



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

April 1, 2010

SUBJECT: Children's Learning Center
Project HPP-4071(001)
Section 08-00061-00-RS (Glencoe)
Cook County
Contract No 63449
Item 142 A
April 23, 2010 Letting

TO PROSPECTIVE BIDDERS:

To clarify information it is necessary to revise the following:

Proposal: Revised pages 1-7 of the Schedule of Prices. Revised the Table of Contents and pages 1, 2, 4-7 and added pages 37A-37E of the Special Provisions.

Plans: Revised sheets 3, 4, 6-13 and added sheet 16A

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.

Since the proposal sheets are printed back to back, bidders are cautioned to exercise care when inserting revised and/or added special provisions into their proposals.

Please call 217-782-7806 if any of the above-described material is not included in this transmittal.

Very truly yours,

Scott Stitt
Acting Engineer of Design and Environment

A handwritten signature in black ink, appearing to read 'Ted B. Walschleger', followed by the initials 'AE'.

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

COUNTY NAME	CODE	DIST	SECTION NUMBER	PROJECT NUMBER	ROUTE
COOK	031	01	08-00061-00-RS (GLENCOE)	HPP-4071/001/000	CHILDRENS LEARNING CENTER

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
A2005055	T-GYMNOC DIO PT 5	EACH	9.000 X	=		=	
A2007212	T-QUERCUS X SCHU 7	EACH	1.000 X	=		=	
C2C014G5	S-CORNUS MAS DC CG 5G	EACH	254.000 X	=		=	
C2C024G2	S-DIERVILLA CL SP 2G	EACH	148.000 X	=		=	
C2008318	S-ROSA PURP PAV 18	EACH	70.000 X	=		=	
K0030421	PERENNIAL PLANT NARCS	UNIT	30.000 X	=		=	
K1004465	PERENNIAL PLANTS BULB	UNIT	12.000 X	=		=	
K1005875	TREE TRANSPLANT	EACH	18.000 X	=		=	
XX000052	REM EX WATERMAIN	FOOT	879.000 X	=		=	
XX003885	IRRIGATION SYSTEM	L SUM	1.000 X	=		=	
XX004998	PVC WATER MAIN 6	FOOT	670.000 X	=		=	
XX005434	WATER SERVICE LINE SP	FOOT	2,192.000 X	=		=	
XX006077	GATE VALVE AND BOX 6	EACH	2.000 X	=		=	
XX006282	SS DI T1 12	FOOT	121.000 X	=		=	
XX006755	STOP VALVE 3/4 & BOX	EACH	13.000 X	=		=	

revised 4/1/10

CHILDRENS
08-00061-00-RS (GLENCOE)
COOK

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 63449

ECMS002 DTGECM03 ECMR003 PAGE 2
RUN DATE - 03/31/10
RUN TIME - 183459

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
XX007186	QUICK COUPLE	EACH	22.000 X				
XX007263	GATE VALVE W/ BOX 4	EACH	3.000 X				
XX007469	UPLIGHTS	EACH	10.000 X				
XX008001	AGGREGATE PATH 8	SQ YD	291.000 X				
XX008185	PVC WATER MAIN 4	FOOT	389.000 X				
XX008207	LIGHTS PEDESTRIAN	EACH	7.000 X				
XX011700	WATER MAIN FITTINGS	POUND	960.000 X				
X0320903	CIR BREAK & ENCLOSURE	EACH	1.000 X				
X0656300	PAVEMENT REM & REPL	SQ YD	6.000 X				
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000 X				
Z0022800	FENCE REMOVAL	FOOT	310.000 X				
20100500	TREE REMOV ACRES	ACRE	1.000 X				
20101100	TREE TRUNK PROTECTION	EACH	9.000 X				
20101200	TREE ROOT PRUNING	EACH	9.000 X				
20101400	NITROGEN FERT NUTR	POUND	70.000 X				

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CHILDRENS
08-00061-00-RS (GLENCOE)
COOK

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 63449

ECMS002 DTGECM03 ECMR003 PAGE 3
RUN DATE - 03/31/10
RUN TIME - 183459

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
20101500	PHOSPHORUS FERT NUTR	POUND	70.000 X	=		=	
20101600	POTASSIUM FERT NUTR	POUND	70.000 X	=		=	
20200100	EARTH EXCAVATION	CU YD	2,600.000 X	=		=	
20200410	EARTH EXCAVATION SPL	CU YD	4,830.000 X	=		=	
20700420	POROUS GRAN EMB SUBGR	CU YD	1,310.000 X	=		=	
20800150	TRENCH BACKFILL	CU YD	151.000 X	=		=	
21101505	TOPSOIL EXC & PLAC	CU YD	1,474.000 X	=		=	
21101665	TOPSOIL F & P 18	SQ YD	6,038.000 X	=		=	
25000200	SEEDING CL 2	ACRE	0.530 X	=		=	
25200100	SODDING	SQ YD	5,618.000 X	=		=	
25400100	PERENNIAL PLANTS	UNIT	16.800 X	=		=	
25400105	PERENNIAL PLANTS	EACH	240.000 X	=		=	
28000250	TEMP EROS CONTR SEED	POUND	900.000 X	=		=	
28000400	PERIMETER EROS BAR	FOOT	1,328.000 X	=		=	
28000510	INLET FILTERS	EACH	11.000 X	=		=	

