall be tagged using the nomenclature given on the wiring diagram. The alarms acknowledge button shall be implemented with a placard stating "Alarm Acknowledge". Site configuration, map implementation, screens tagging and other related software configurations shall be specified elsewhere herein.

The antenna shall be centered on the top of the control cabinet. The antenna cable shall be dressed and trimmed for minimal length, allowing sufficient slack of removal of the radio connection for replacement or testing without disruption to the installation. The antenna connector shall be properly soldered to the cable assembly. Great care shall be exercised in the assembly of the antenna connector, excessive heat will destroy the inner insulation, and insufficient heat will produce a cold solder connection on the outer shield.

Intra-module wiring shall be 18 AWG stranded wire, color coded (American) consistent with battery polarity, and signal. The wire connection from terminal block (TB2) to the interpose relays shall be 14AWG stranded. All wires connected to the radio modules shall be dressed and tinned prior to insertion, (crimp on connectors will not be allowed for use in the radio system). Cost of all wire is inclusive within the scope of this work.

A terminal strip separate from the integral radio module and power supply shall be provided to interface power and signal conductors to the lighting controller. Terminals and wiring shall be labeled in accordance with the drawings, and dressed to allow service. The radio module shall be provided with constant 240 VAC power. The control power breaker shall provide power for the SCADA system. This is to allow the system to be energized at all times.

The SCADA system shall be tested in conjunction with the controller inspection, prior to field installation. The turn-on and turn-off function shall be tested ten (10) consecutive times utilizing actual signals originating from District 1 Headquarters. Any failures must be cleared before the controller is delivered to the job site.

Null covers shall be provided for the slots not used. All analog inputs shall be 4-20 mA. All I-O wiring including analog and digital shall be wired as per the enclosed table.

SCADA System Control Relay Assembly. The Contractor shall mount and wire four (4) relays in a box as shown in the wiring diagram. Two relays shall be 240 volts sealed type and two relays shall be 24 volts sealed type, unless otherwise indicated, shall have contacts rated at not less than 20 amperes at 240 volts. The power relay for activating the lighting contactors shall have contacts rated to handle the contactor inrush. The relays shall be wired to a marked terminal strip.

Testing._As part of final acceptance testing, all individual I/O points and internal status alarms shall be tested for proper operation and transmission. The transmission shall be confirmed at IDOT District 1 HQ. and the contractors dispatch facility. This full SCADA system start-up shall be completed with the Engineer present.

The SCADA radio system shall have the following items tested: VSWR, cable impedance, RSSI to the power center and confirmation that data sent from power center is received by the IDOT lighting system computers.

Revised 01/12/12

Analog Inputs And Transducers. The panel shall include one voltage transducer for monitoring the line voltage and one current transducer for monitoring the neutral current. Their outputs shall be 4-20 mA DC each and shall be wired to channels 1 and 2 of the Mixed I/O module as shown. The voltage transducer shall be Scientific Columbus Model # VT110 – PAN7 – A4-2 for 480/240 volt single phase systems. The current transducers shall be Mel Kirchler Technologies Model # AT2-420-24L-FT, with power supply, PS-240-24P-1A. Both analog inputs shall be wired using shielded cable. Both transducers shall also be calibrated so that the SCADA system reads the correct value.

Testing Of The Assembled Cabinet. Prior to shipment of the completed control cabinet, the control cabinet shall be tested for load, short circuits and complete operation of the cabinet as specified herein and as shown on the plans. The test shall be made at the manufacturer's shop, by the manufacturer and shall be witnessed by the Engineer. The Contractor shall arrange the test date with the Engineer and so allow not less than seven (7) days advance notice. The cabinet shall not be delivered to the job site until inspected, tested and approved for delivery by the Engineer.

Staging. All Central Configuration programming be completed prior to the initial check out/PM of the SCADA unit in the field. This is to assure/confirm 2 way radio communications from the field RTU the Central. Lighting controller information submitted for approval shall include any recommendations of the Manufacturer for storage as provided under this contract.

The packaging of the lighting controller shall incorporate the provisions recommended by the Manufacturer to accommodate storage.

TERM	MOSCAD DESTINATION	WIRE #	DESCRIPTION OF INPUT
32	Analog Input 1 (+)	TB2 B11	CABINET NEUTRAL CURRENT
33	Analog Input 1 (-)	TB2 B1	CABINET NEUTRAL CURRENT
34	Analog Input 2 (+)	TB2 A2	CABINET SERVICE VOLTAGE
35	Analog Input 2 (-)	TB2 B2	CABINET SERVICE VOLTAGE
40	P. Ground	TB2 A3	GROUND
1	Digital Input 1	TB2 B3	ALARM ACKNOWLEDGE
2	Digital Input 2	TB2 A4	DOOR OPEN
3	Digital input 3	TB2 A5	MAIN(S) BREAKER OPEN
4	Digital input 4	TB2 A7	CONTACTOR 1 OPEN
5	Digital Input 5	TB2 A8	CONTACTOR 2 OPEN
6	Digital input 6	TB2 A9	CABINET IN NON-AUTO
7	Digital input 7	TB2 A10	BACK-UP CLOCK OFF CALL
8	Digital Input 8	TB2 A11	BACK-UP CLOCK ON CALL
18	DI Common	*	COMMON
20	K1 NO	TB2 A12	LIGHTS ON CALL
21	K1 Com	TB2 B17	K1 COMMON
23	K2 NO	TB2 A13	LIGHTS OFF CALL
24	K2 Com	TB2 B17	K2 COMMON
17	24 V+	TB2 B13	24+ VDC

All analog inputs will be 4-20 mA only. Digital output relays will be electrically energized and momentarily held.

Mixed I/O module model number V 245

Revised 01/12/12

Lighting SCADA RTU terminal Configuration.

Description. This work shall consist of having the SCADA system manufacturer design, implement and test a new RTU on the Lighting SCADA System on all system terminals.

Materials. All software work shall be completed by the manufacturer or approved factory licensed sales and service company for the SCADA equipment. All licensing shall be provided by the entity completing the work. Licenses are to be held by IDOT.

SCADA RTU Configuration And Programming:

1. Setup of CPU and accompanying modules.
2. Setup of RTU site number, octal address, group call and All Call.
3. Configure application alarm parameters (download config./application).
4. Development and implementation of control and alarm application from IDOT submitted telemetry requirements.

NOTE: IDOT shall supply checklist listing I/O, telemetry, all call, group call and individual call data.

SCADA Service/Client Wonderware Programming:

1. Add RTU to Wonderware.
2. Configure Wonderware to poll SCADA CPU for data on that specific RTU.
3. Setup servers and clients for alarm notification and database I/O, for that specific RTU.
4. Configure RTU polling.
5. Activate RTU on FIU polling.

SCADA FIU CPU Programming:

If RTU exists as an Intrac site, it will have to be setup as a MOSCAD site (MOSCAD CPU). If RTU is a new site, it will have to be configured as a MOSCAD site (MOSCAD CPU).

Submittals. The Motorola VAR shall submit ladder programming, quiescent telemetry and SCADA configuration files for approval by the IDOT Engineer. Submittal will be reviewed by the Engineer and returned noting changes and/or comments.

Testing and Documentation. As part of final acceptance testing, all individual I/O points and internal status (COS) alarms shall be tested for proper operation and transmission. The transmission shall be confirmed at IDOT Dist. HQ. And the contractors dispatch facility. This full SCADA system start-up shall be completed with the Engineer present.

The control cabinet shall be tested for complete operation and the electrical load on each circuit shall be measured and documented on the Log form L-3. The ground resistance test shall be performed by the Contractor using the fall-of-potential method, with results recorded by the Contractor and witnessed by the Engineer. Ground continuity shall be tested using an approved low-impedance ohmmeter, to the farthest point of each circuit extension from the controller cabinet. Results shall be recorded by the Contractor and witnessed by the Engineer.

Revised 01/12/12

Installation.

The lighting controller installation shall be according to the details, location, and orientation shown on the plans.

Work Pad. A 4 in. (100 mm) thick portland cement concrete work pad, not less than 48 x 48 in. (1.2 x 1.2 m) shall be provided in front of the cabinet, except where the cabinet faces an adjacent sidewalk.

All conduit entrances into the lighting controller shall be sealed with a pliable waterproof material.