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
28100105	STONE RIPRAP CL A3	SQ YD	5.000 X	=		=	
28200200	FILTER FABRIC	SQ YD	5.000 X	=		=	
35102400	AGG BASE CSE B 12	SQ YD	2,150.000 X	=		=	
40300100	BIT MATLS PR CT	GALLON	1,072.000 X	=		=	
40603080	HMA BC IL-19.0 N50	TON	270.000 X	=		=	
40603310	HMA SC "C" N50	TON	180.000 X	=		=	
42400200	PC CONC SIDEWALK 5	SQ FT	3,585.000 X	=		=	
42400800	DETECTABLE WARNINGS	SQ FT	76.000 X	=		=	
44000200	DRIVE PAVEMENT REM	SQ YD	82.000 X	=		=	
44000500	COMB CURB GUTTER REM	FOOT	1,972.000 X	=		=	
48301000	PROTECTIVE COAT	SQ YD	590.000 X	=		=	
54213657	PRC FLAR END SEC 12	EACH	1.000 X	=		=	
550A0050	STORM SEW CL A 1 12	FOOT	92.000 X	=		=	
550A0340	STORM SEW CL A 2 12	FOOT	183.000 X	=		=	
550A0360	STORM SEW CL A 2 15	FOOT	50.000 X	=		=	

revised 4/1/10

CHILDRENS
 08-00061-00-RS (GLENCOE)
 COOK

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63449

ECMS002 DTGECM03 ECMR003 PAGE 5
 RUN DATE - 03/31/10
 RUN TIME - 183459

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
55100300	STORM SEWER REM 8	FOOT	122.000 X	=		=	
55100700	STORM SEWER REM 15	FOOT	50.000 X	=		=	
60107600	PIPE UNDERDRAINS 4	FOOT	812.000 X	=		=	
60108000	PIPE UNDERDRAINS 12	FOOT	186.000 X	=		=	
60200805	CB TA 4 DIA T8G	EACH	4.000 X	=		=	
60201305	CB TA 4 DIA T15F&L	EACH	2.000 X	=		=	
60218400	MAN TA 4 DIA T1F CL	EACH	2.000 X	=		=	
60219000	MAN TA 4 DIA T8G	EACH	2.000 X	=		=	
60237000	INLETS TA T15F&L	EACH	2.000 X	=		=	
60250200	CB ADJUST	EACH	1.000 X	=		=	
60255500	MAN ADJUST	EACH	1.000 X	=		=	
60500060	REMOV INLETS	EACH	3.000 X	=		=	
60600605	CONC CURB TB	FOOT	532.000 X	=		=	
60608250	COMB CC&G TM2.06	FOOT	949.000 X	=		=	
60608600	COMB CC&G TM6.06	FOOT	202.000 X	=		=	

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
66411900	TEMP FENCE	FOOT	2,090.000 X	=			
67000400	ENGR FIELD OFFICE A	CAL MO	6.000 X	=			
67100100	MOBILIZATION	L SUM	1.000 X	=			
70101800	TRAF CONT & PROT SPL	L SUM	1.000 X	=			
78000100	THPL PVT MK LTR & SYM	SQ FT	25.000 X	=			
78000200	THPL PVT MK LINE 4	FOOT	328.000 X	=			
78000400	THPL PVT MK LINE 6	FOOT	48.000 X	=			
78000650	THPL PVT MK LINE 24	FOOT	27.000 X	=			
80400105	ELECT SERV INSTALL SP	EACH	1.000 X	=			
81012300	CON T 1 PVC	FOOT	644.000 X	=			
81400105	HANDHOLE SPL	EACH	1.000 X	=			
81700325	EC C EPR RHW 3-1C 8	FOOT	713.000 X	=			
87800110	CONC FDN TY A SPL	FOOT	7.000 X	=			
				TOTAL \$			

NOTE: *** PLEASE TURN PAGE FOR IMPORTANT NOTES ***

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NOTE:

1. EACH PAY ITEM SHOULD HAVE A UNIT PRICE AND A TOTAL PRICE.
2. THE UNIT PRICE SHALL GOVERN IF NO TOTAL PRICE IS SHOWN OR IF THERE IS A DISCREPANCY BETWEEN THE PRODUCT OF THE UNIT PRICE MULTIPLIED BY THE QUANTITY.
3. IF A UNIT PRICE IS OMITTED, THE TOTAL PRICE WILL BE DIVIDED BY THE QUANTITY IN ORDER TO ESTABLISH A UNIT PRICE.
4. A BID MAY BE DECLARED UNACCEPTABLE IF NEITHER A UNIT PRICE NOR A TOTAL PRICE IS SHOWN.

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INSERTED 2010 BDE SPECIAL PROVISIONS
STORM WATER POLLUTION PREVENTION PLAN
NOTICE OF INTENT (NOI)

STATE OF ILLINOIS
SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2007 (hereinafter referred to as the "Standard Specifications"), the latest edition of the "Illinois Supplement to the National Manual on Uniform Traffic Control Devices for Streets and Highways" in effect on the date of invitation for bids, and the "Supplemental Specifications and Recurring Special Provisions" adopted January 1, 2010 and as indicated on the Check Sheet included herein, which apply to and govern the proposed improvement designated as the Children's Learning Center Campus Entryway; Section No. 08-00061-00-RS; Project No. HPP-4071(002); Job No. C-91-102-08; and Contract No. 63449 at the Chicago Botanic Garden, and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

LOCATION OF PROJECT

The project consists of removing an existing stone parking lot and constructing a new drive/entryway to the Children's Learning Center at the Chicago Botanic Garden, located at 1000 Lake Cook Road in northern Glencoe, Illinois. The project length of new construction is approximately 470 feet.

DESCRIPTION OF PROJECT

The existing north-end facility on the project site is a crushed stone parking lot, with minimal parking islands and an area of 1.6 acres. The proposed improvements include the removal of the existing parking lot, the construction of a new two-way entrance drive with two (2), 12 foot lanes and a one-way circular turnaround/drop-off roadway with parking stalls. The paved area will have curb and gutter and new drainage structures in compliance with the Cook County building code. The project includes excavation, paving, drainage, curb and gutter, landscaping, and landscape lighting. The existing stone lot from the north-end facility will be disposed at the south-end facility at Dundee Road as indicated in the plans. Project coordination will be required with the Growing Garden project adjacent to the CLC Entryway project.

CONTRACT START DATE

The Contractor shall not start work before August 15, 2010 within the Children's Learning Center Campus as directed by the Chicago Botanic Garden. Work can begin at an early date, but not before July 1, 2010 for site preparation activities and storm sewer installation at the south-end facility at the southern limits of the Chicago Botanic Garden.

STATUS OF UTILITIES TO BE ADJUSTED

Effective: January 30, 1987

Revised: July 1, 1994

Utility companies involved in this project have provided the following estimated dates:

Name of Utility	Type	Location	Estimated Dates for Start and Completion of Relocation or Adjustments
ComEd	Electric	Various	None anticipated
Nicor	Gas	Various	None anticipated
Water Main	Water	Various	None anticipated
Telecommunications		Various	None anticipated

The above represents the best information available to the Department and is included for the convenience of the bidder. The applicable portions of Articles 105.07 and 107.31 of the Standard Specifications shall apply.

PRUNING FOR SAFETY AND EQUIPMENT CLEARANCE

Revise Article 201.05 (c) of the Standard Specifications as follows:

“Plant material shall be pruned to provide a minimum vertical clearance of 15 feet from the finished surface of the road bed and shoulders.”

TRAFFIC CONTROL PLAN

Traffic Control shall be in accordance with the applicable sections of the Standard Specifications, the Supplemental Specifications, the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", any special details and Highway Standards contained in the plans, and the Special Provisions contained herein.

Special attention is called to Article 107.09 of the Standard Specifications and the following Highway Standards, Plans, Quality Standard for Work Zone Traffic Control Devices, Recurring Special Provisions, and Special Provisions, relating to traffic control.

STANDARDS:

State:

701001-02 Off-Rd Operations, 2L, 2W, More Than 15' Away
701006-03 Off-Rd Operations, 2L, 2W, 15' to 24" From Pavement
701901-01 Traffic Control Devices

PLANS: Traffic Control Plan

SPECIAL PROVISIONS: Work Zone Traffic Control (Lump Sum Payment)

WORK RESTRICTIONS

Add the following paragraph to Article 107.20 of the “Standard Specifications”:

No work or equipment will be allowed outside of the construction limits or as directed by the engineer. Trees outside of the construction area are not to be damaged during construction. Trees within the construction area are marked on the grading plan to be protected, removed or relocated. Any destroyed trees that are not called for removal in the plans or by the Engineer in the field will be replaced at the Contractor's expense. The Contractor shall incur a \$1,000 fine per damage infliction to a marked protected tree on the grading plan or a marked protected tree by the engineer in the field, for any condition where such damage incident would occur. This would include damage to tree trunks, branches and roots within the drip zone. The fine will be collected by the Chicago Botanic Garden. A damage incident will be determined by the engineer in the field.