Concrete Foundation. The Contractor shall confirm the orientation of the lighting controller, and its door side, with the Engineer, prior to installing the foundation. A portland cement concrete foundation shall be constructed to the details shown on the plans and is included as a part of this pay items and shall not be paid for separately. The top of the foundation shall be 12-inches above grade.

The lighting controller enclosure shall be set plumb and level on the foundation. It shall be fastened to the anchor rods with hot-dipped galvanized or stainless steel nuts and washers. Foundation mounted lighting controllers shall be caulked at the base with silicone.

Where the controller has a metal bottom plate, the plate shall be sealed with a rodent and dust/moisture barrier.

Grounding.

Grounding shall be as shown on the lighting controller detail drawings. Ground rods, ground wells, connections, ground wire and other associated items shall be included in the cost the lighting controller and shall not be paid for separately."

Method Of Measurement. *Each lighting controller shall be counted each for payment.*

Basis Of Payment. *This item (LIGHTING CONTROLLER, RADIO CONTROL, DUPLEX CONSOLE TYPE WITH SCADA) shall be paid for at the contract unit price each for LIGHTING CONTROLLER (SPECIAL), which shall be payment in full for the work, complete, as specified herein.*

TRAFFIC SIGNAL SPECIFICATIONS

Effective: May 22, 2002

Revised: January 1, 2012

These Traffic Signal Special Provisions and the "District One Standard Traffic Signal Design Details" supplement the requirements of the State of Illinois "Standard Specifications for Road and Bridge Construction." The intent of these Special Provisions is to prescribe the materials and construction methods commonly used for traffic signal installations. All material furnished shall be new. The locations and the details of all installations shall be as indicated on the Plans or as directed by the Engineer. Traffic signal construction and maintenance work shall be performed by personnel holding IMSA Traffic Signal Technician Level II certification. The work to be done under this contract consists of furnishing and installing all traffic signal work as specified in the Plans and as specified herein in a manner acceptable and approved by the Engineer.

Revised 01/12/12

ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED

Description. This work shall consist of furnishing and installing aerial suspended electric cable in accordance with Section 873 of the Standard Specifications and the following additions or exceptions.

The electric cable shall service the light detectors. The cable shall be a continuous unbroken run from the light detector to the light detector amplifier. Splices in the cable are not allowed.

The electric cable shall be in accordance with the light detector manufacturer's specifications and requirements for warranty protection.

The electric cable shall be tagged with wiring identification markers at each point of access. All handholes, gulfbox junctions, pole handholes, and controller cabinets shall be considered as points of access. Wiring identification markers shall be in accordance with Article 1066.07 of the Standard Specifications.

Basis of Payment. This work will be paid for at the contract unit price per foot for ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED, which price shall include all labor, equipment, and material necessary to complete the work as specified

ELECTRIC CABLE AERIAL SUSPENDED NO. 20 3/C, TWISTED, SHIELDED

Description. This work shall consist of furnishing and installing electric cable in conduit in accordance with Section 873 of the Standard Specifications and the following additions or exceptions.

The electric cable shall service the light detectors. The cable shall be a continuous unbroken run from the light detector to the light detector amplifier. Splices in the cable are not allowed.

The electric cable shall be in accordance with the light detector manufacturer's specifications and requirements for warranty protection.

Basis of Payment. This work will be paid for at the contract unit price per foot for ELECTRIC CABLE AERIAL SUSPENDED NO. 20 3/C, TWISTED, SHIELDED, which price shall include all labor, equipment, and material necessary to complete the work as specified

PARAPET MOUNTED EMERGENCY VEHICLE PREEMPTION DETECTOR SUPPORT

Revised: January 4, 2012

Description. This item shall consist of installing the support for a new emergency vehicle preemption detector as shown on the plans and as described herein.

The installation of the new emergency vehicle preemption detector support shall conform with sections 700, 800 and 1000 of the Standard Specifications for Road and Bridge Construction and the Emergency Vehicle Priority System section of the District 1 Traffic Signal Specifications, except as revised herein.

The installation of the new emergency vehicle preemption detector support shall include any electric conduit, fittings, connector, and all other incidentals necessary to complete the installation.