COOPERATION WITH CHICAGO BOTANIC GARDEN LIAISON

The Chicago Botanic Garden (CBG) will assign a liaison to the Engineer during the construction of the project. The Contractor will cooperate with the CBG for protection of its facilities (not limited to trees, lawn, roadways, utilities within the Botanic Garden property) in accordance with Article 107.20 and for coordination of the work. Additional compensation will be allowed for delays, inconveniences, or damages while conforming to the cooperation specified herein shall be considered as included in the cost of MOBILIZATION and no additional compensation will be allowed.

Full depth subgrade undercut should occur at limits determined by the Engineer. A transition slope to the full depth of undercut shall be made outside of the undercut limits at a taper of 1 foot (300 mm) longitudinal per 1 inch (25 mm) depth below the proposed subgrade or bottom of the proposed aggregate subgrade when included in the contract.

Method of Measurement. This work will be measured for payment in accordance with Article 207.04 of the Standard Specifications. When specified on the contract, the theoretical elevation of the bottom of the aggregate subgrade shall be used to determine the upper limit of Porous Granular Embankment, Subgrade. The volume will be computed by the method of average end areas.

Basis of Payment. This work shall be paid for at the contract unit price per cubic yard (cubic meter) for POROUS GRANULAR EMBANKMENT, SUBGRADE.

The Porous Granular Embankment, Subgrade shall be used as field conditions warrant at the time of construction. No adjustment in unit price will be allowed for an increase or decrease in quantities from the estimated quantities shown on the plans.

EARTH EXCAVATION, SPECIAL

Description: Except as herein specified, EARTH EXCAVATION, SPECIAL shall be constructed in accordance with standard line item EARTH EXCAVATION of Section 201 of the "Standard Specifications".

Disposal Requirements: Stone removed from the existing north-end parking lot will be disposed at the south-end facility as indicated on the plans and as directed by the Engineer and the Chicago Botanic Garden Liaison. Final grading of the south-end facility will follow Section 212 of the "Standard Specifications". Remaining material will be disposed of off-site when directed by the Engineer according to Section 201 of the "Standard Specifications".

Basis of Payment: Earth excavation will be paid for at the contract unit price per cubic yard for EARTH EXCAVATION, SPECIAL. The contract unit price shall include other items of work included under the heading of Earthwork for which no payment item is included in the contract.

TOPSOIL AND COMPOST

This Special Provision amends the provisions of the Standard Specifications and shall be construed to be a part thereof:

211.03 Furnishing and Excavating Topsoil.

Remove the second and third paragraphs and add the following:

Topsoil to be furnished and placed as indicated in the plans and shall consist of rough black topsoil material (i.e. not pulverized) that is imported. Topsoil shall not contain stones, lumps, roots or similar objects larger than 1 inch in any dimension or weed propagules (seeds, rhizomes and plants, including but not limited to Quack Grass (*Agropyren repens*), Hungarian Brome Grass (*Bromus inermus*), Crown Vetch (*Coronilla varia*), Reed Canary Grass (*Phalarus arundinaceae*), and Teasel (*Dipsacus laciniatus* and *Dipsacus sylvestris*), and shall have a pH value between 5.8 and 7.2. Topsoil shall not have been stored or stockpiled for more than one year. Material stripped from the following sources shall not be considered suitable for use as topsoil: existing soil on site, chemically contaminated soils, areas from which the original surface has been stripped and/or covered over such as borrow pits, open mines, demolition sites, dumps and sanitary landfills.

Approved topsoil from offsite will be required to complete the contract to the lines, grades and the minimum thickness shown on the plans. The Contractor shall furnish topsoil from areas outside the limits of the right of way. The Engineer, prior to its use, shall approve this topsoil. If stockpiling cannot be avoided, special measures, such as watering the stockpile and planting a cover crop on the stockpile shall be required

as directed by the Engineer. If stockpile is to be in place for more than 45 days it will be seeded with a cover crop. See Article 1081.10(g) for cover crop material.

Contractor shall have the soil subjected to a germination test to detect whether or not weed propagules are present. Contractor shall deliver results to the Engineer prior to any planting or seeding. Contractor shall have this test performed for each 500 cubic yards delivered to the site.”

211.04 Placing Topsoil and Compost.

Add the following after the second paragraph:

If soil is to be bare for more than 45 days a cover crop will be used. See Article 1081.10(g) for cover crop materials. Watering shall be performed, if necessary, for germination.

Delete the words “disking” and “or” in the last sentence of the second paragraph and add the following:

For the planting bed in the turnaround island, 18” depth of topsoil is required with 3” leaf compost tilled in to a depth of 12” inches, or as directed by the Engineer. For all other planting bed areas, provide 18” depth topsoil, or as directed by Engineer.

211.08 Basis of Measurement and Payment

Remove the paragraph and add the following:

TOPSOIL EXCAVATION AND PLACEMENT will be measured according to Article 211.07 of the “Standard Specifications” and paid for at the contract unit price per cubic yard. TOPSOIL FURNISH AND PLACE, of the thickness specified will be measured and paid for at the contract unit price per square yard. Measurement will be as specified in Article 211.07 of the “Standard Specifications”. The contract unit prices includes all labor, equipment, and materials to perform the work as specified herein, except for compost material. Compost material only is provided by CBG. Labor, and all other costs to perform work incurred by contractor as specified herein, or as directed by Engineer, is included in contract unit price.

AGGREGATE PATH, 8”

Description: This item shall consist of furnishing, placing and shaping crushed concrete, crushed gravel or crushed stone at the locations specified in the plans. The aggregate path is the Chicago Botanic Garden’s standard gravel sidewalk, named “Old Time Screening”.

Materials: Aggregate shall conform to the requirements of Articles 1003 and 1004. The 2” cap layer shall be Grade 9 fines and the 6” base layer shall be Grade 9 coarse aggregate. A typical gradation is as follows:

Sieve Size	Percent Passing
1/2”	100
3/8”	98.6
#4	74.9
#8	35.5
#16	26.3
#30	20
#50	15.8
#100	12.5
#200	9.8

A typical color is light brown, crushed Birdseye gravel mixed with a crushed 3/8" chip of granites and dolomites (no limestone).

Construction Requirements: Where shown on the plans or as required in the Special Provisions, the area upon which AGGREGATE PATH, 8" are to be placed shall be excavated and graded to the extent necessary to place the sidewalk to the thickness shown.

Before any aggregate is placed, weeds, grass and miscellaneous vegetation shall be removed from the area in a manner acceptable to the engineer. The Contractor shall give the engineer at least 48 hours notice that an area will be prepared to receive treatment, prior to the placement of the aggregate.

The aggregate shall be placed as indicated on the plans and in sufficient quantity and in such a manner that after compaction the aggregate shall have the configuration shown on the Plans.

Basis of Payment: Payment for AGGREGATE PATH, 8" will be made at the contract unit price per square yard, which payment shall constitute full compensation for furnishing and placing the crushed concrete, crushed gravel or crushed stone, and for all labor, equipment and incidentals required to complete this item as specified.

WORK ZONE TRAFFIC CONTROL (LUMP SUM PAYMENT)

Effective: February 1, 1996

Revised: January 1, 2007

Specific traffic control plan details and Special Provisions have been prepared for this contract. This work shall include all labor, materials, transportation, handling and incidental work necessary to furnish, install, maintain and remove all traffic control devices required as indicated in the plans and as approved by the Engineer.

Method of Measurement: All traffic control (except traffic control pavement marking) indicated on the traffic control plan details and specified in the Special Provisions will be measured for payment on a lump sum basis. Traffic control pavement markings will be measured per foot (meter).

Basis of Payment: All traffic control and protection will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION (SPECIAL).

SHORT TERM PAVEMENT MARKING, TEMPORARY PAVEMENT MARKING and PAVEMENT MARKING TAPE TYPE III will be paid for separately.

TREE TRANSPLANT

Description: This work shall include the transplanting of existing trees as indicated on the plans to the locations within the Chicago Botanic Garden as directed by the Engineer and the Chicago Botanic Garden Liaison.

Construction Requirements:

Perform work under this item in accordance with Section 253 of the Standard Specifications except as herein modified.

Digging of Plants: Trees must not be dug until the Contractor is ready to transport them from their original locations to the new locations or approved temporary storage. The maximum time lapse between digging and replanting must be four hours. Trees over 100mm (4 inch) diameter must be dug carefully with a tree spade, avoiding injury to the tree or damage of the roots, particular attention must be given to fibrous roots. Immediately after digging, roots must be protected against drying out and freezing. The size of tree spade must meet horticultural arborist nursery industry standard in regard to caliper of tree and size of root ball. Trees being moved from original location directly to new location do not have to be wrapped in burlap and twine.