Revised 01/12/12

Basis of Payment. This work shall be paid for at the contract unit price each for EMERGENCY VEHICLE PREEMPTION DETECTOR SUPPORT PARAPET MOUNTED, which price shall include all labor, equipment, and material necessary to complete the work as specified

INSTALL EXISTING FIBER OPTIC CABLE IN CONDUIT

Description. This work shall consist of installing fiber optic cable and tracer wire in conduit in accordance with Sections 871 and 873 of the Standard Specifications and the following additions or exceptions.

The existing fiber optic cable and tracer wire are coiled and stored in traffic signal handholes and conduit at the Smith Road & Walmart Entrance intersection. This fiber optic cable and tracer wire shall be installed in new and existing conduit to the IL Route 64 & Smith/Kautz Road traffic signal controller.

Method of Measurement. Installation of existing fiber optic cable will be measured for payment in feet in place. Length of measurement shall be in accordance with Article 873.05.

Basis of Payment. This work will be paid for at the contract unit price per foot for INSTALL EXISTING FIBER OPTIC CABLE IN CONDUIT, which price shall include all labor, equipment, and material necessary to complete the work as specified

SPECIAL PROVISION FOR IN-STREAM WORK PLAN REQUIREMENT (DISTRICT ONE)

Effective: July 7, 2011

The Contractor shall secure approval of a Contractor-prepared in-stream work plan from the Army Corps of Engineers prior to any work affecting jurisdictional waters.

The applicable ACOE Chicago District in-stream and side stream requirements are contained in the Army Corps permit authorization, which is a special provision of this contract, or which will be provided to the contractor upon issuance.

The Army Corps "Requirements for In-stream Activities" (March 2011) are reproduced here for reference only. These in-stream requirements, as well as any updates to the guidelines on the Army Corps website, and specific permit conditions all apply. In the event of conflicts, the permit language shall apply.

Requirements for In-stream Construction Activities:

The contractor shall contact the Corps with a proposed cofferdam plan meeting the standards listed below. Means and methods for completing work within a waterway must be approved by the Corps prior to the commencement of work. The Corps will approve the cofferdam plan to ensure it meets erosion and sediment control standards. However, it is incumbent upon the contractor to ensure that all cofferdams are constructed to allow the passage of the 2-year peak flow and constructed to withstand the 25-year, 24-hour storm.

The following definitions apply to these notes:

Cofferdam: a temporary structure within a waterway or body of water designed to provide a dry work area for temporary construction activities and contain disturbed soil and/or suspended sediments.

Revised 01/12/12

WINTERIZED TEMPORARY ACCESS

Effective: January 1, 2012

Description. This work shall consist of constructing, maintaining and removing winterized temporary access for private and commercial entrances and side roads designed for use throughout the winter months.

Materials. Materials shall be according to the following.

ITEM	ARTICLE/SECTION
Hot-Mix Asphalt	1030

Construction Requirements

For projects lasting longer than one construction season, the contractor shall construct and maintain temporary access composed of an HMA surface course over an existing aggregate temporary access. The contractor shall install the winterized temporary access prior to winter shut down at the direction of the engineer. The top 2" of the existing aggregate temporary access should be removed and replaced with 2" of Hot-Mix Asphalt. Compensation will be given for the winterized temporary access at the time of the installation of the Hot-Mix Asphalt surface course.

HMA Surface Course. The Hot-Mix Asphalt surface course shall be 2 in. thick when compacted. HMA Surface Course, Mix "D", N50 shall be used except as modified by the plans or as directed by the Engineer. This work shall be constructed in accordance with the applicable portions of Section 406 of the Standard Specifications and as directed by the Engineer. The material shall conform to the applicable portions of Section 1030 of the Standard Specifications.

The winterized temporary access shall be constructed to the dimensions and grades of the existing aggregate temporary access.

Maintaining the winterized temporary access shall include repairing the HMA surface course after any operation that may disturb or remove the winterized temporary access to the satisfaction of the Engineer. The cost for maintenance of the temporary access shall be included in the cost for Winterized Temporary Access.

When use of the winterized temporary access is discontinued, the winterized temporary access shall be removed according to Article 440.03 of the Standard Specifications. The material shall be disposed of according to Article 202.03 of the Standard Specifications or may be utilized in the permanent construction with the approval of the Engineer.