The root balls must be a minimum of 2.1 m (84 inch) diameter by 900 mm (36 inch) height, wrapped in burlap and twine

- A. Transplanted trees will either be balled and burlapped and stored in a temporary nursery for future use in this project or mechanically dug and transplanted directly to a new location within 2,000 feet of their current location.
- B. The contractor shall take measures necessary to not damage any existing plant material or any existing Chicago Botanic Garden displays, features, pavements, etc. during transplanting operations.
- C. The temporary nursery storage area will be in a location directed by the Engineer. The exact storage location of each individual tree shall be as directed by the Engineer. Each tree shall have two heavy-duty watering bags placed around its trunk to aid in watering the trees while in the nursery. The heavy-duty watering bags shall be approved by the Engineer. Balled and burlapped transplanted trees shall be stored above grade and “heeled in” in shredded bark mulch as approved by the Engineer. The Contractor shall ensure that proper drainage of the nursery storage area is provided.
- D. When transplanting trees to final locations, the trees shall bear the same relationship to grade as they did prior to transplanting. The location and orientation of the re-planted trees shall be determined by the Engineer and the Chicago Botanic Garden Liaison.

Basis of Payment: Payment for TREE TRANSPLANT will be made at the contract unit price per each, which payment shall constitute full compensation for salvaging and transplanting existing trees to the locations directed by the engineer, and for all labor, equipment and incidentals required to complete this item as specified.

TEMPORARY FENCE

Description: Except as herein specified, TEMPORARY FENCE shall be constructed in accordance with standard line item TEMPORARY FENCE of Section 201 of the “Standard Specifications”. This item shall consist of constructing TEMPORARY FENCE for installation as shown on the plans.

Materials: Material shall meet the requirements of Section 201 of the “Standard Specifications” except as follows. The fence shall be of the color dark green. The color is to be approved by the Field Engineer before installation.

Construction Requirements: The TEMPORARY FENCE shall follow the construction requirements of Section 201 of the “Standard Specifications”. If the fence collapses at any time it shall be restored to its original position within 24 hours. The fence shall also remain standing in place for the entire duration of the project, until construction is completed for the contract.

Basis of Payment: This work will be paid for at the contract unit price per foot for TEMPORARY FENCE. This unit price shall include maintenance of the fence.

PAVEMENT REMOVAL AND REPLACEMENT

Description: This work shall consist of the removal and replacement of existing pavement due to the construction of the proposed irrigation main as indicated in the plans and as directed by the Engineer. Work shall be completed in conformance with the applicable sections of the “Standard Specifications”.

Materials and Construction Requirements: This item shall consist of the removal of existing pavement and replacement with hot-mix asphalt binder course, hot-mix surface course, and aggregate base course at the specified width as shown in the plans in accordance with applicable portions of Sections 301 and 406 of the “Standard Specifications”. The pavement shall be constructed with 1 ½” Hot-Mix Asphalt Surface Course, Mix “C”, N50; 2 ¼” Hot-Mix Asphalt Binder Course, IL-19.0, N50; and 12” Aggregate Base Course, Type B.

Basis of Payment: This item shall be paid for at the contract unit price per square yard for PAVEMENT REMOVAL AND REPLACEMENT, measured in place to the limits shown in the plans and shall be full compensation for all labor, equipment, and material including Aggregate Base Course, Type B; Hot-Mix Asphalt Surface Course, Mix “C”, N50; Hot-Mix Asphalt Binder Course, IL-19.0, N50; and surface preparation necessary to complete the work to the satisfaction of the Engineer.

LIGHTING SYSTEM SPECIFICATIONS

PART 1 – GENERAL

DESCRIPTION

- A. The other Contract Documents shall be considered as included with this section.

BASIC LIGHTING SYSTEM REQUIREMENTS

- A. The Electrical Contractor shall carefully correlate his work with the Landscape Contractor, Irrigation Contractor, and other site developments.
- B. Electrical Contractor is required to install, adjust and maintain his finished work at his expense throughout the entire project length.
- C. The electrical work shall be performed in accordance with applicable Articles in Division 800 of the "Standard Specifications".

SCOPE OF WORK

Provide labor, materials, equipment and services necessary to complete the electrical work as defined herein and as indicated on the Electrical Plan and Details.

Work shall include, but is not limited to:

- A. Complete lighting system as shown on drawings.
- B. Verify underground utility locations
- C. The Contractor shall coordinate work of this section with work of all related trades and subcontractors to assure smooth progression of work.
- D. Protection and/or restoration of all existing improvements.
- E. Trenching and backfill for all conduit and lighting fixtures.
- F. Furnishing and installing all conduit, electrical cable, pedestrian lights, uplights, apparatus, and all necessary specialties and accessories.
- G. Testing of lighting system.

RELATED WORK BY OTHERS

- A. Landscaping Installation and maintenance.
- B. Irrigation installation and maintenance.

ELECTRICAL REQUIREMENTS

General electrical requirements shall follow Section 801 in the "Standard Specifications".

PART 2 – LIGHT FIXTURE MATERIALS

All materials to be incorporated in the lighting system shall be new and without flaws or defects and of quality and performance as specified and meeting the requirements of the system.

TREE ACCENT LIGHTING

Tree accent light fixtures shall meet the following:

- A. Fixture shall be KIM Lighting Spun Copper Bullet, or approved equal.
- B. The housing and shield shall be spun copper with cast bronze clamping rings and swivel base. The fixture shall be a bullet shape of at least a 6 ½" diameter, 13 ¼" length, and 2 ½" height.
- C. The swivel base shall be cast bronze with set screw lock and ½" NPT plus solid brass locknut for mounting.
- D. The lens shall be a convex clear tempered glass with silicone gasket.
- E. The socket shall be porcelain medium base.
- F. Wiring shall be No. 18 AWM rated 105 degrees.
- G. The finish shall be natural copper and bronze that should rapidly age to a deep rich bronze color.
- H. Must be UL listed to U.S. safety standards for wet locations.
- I. Shall be 120 Volt.
- J. The lamp shall be 150W, PAR 38 Halogen
- K. The fixture shall be mounted on a PVC fixture molded in black, suitable for 120 Volt with a ½" NPT mount that is corrosion free and UV resistant. The mount shall be 100% shatter resistant against denting and cracking, have an angled bottom to eliminate cable congestions, and a minimum post length of 17 ½".
- L. A transition from rigid PVC conduit to rigid metallic conduit at the location of the PVC fixture shall be made per all applicable regulations to the satisfaction of the engineer.

PEDESTRIAN LIGHTS

Pedestrian light fixtures shall meet the following:

- A. Fixture shall be KIM Lighting Compact Bollard, or approved equal.
- B. The top and louvers shall be interlocking die-cast, low-copper, aluminum sections that fasten together with concealed stainless steel screws. Louver base assembly shall fasten internally to riser with 4 concealed screws.
- C. The riser shall be extruded aluminum, minimum 5" diameter, minimum wall thickness of 0.124", external vertical grooves shall align with vertical members on louver assembly. Should attach to anchor base with 4 countersunk stainless steel flat socket head screws to match fixture.
- D. The anchor base shall be a heavy sand cast, low-copper aluminum, fully concealed base with riser shaft. Three 3/8" x 10" + 2" zinc plated anchor bolts, each with two nuts and washers, and a rigid pressboard template.
- E. The globe shall be internally fluted, clear tempered glass, fully gasketed.
- F. The socket shall be porcelain medium base rated 4KV for HID and incandescent.
- G. Ballast shall be factory mounted to rigid harness suspended from fixture head within the Riser. Wire leads supplied to base. HID: High power factor with starting temperatures of -20°F. for PMH and -40°F. for HPS lamp modes.
- H. Lamp shall be 50W and line shall be 120V.
- I. Finish shall be Super TGIC thermoset polyester powder coat paint, 2.5 mil nominal thickness, applied over a titanated zirconium conversion coating; A.S.T.M. 2500 hour salt spray test endurance rating.
- J. Finish color shall be Dark Bronze.
- K. The fixture height shall be a minimum of 24".

CIRCUIT BREAKER AND ENCLOSURE

- A. Breaker shall be 20 AMP single pole breaker.
- B. Electric cable shall be 3 1/C #8 AWG
- C. Conduit shall be 1" EMT
- D. Contractor shall take load readings on each phase of existing distribution panel and install new breaker to maintain circuit balance.
- E. Contractor shall update panel schedule.
- F. Modifications to existing panel and all work inside building shall be coordinated at least 1 week ahead. No work may proceed without Engineer approval.
- G. Contractor to use existing enclosure. A new enclosure will only be allowed by direction of the Engineer.

BUILDING PENETRATION

- A. Connection shall be made to the existing distribution panel located in the existing Children's Learning Center (CLC). Exact location will be determined in the field and approved by the Engineer.
- B. Connection shall include the following:
 - 100 feet of electrical metallic tubing (EMT) – 1 inch
 - 10 feet of rigid metal conduit (RMC) – 1 inch
 - 50 feet of PVC conduit, trenched – 1 inch
 - Building penetration, including seals in and around conduit

LIGHTING CONTROLLER

- A. The new controller module must be compatible with the existing Botanic Garden Honeywell control system.
- B. Contractor to coordinate with Engineer in field for location of control module and power source.
- C. All new lights to be controlled by single module.

PART 3 – EXECUTION

All work consisting of furnishing, installing, and testing light fixtures will be done in accordance with the "Standard Specifications" and the requirements of all regulatory agencies to the satisfaction of the engineer.

BASIS OF PAYMENT

The unit price of the following items shall include all equipment, labor, and materials necessary to complete the work specified:

- A. Pedestrian lights will be measured and paid for at the contract unit price per each for LIGHTS PEDESTRIAN. The concrete foundation will be paid for separately.
- B. The tree accent lights will be measured and paid for at the contract unit price per each for UPLIGHTS which shall include the mounting method and conduit transitions.