Method of Measurement. Winterized temporary access for private and commercial entrances and roads will be measured for payment at the contract unit price per square yard for every private entrance, commercial entrance or road constructed for the purpose of winterized temporary access.

Added 01/12/12

Basis of Payment. Winterized temporary access for private and commercial entrances and roads will be paid for at the contract unit price per square yard for WINTERIZED TEMPORARY ACCESS as specified in the plans.

Partial payment of the square yard amount bid for each winterized temporary access will be paid according to the following schedule:

(a) Upon construction of the winterized temporary access, sixty percent of the contract unit price per square yard will be paid.

(b) Subject to the approval of the Engineer for the adequate maintenance and removal of the winterized temporary access, the remaining forty percent of the pay item will be paid upon the permanent removal of the temporary access.

AGGREGATE DITCH CHECKS

Effective: January 4, 2012

Description:

This work shall consist of constructing an Aggregate Ditch Check for storm water detention purposes per IDOT Standard 280001.

General Requirements: Aggregate Ditch Checks shall be constructed with products from the Department's approved list with aggregate placed on filter fabric. Riprap shall be placed in accordance with Article 281.01. Aggregate Ditch Checks shall be constructed per IDOT Standard 280001 and per the ditch profiles included in the contract drawings.

Method of Measurement: This work will be measured for payment in tons for Aggregate Ditch Checks. Payment will not be made for aggregate in excess of 108 percent of the amount specified by the Engineer.

Basis of Payment: This work will be paid for at the contract unit price per tons for Aggregate Ditch Checks.

WETLAND PROTECTION FENCE (SPECIAL)

Description. This work shall consist of the installation, maintenance and removal of temporary fencing to protect jurisdictional wetlands adjacent to the project.

The temporary fencing shall be installed in accordance with the applicable portions of Section 201 of the Standard Specifications and as shown in the plans.

Method of Measurement. This work will be measured in accordance with Article 201.10 of the Standard Specifications.

Added 01/12/12

Basis of Payment. This work will be paid for at the contract unit price per foot for FENCE (SPECIAL).

RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT

Effective: January 1, 2002

Revised: January 1, 2007

This item shall consist of relocating the existing emergency vehicle priority system, detector unit (single channel or dual channel) from its existing location to a new traffic signal post or mast arm assembly and pole, and connecting it to an emergency vehicle priority system, phasing unit. If the existing Emergency Vehicle Priority System, Detector Unit Assembly includes a Confirmation Beacon, the Confirmation Beacon shall also be relocated and connected to the Emergency Vehicle Priority System, Detector Unit and shall be included in this item.

The emergency vehicle system is not to be inoperative for more than 8 hours and the Contractor must notify the Municipality or Fire Protection District 72 hours prior to the disconnection of the equipment.

Basis of Payment. This item will be paid for at the contract unit price each for RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT.

TEMPORARY TRAFFIC SIGNAL INSTALLATION (SPECIAL)

Effective; January 4, 2012

Description. This work shall consist of modifying an existing temporary traffic signal installation, maintaining the temporary traffic signal installation during construction, and removing the temporary traffic signal installation upon completion of construction.

Modify the existing temporary traffic signal installation as shown on the plans. Perform all modifications in accordance with Section 890 of the Standard Specifications and the Temporary Traffic Signal Installation section of the District 1 Traffic Signal Specifications.

Maintain the temporary traffic signal installation in accordance with Section 850 of the Standard Specifications and the Maintenance of Existing Traffic Signal Installation section of the District 1 Traffic Signal Specifications.

Upon completion of permanent traffic signal construction, remove the temporary traffic signal installation in accordance with Section 895 of the Standard Specifications and the Temporary Traffic Signal Installation section of the District 1 Traffic Signal Specifications.

Basis of Payment. This work shall be paid for at the contract unit price each for TEMPORARY TRAFFIC SIGNAL INSTALLATION (SPECIAL), the price of which shall include all costs for the modification of the existing temporary traffic signal installation, the modifications required for traffic staging, changes in signal phasing as required in the Contract plans, and the complete removal of the temporary traffic signal.

Added 01/12/12