- C. The circuit breaker will be measured and paid for at the contract unit price per each for CIRCUIT BREAKER AND ENCLOSURE which shall include all modifications to existing distribution panel and all coordination activities.
- D. Building penetration to connect to the existing distribution panel will be measured and paid for at the contract unit price per each for ELECTRIC SERVICE INSTALLATION, SPECIAL which shall include furnishing and installing all materials to complete the connection.

CONCRETE FOUNDATION, TYPE A (SPECIAL)

Description: Except as herein specified, CONCRETE FOUNDATION, TYPE A (SPECIAL) shall be constructed in accordance with Section 878 of the "Standard Specifications". The pedestrian lights are to be installed with anchor bolts imbedded in a concrete foundation.

Basis of Payment: This work will be measured and paid for at the contract unit price per foot of depth of CONCRETE FOUNDATION, TYPE A (SPECIAL) at the locations and of the details as specified in the plans and shall include all labor, equipment, materials, and surface preparation necessary to complete the work to the satisfaction of the Engineer.

HANDHOLE (SPECIAL)

Description: This work consists of furnishing, installing, and testing the polymer concrete handhole at location designated on the Plans. This work will be done in accordance with the "Standard Specifications", except as modified herein.

General.

- A. Furnish, install, test and integrate all equipment and components necessary to provide full and complete functionality in all respects, without additional expense to the Department.
- B. Furnish and install complete with all accessories the complete Polymer Concrete Handhole, which meets or exceeds all testing requirements as noted on Plans and in accordance with this Special Provision.
- C. Requirements of Regulatory Agencies: The Contractor will comply with the latest edition of the following codes or standards:
 - *National Electrical Manufacturers Association (NEMA).*
 - *National Fire Protection Association (NFPA) 70 - National Electrical Code.*

Materials:

Equipment.

- A. New handhole will be UL listed, rated for occasional vehicular traffic (ANSI Tier 15), and will be constructed of reinforced polymer-concrete. Walls will be of monolithic construction with no bottom.
- B. Handhole cover will have at least two attachment points and fit frames without undue play. Hardware such as screws, nuts, and bolts will be 316 Stainless Steel with PVC coating.
- C. Make handhole modifications by core-drilling for conduit penetrations only. No conduit penetrations will be made by hammering conduit opening. Seal all conduit penetrations with grout after conduit installation.
- D. Acceptable manufacturers are (in alphabetical order), or approved equal:
 - J&R Concrete Products.
 - Quazite.
 - Rockway Precast.
 - Strongwell.

Construction Requirements:

- A. Furnish and install the Polymer Concrete Handhole and all of the necessary components as specified on the Plans.
- B. Handhole shall be installed on a granular sub-base composed of CA-6 and with nominal dimensions of 24" x 24" x 24".

Measurement and Payment:

Payment for new handhole will be made at the unit price bid for each type installed, completed and accepted by the Engineer. Payment includes excavation, grout, frames and covers, granular sub-base, ground rods and grounding conductors, and any incidentals necessary to provide a complete installation for each item. The completed work as described will be measured and paid for at the contract unit price per each for HANDHOLE (SPECIAL).

STORM SEWER, DUCTILE IRON, TYPE 1

Description: This work consists of constructing storm sewer of the specified diameter adjacent to or crossing water main, at the locations shown on the plans, meeting the material and installation requirements of 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" except that the pipe material shall be used for the full length between structures.

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".

Encasing of standard type storm sewer, in accordance with the details for "Water and Sewer Separation Requirements (Vertical Separation)", (DIV. V/STANDARD DRAWINGS) in the "Standard Specifications for Water and Sewer Main Construction in Illinois", may be used for storm sewers crossing water mains.

Basis of Payment: This work will be paid for in accordance with Article 550.09 of the Standard Specifications, except the pay item shall be STORM SEWER, DUCTILE IRON, TYPE 1, of the diameter specified, and shall include all materials, fittings, labor, equipment, and encasing pipe with seals. The contract unit price shall include all joints and/or couplings, all excavation, and all backfill.

FENCE REMOVAL

Description: This work shall consist of the removal of wooden fences and chain link fences; including post foundations, fittings, gates, posts, and accessories. The Contractor shall do so at locations shown on the plans or as directed by the Engineer. The existing fence shall be carefully removed and delivered to the owners or properly disposed of as directed by the Engineer. Any part of the fence that is damaged that is not called for to be removed will be replaced at the Contractor's expense.

Basis of Payment: This work will be measured and paid for at the contract unit price per lineal foot for FENCE REMOVAL, which includes all equipment, delivery and labor involved to remove, deliver and dispose of the fence and miscellaneous accessories (posts, gates, fittings, etc.).